# Table of Contents

- **Campus Location Maps** ........................................ 7  
- **Academic Calendars** ........................................ 10  
- **The College** .................................................. 13  

  - Accreditation and Recognition ................................ 14  
  - Tidewater Community College Mission ...................... 14  
  - Tidewater Community College Educational Foundation, Inc. 15  
  - Virginia Tidewater Consortium ................................ 15  

- **Programs** ..................................................... 15  

  - Career and Technical Education ................................ 15  
  - Tech Prep .......................................................... 16  
  - College Transfer Education .................................... 16  
  - Dual Enrollment .................................................. 16  
  - International Study Abroad ...................................... 16  
  - General Education ................................................ 16  
  - Developmental Studies ............................................ 17  
  - Continuing Education ............................................ 17  
  - Workforce Development .......................................... 17  
  - Naval Apprentice Program ....................................... 17  
  - Distance Learning ................................................ 17  

- **Admissions to the College** .................................. 17  

  - Exceptions to General Admissions Policy .................... 19  

- **Classification of Students** ................................ 20  

  - Curricular ....................................................... 20  
  - Non-Curricular .................................................. 20  
  - Full-Time .......................................................... 20  
  - Part-Time .......................................................... 21  
  - Academic Load .................................................... 21  
  - Student Level ...................................................... 21  
  - Campus of Record ............................................... 21  

- **Assessment and Placement Testing** ......................... 21  

  - Required Testing ................................................ 22  
  - Required Enrollment in Developmental Courses .......... 22  
  - Ability to Benefit ............................................... 23  

- **Other Admission Requirements** ............................ 23  

  - Admission Requirements for International Students ...... 23  
  - Admission to Specific Courses ................................ 23  
  - Admission to Specific Curricula ................................ 24  
  - Curriculum Changes .............................................. 24  
  - Admission Priorities ............................................. 24  
  - Reapplication ...................................................... 24  
  - Senior Citizens Higher Education Act ....................... 24  

- **Credit for Other Education and Experience** ............. 25  

  - Transferring from Other Colleges ............................ 25  
  - Transcripts from Institutions Outside the U.S. ............ 25  

  - Transfer Credit Appeals Procedure .......................... 25  
  - Credit by Examination .......................................... 25  
  - Credit by Examination for Information Technologies Certifications 26  
  - Substitution of Curriculum Requirements .................... 27  
  - Credit for Military Service Experience and Education 27  
  - Service-members Opportunity Colleges ..................... 27  

- **Registration Information** ................................... 28  

  - Enrollment ....................................................... 28  
  - Online Enrollment .............................................. 28  
  - Touchtone Enrollment .......................................... 28  

  - Academic Load .................................................. 29  

  - Academic Advisors and Counselors .......................... 29  

  - Minimum Enrollment Requirement for Classes ............... 29  

  - Auditing a Course ............................................... 29  

  - Change of Registration ......................................... 30  

  - Types of Changes ............................................... 30  

  - Course Withdrawal .............................................. 30  

- **Financial Information** ........................................ 31  

  - Tuition and Fees ............................................... 31  

  - Books and Materials ........................................... 31  

  - Other Expenses .................................................. 31  

  - Charges ............................................................ 31  

  - Student Domicile ............................................... 31  

  - Refunds ........................................................... 31  

  - Services Denied for Debt ...................................... 32  

- **Student Financial Aid** ........................................ 32  

  - Grants ............................................................. 32  

  - Scholarships ...................................................... 33  

  - Employment ....................................................... 34  

  - Loans .............................................................. 34  

- **Special Programs for Assistance** ........................... 34  

  - Tax Credits ....................................................... 35  

- **Academic Regulations** ........................................ 35  

  - Degrees and Certificates ...................................... 35  

  - Course Credits .................................................. 35  

  - Course Numbering ................................................ 36  

  - Grading System .................................................. 36  

  - P-Pass .............................................................. 36  

  - S-Satisfactory .................................................... 37  

  - U-Unsatisfactory ................................................ 37  

  - R-Re-enroll ........................................................ 37  

  - W-Withdrawal ..................................................... 37  

  - X-Audit ............................................................. 37  

  - I-Incomplete ........................................................ 37  

  - Computing the GPA .............................................. 38  

  - Semester GPA ..................................................... 38  

  - Curriculum GPA .................................................. 38
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative GPA</td>
<td>38</td>
</tr>
<tr>
<td>Repeated Course Policy</td>
<td>39</td>
</tr>
<tr>
<td>Limit on Repeating a Course</td>
<td>39</td>
</tr>
<tr>
<td>Final Grade Appeal</td>
<td>39</td>
</tr>
<tr>
<td><strong>Other Academic Regulations</strong></td>
<td>40</td>
</tr>
<tr>
<td>Course Prerequisites</td>
<td>40</td>
</tr>
<tr>
<td>Course Co-requisites</td>
<td>40</td>
</tr>
<tr>
<td>Required Declaration of Curriculum</td>
<td>40</td>
</tr>
<tr>
<td>Examinations</td>
<td>40</td>
</tr>
<tr>
<td>Course Attendance</td>
<td>40</td>
</tr>
<tr>
<td><strong>Academic Standing</strong></td>
<td>41</td>
</tr>
<tr>
<td>Academic Warning</td>
<td>41</td>
</tr>
<tr>
<td>Academic Probation</td>
<td>41</td>
</tr>
<tr>
<td>Academic Suspension</td>
<td>41</td>
</tr>
<tr>
<td>Academic Dismissal</td>
<td>41</td>
</tr>
<tr>
<td><strong>Academic Renewal Policy</strong></td>
<td>42</td>
</tr>
<tr>
<td>Honors</td>
<td>43</td>
</tr>
<tr>
<td>President’s Honor Roll</td>
<td>43</td>
</tr>
<tr>
<td>Dean’s List</td>
<td>43</td>
</tr>
<tr>
<td>Graduation Honors</td>
<td>43</td>
</tr>
<tr>
<td><strong>Graduation Requirements</strong></td>
<td>43</td>
</tr>
<tr>
<td>Catalog Determination and Degree Designation</td>
<td>43</td>
</tr>
<tr>
<td>Application for Graduation</td>
<td>43</td>
</tr>
<tr>
<td>Required Computer Competencies</td>
<td>44</td>
</tr>
<tr>
<td>Student Outcomes Assessment Requirement</td>
<td>44</td>
</tr>
<tr>
<td><strong>General Education Requirements</strong></td>
<td>44</td>
</tr>
<tr>
<td>Associate Degree Requirements</td>
<td>47</td>
</tr>
<tr>
<td>Certificate Requirements</td>
<td>47</td>
</tr>
<tr>
<td>Second Degree or Certificate</td>
<td>48</td>
</tr>
<tr>
<td>Commencement</td>
<td>48</td>
</tr>
<tr>
<td><strong>College Records Policies</strong></td>
<td>48</td>
</tr>
<tr>
<td>Student Address of Record</td>
<td>48</td>
</tr>
<tr>
<td>Final Grade Reports</td>
<td>48</td>
</tr>
<tr>
<td>Transcripts and Certifications</td>
<td>48</td>
</tr>
<tr>
<td>Hold on Records</td>
<td>48</td>
</tr>
<tr>
<td>Family Educational Rights and Privacy Act (FERPA)</td>
<td>49</td>
</tr>
<tr>
<td>Directory Information Policy</td>
<td>49</td>
</tr>
<tr>
<td>Student Records Retention Policy</td>
<td>50</td>
</tr>
<tr>
<td><strong>Student Conduct</strong></td>
<td>50</td>
</tr>
<tr>
<td>Right to Attend Class</td>
<td>51</td>
</tr>
<tr>
<td><strong>Academic Conduct</strong></td>
<td>51</td>
</tr>
<tr>
<td>Academic Freedom</td>
<td>51</td>
</tr>
<tr>
<td>Academic Misconduct</td>
<td>52</td>
</tr>
<tr>
<td>Faculty Disposition of Academic Misconduct</td>
<td>52</td>
</tr>
<tr>
<td><strong>Student Misconduct</strong></td>
<td>53</td>
</tr>
<tr>
<td>Behavior Subject to Disciplinary Action</td>
<td>53</td>
</tr>
<tr>
<td>Acceptable Use of Electronic Resources</td>
<td>54</td>
</tr>
<tr>
<td>Computer Ethics Guideline</td>
<td>55</td>
</tr>
<tr>
<td>Discrimination or Harassment</td>
<td>55</td>
</tr>
<tr>
<td>Sexual Harassment</td>
<td>55</td>
</tr>
<tr>
<td>Smoking</td>
<td>56</td>
</tr>
<tr>
<td>Weapons and Firearms</td>
<td>56</td>
</tr>
<tr>
<td><strong>Academic Services</strong></td>
<td>56</td>
</tr>
<tr>
<td>Learning Resources Centers (LRC)</td>
<td>56</td>
</tr>
<tr>
<td>Interactive Computer Laboratories</td>
<td>57</td>
</tr>
<tr>
<td>Service Learning</td>
<td>57</td>
</tr>
<tr>
<td><strong>Student Services</strong></td>
<td>57</td>
</tr>
<tr>
<td>Counseling</td>
<td>57</td>
</tr>
<tr>
<td>Transfer Counseling</td>
<td>58</td>
</tr>
<tr>
<td>Career Development</td>
<td>58</td>
</tr>
<tr>
<td>Student Development</td>
<td>58</td>
</tr>
<tr>
<td>Job Referral Service</td>
<td>58</td>
</tr>
<tr>
<td>Cooperative Education Program</td>
<td>58</td>
</tr>
<tr>
<td>International Student Services</td>
<td>59</td>
</tr>
<tr>
<td>Disability Services</td>
<td>59</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>59</td>
</tr>
<tr>
<td>Open Door Project</td>
<td>59</td>
</tr>
<tr>
<td>The Women’s Center</td>
<td>59</td>
</tr>
<tr>
<td>Veterans Affairs Office</td>
<td>60</td>
</tr>
<tr>
<td>Student Activities</td>
<td>60</td>
</tr>
<tr>
<td>College Governance</td>
<td>60</td>
</tr>
<tr>
<td><strong>Student Life Policies</strong></td>
<td>60</td>
</tr>
<tr>
<td>Children on Campus</td>
<td>60</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>61</td>
</tr>
<tr>
<td>Drug and Alcohol Abuse Prevention</td>
<td>61</td>
</tr>
<tr>
<td>Health Services</td>
<td>62</td>
</tr>
<tr>
<td>Inclement Weather Conditions Policy</td>
<td>62</td>
</tr>
<tr>
<td>Student Handbook</td>
<td>62</td>
</tr>
<tr>
<td><strong>Curricula of Study</strong></td>
<td>62</td>
</tr>
<tr>
<td>State Policy on Transfer</td>
<td>62</td>
</tr>
<tr>
<td>Articulation Agreements</td>
<td>63</td>
</tr>
<tr>
<td>General Education Requirements and Prerequisites</td>
<td>63</td>
</tr>
<tr>
<td>Major Field Course Requirements and Prerequisites</td>
<td>65</td>
</tr>
<tr>
<td>General Electives</td>
<td>65</td>
</tr>
<tr>
<td><strong>Transfer Education</strong></td>
<td>67</td>
</tr>
<tr>
<td>Program Grid</td>
<td>67</td>
</tr>
<tr>
<td>Liberal Arts</td>
<td>67</td>
</tr>
<tr>
<td>Business Administration</td>
<td>68</td>
</tr>
<tr>
<td>Engineering</td>
<td>69</td>
</tr>
<tr>
<td>General Studies</td>
<td>70</td>
</tr>
<tr>
<td>Science</td>
<td>71</td>
</tr>
<tr>
<td>Science: Computer Science</td>
<td>72</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>72</td>
</tr>
</tbody>
</table>
### table of contents

<table>
<thead>
<tr>
<th>Career and Technical Education</th>
<th>74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Grid</td>
<td>74</td>
</tr>
<tr>
<td>Accounting</td>
<td>77</td>
</tr>
<tr>
<td>Administration of Justice</td>
<td>78</td>
</tr>
<tr>
<td>Administrative Support Technology</td>
<td>79</td>
</tr>
<tr>
<td>Air Conditioning and Refrigeration</td>
<td>81</td>
</tr>
<tr>
<td>American Sign Language</td>
<td>82</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>84</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>87</td>
</tr>
<tr>
<td>Computer Aided Drafting and Design Technology</td>
<td>89</td>
</tr>
<tr>
<td>Mechanical Drafting and Design Technology</td>
<td>90</td>
</tr>
<tr>
<td>Developmental Disabilities</td>
<td>91</td>
</tr>
<tr>
<td>Diagnostic Medical Sonography</td>
<td>92</td>
</tr>
<tr>
<td>Early Childhood Development</td>
<td>93</td>
</tr>
<tr>
<td>Electromechanical Controls Technology</td>
<td>96</td>
</tr>
<tr>
<td>Electronics Technology</td>
<td>98</td>
</tr>
<tr>
<td>Emergency Medical Services</td>
<td>99</td>
</tr>
<tr>
<td>Financial Services</td>
<td>102</td>
</tr>
<tr>
<td>Fire Science</td>
<td>102</td>
</tr>
<tr>
<td>Funeral Services</td>
<td>103</td>
</tr>
<tr>
<td>Gerontology</td>
<td>105</td>
</tr>
<tr>
<td>Graphic Design</td>
<td>105</td>
</tr>
<tr>
<td>Health Information Technology</td>
<td>108</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>109</td>
</tr>
<tr>
<td>Horticulture</td>
<td>109</td>
</tr>
<tr>
<td>Hospitality Management</td>
<td>112</td>
</tr>
<tr>
<td>Human Services</td>
<td>116</td>
</tr>
<tr>
<td>Industrial Technology</td>
<td>117</td>
</tr>
<tr>
<td>Information Systems Technology</td>
<td>123</td>
</tr>
<tr>
<td>Interior Design</td>
<td>127</td>
</tr>
<tr>
<td>Management</td>
<td>128</td>
</tr>
<tr>
<td>Maritime Logistics</td>
<td>130</td>
</tr>
<tr>
<td>Medical Assisting</td>
<td>131</td>
</tr>
<tr>
<td>Music</td>
<td>133</td>
</tr>
<tr>
<td>Nursing Program</td>
<td>133</td>
</tr>
<tr>
<td>Occupational Therapy Assistant</td>
<td>135</td>
</tr>
<tr>
<td>Paralegal Studies</td>
<td>136</td>
</tr>
<tr>
<td>Physical Therapist Assistant</td>
<td>140</td>
</tr>
<tr>
<td>Polysomnography</td>
<td>141</td>
</tr>
<tr>
<td>Radiography</td>
<td>142</td>
</tr>
<tr>
<td>Respiratory Therapy</td>
<td>143</td>
</tr>
<tr>
<td>Studio Arts</td>
<td>145</td>
</tr>
<tr>
<td>Technical Studies</td>
<td>147</td>
</tr>
<tr>
<td>Theatre Arts</td>
<td>149</td>
</tr>
<tr>
<td>Truck Driving</td>
<td>150</td>
</tr>
<tr>
<td>Welding</td>
<td>150</td>
</tr>
<tr>
<td><strong>Course Descriptions</strong></td>
<td>153</td>
</tr>
<tr>
<td>General Usage Courses</td>
<td>153</td>
</tr>
<tr>
<td>Accounting</td>
<td>153</td>
</tr>
<tr>
<td>Acquisition and Procurement</td>
<td>154</td>
</tr>
<tr>
<td>Administration of Justice</td>
<td>155</td>
</tr>
<tr>
<td>Air Conditioning and Refrigeration</td>
<td>156</td>
</tr>
<tr>
<td>Architecture</td>
<td>157</td>
</tr>
<tr>
<td>Art</td>
<td>157</td>
</tr>
<tr>
<td>American Sign Language</td>
<td>158</td>
</tr>
<tr>
<td>Administrative Support Technology</td>
<td>159</td>
</tr>
<tr>
<td>Automotive</td>
<td>160</td>
</tr>
<tr>
<td>Biology</td>
<td>161</td>
</tr>
<tr>
<td>Business Management and Administration</td>
<td>161</td>
</tr>
<tr>
<td>Childhood Development</td>
<td>164</td>
</tr>
<tr>
<td>Chemistry</td>
<td>165</td>
</tr>
<tr>
<td>Civil Engineering Technology</td>
<td>165</td>
</tr>
<tr>
<td>Crafts</td>
<td>167</td>
</tr>
<tr>
<td>Computer Science</td>
<td>167</td>
</tr>
<tr>
<td>Dance</td>
<td>168</td>
</tr>
<tr>
<td>Dietetics</td>
<td>168</td>
</tr>
<tr>
<td>Diagnostic Medical Sonography</td>
<td>169</td>
</tr>
<tr>
<td>Drafting (CADD)</td>
<td>170</td>
</tr>
<tr>
<td>Diesel</td>
<td>171</td>
</tr>
<tr>
<td>Economics</td>
<td>171</td>
</tr>
<tr>
<td>Education</td>
<td>172</td>
</tr>
<tr>
<td>Engineering</td>
<td>172</td>
</tr>
<tr>
<td>Electrical Technology</td>
<td>174</td>
</tr>
<tr>
<td>Emergency Medical Services</td>
<td>174</td>
</tr>
<tr>
<td>English</td>
<td>176</td>
</tr>
<tr>
<td>English as a Second Language</td>
<td>178</td>
</tr>
<tr>
<td>Electronics Technology</td>
<td>179</td>
</tr>
<tr>
<td>Financial Services</td>
<td>180</td>
</tr>
<tr>
<td>Funeral Services</td>
<td>181</td>
</tr>
<tr>
<td>Fire Science Technology</td>
<td>182</td>
</tr>
<tr>
<td>French</td>
<td>182</td>
</tr>
<tr>
<td>Geography</td>
<td>183</td>
</tr>
<tr>
<td>German</td>
<td>184</td>
</tr>
<tr>
<td>Geographical Information Systems</td>
<td>184</td>
</tr>
<tr>
<td>Geophysical Sciences</td>
<td>184</td>
</tr>
<tr>
<td>History</td>
<td>185</td>
</tr>
<tr>
<td>Health Information Technology</td>
<td>185</td>
</tr>
<tr>
<td>Health</td>
<td>186</td>
</tr>
<tr>
<td>Human Services</td>
<td>188</td>
</tr>
<tr>
<td>Hotel-Restaurant-Institutional Management</td>
<td>189</td>
</tr>
<tr>
<td>Horticulture</td>
<td>190</td>
</tr>
<tr>
<td>Humanities</td>
<td>192</td>
</tr>
<tr>
<td>Interior Design</td>
<td>193</td>
</tr>
<tr>
<td>Industrial Engineering Technology</td>
<td>194</td>
</tr>
<tr>
<td>Interpreter Education</td>
<td>195</td>
</tr>
<tr>
<td>Information Technology Design</td>
<td>197</td>
</tr>
<tr>
<td>Information Technology Essentials</td>
<td>198</td>
</tr>
<tr>
<td>Information Technology Networking</td>
<td>199</td>
</tr>
<tr>
<td>Information Technology Programming</td>
<td>201</td>
</tr>
<tr>
<td>Japanese</td>
<td>203</td>
</tr>
<tr>
<td>Legal Administration</td>
<td>203</td>
</tr>
<tr>
<td>Medical Assisting</td>
<td>205</td>
</tr>
<tr>
<td>Marketing</td>
<td>206</td>
</tr>
<tr>
<td>Mechanical Engineering Technology</td>
<td>206</td>
</tr>
<tr>
<td>Mental Health</td>
<td>206</td>
</tr>
<tr>
<td>Military Science</td>
<td>207</td>
</tr>
</tbody>
</table>
This catalog and its companion publication, the TCC Student Handbook, constitute neither a contract, nor an offer to contract. This catalog is scheduled to be revised every year. In the interim period, the college reserves the right, consistent with Federal, state, and local legal authority, the requirements of accrediting bodies, and the best professional judgment of its faculty, staff, and administrators, to make changes in this catalog and the student handbook as circumstances warrant. Such changes may be made without notice, and it is the obligation of the student to remain abreast of such changes through contact with the relevant college offices. This catalog incorporates many provisions of the TCC Student Handbook.

Tidewater Community College is committed to equal access to its programs and services governed by this policy of non-discrimination. These programs and services include, but are not limited to, all employees, student governments, curricula and other programs sponsored by the College. In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 and Board policy, the College does not discriminate on the basis of disability. Please contact Linda W. Harris, JD, Coordinator of College-Wide Disability Services at 757-822-1225 (voice) or 757-822-1248 (TDD) regarding equal access.

Tidewater Community College does not discriminate on the basis of race, color, religion, national origin, political affiliation, veteran status, gender, age, sexual orientation, or disability in its programs or activities. Inquiries related to the college’s nondiscrimination policies may be directed to the Director of Human Resources, Post Office Box 9000, Norfolk, VA 23509-9000, 757-822-1708.

| Mathematics                           | 208 |
| Music                                | 209 |
| Natural Science                      | 211 |
| Nursing                              | 211 |
| Occupational Therapy                | 213 |
| Public Service                       | 214 |
| Physical Education                   | 214 |
| Philosophy                           | 215 |
| Photography                          | 215 |
| Physics                              | 216 |
| Political Science                    | 216 |
| Polysomnographic Technology          | 217 |
| Psychology                           | 217 |
| Physical Therapist Assistant         | 218 |
| Radiography                          | 219 |
| Real Estate                          | 221 |
| Religion                             | 221 |
| Respiratory Therapy                  | 221 |
| Russian                              | 222 |
| Safety                               | 222 |
| Student Development                  | 223 |
| Sociology                            | 223 |
| Spanish                              | 224 |
| Speech and Drama                     | 224 |
| Trucking                             | 225 |
| Welding                              | 225 |
| State Board for Community Colleges   | 228 |
| Tidewater Community College Board    | 228 |
| Tidewater Community College          | 228 |
| Executive Staff                      | 228 |
| Faculty and Staff                    | 229 |
| Administrative Staff                 | 229 |
| Faculty                              | 234 |
campus location maps

chesapeake campus
1428 Cedar Road, Chesapeake, VA 23322
Phone (757)-822-5100 | TTY 822-5101

norfolk campus
300 Granby Street, Norfolk, VA 23510
Phone (757) 822-1110 | TTY 822-1248
campus location maps

portsmouth campus
7000 College Drive, Portsmouth, VA 23703
Phone (757) 822-2124 | TTY 483-5154

visual arts center
340 High Street, Portsmouth, VA 23704
Phone (757) 822-1888
summer session 2008

ten-week session

Priority Registration ......................... April 7 - 11
Regular Registration ......................... April 14 - May 16
(Web and Touchtone registration are available beginning
April 12, 2008.)

Classes Begin .................................. May 19
Last Day to Add or Change Classes
for a Ten-Week Course ......................... May 23
Memorial Day (College Closed) .............. May 26
Last Day to Drop for Tuition Refund
for a Ten-Week Course .......................... May 29
Last Day to Withdraw Without Academic Penalty
from a Ten-Week Course (See Note) .......... June 27

Independence Day Holiday
College Closed - No Classes ................... July 4
(Make-up Day for classes is July 29)

Last Day of Instruction
(Includes Examinations) ...................... July 29
(Tuesday, July 29, is the make-up day for Friday, July 4, and
represents the final Friday of the Summer 10-week session.)

fall semester 2008

sixteen-week regular session

Priority Registration ......................... July 7 - 11
Regular Registration ......................... July 14 - August 20
(Web and Touchtone registration are available beginning July
12, 2008.)

Faculty Report .................................. August 18
Classes Begin .................................. August 21
Last Day to Add or Change Classes
for a Sixteen-Week Course ................... August 28
Labor Day (College Closed) ................. September 1
Last Day to Drop for Tuition Refund
for a Sixteen-Week Course .................... September 3
Last Day to Withdraw Without Academic Penalty
from a Sixteen-Week Course .................. September 30
Thanksgiving Holiday ......................... November 27, 28, 29
(College Closed)

Last Day of Instruction ...................... December 8
Final Examinations ......................... December 9 - 15
Faculty Research Days ..................... December 16, 17, 18
Graduation ...................................... December 19
Holiday Break (College Closed) .......... December 25 -
December 31, 2008 and January 1, 2009
spring semester 2009

sixteen-week regular session
Priority Registration .......... November 10 – 14, 2008
Regular Registration .......... November 17, 2008 – January 9, 2009
(Web and Touchtone registration are available beginning November 15, 2008.)
Classes Begin ......................... January 12
Martin Luther King, Jr. Day .......... January 19
(College Closed)
Last Day to Add or Change Classes for a Sixteen-Week course ............... January 20
Last Day to Drop for Tuition Refund for a Sixteen-Week Course ............. January 23
Spring Break (No Classes-College Open) March 9 - 14
Last Day to Withdraw without Academic Penalty from a Sixteen-Week Course .......... March 20
Last Day of Instruction .................. May 4
Final Examinations..................... May 5 - 11
Faculty Research Days ............... May 12, 13, 14
Graduation .................................. May 15

first eight-week session
Priority Registration .......... November 10 – 14, 2008
Regular Registration .......... November 17, 2008 – January 9, 2009
(Web and Touchtone registration are available beginning November 15, 2008.)
Classes Begin ......................... January 12
Martin Luther King, Jr. Day .......... January 19
(College Closed)
(Make-up day for classes is March 9)
Last Day to Add or Change Classes for a First Eight-Week Course ............... January 20
Last Day to Drop for Tuition Refund for a First Eight-Week Course ............. January 20
Last Day to withdraw without Academic Penalty from a First Eight-Week Course .......... February 13
Last Day of Instruction .................. March 9
(Includes Examinations)

second eight-week session
Priority Registration .......... November 10 – 14, 2008
Regular Registration .......... November 17, 2008 – March 13, 2009
Spring Break .............................. March 9 - 14
(No Classes-College Open)
Classes Begin ......................... March 16
Last Day to Add or Change Classes for a Second Eight-Week Course .......... March 23
Last Day to Drop for Tuition Refund for a Second Eight-Week Course .......... March 23
Last Day to Withdraw without Academic Penalty from a Second Eight-Week Course .......... April 17
Last Day of Instruction .................. May 8
(Includes Examinations)
Graduation .................................. May 15

Note:
Students who wish to withdraw without academic penalty should contact a counselor to determine the appropriate procedure and date. Withdrawals through completion of sixty percent of a session will result in a W grade. After sixty percent of a session is completed, a withdrawal will result in a grade of F in a credit course, or a grade of U in a developmental course, except under mitigating circumstances that must be documented by the instructor and approved by the academic dean.
the college

Tidewater Community College, founded in 1968, is one of twenty-three two-year colleges that make up the Virginia Community College System (VCCS). Serving the cities of Chesapeake, Norfolk, Portsmouth, Virginia Beach, and portions of Suffolk, the college offers a comprehensive range of programs designed to meet the educational and training needs of its service area. Programs of study lead to the associate degree or certificate; they include the first two years of university parallel instruction and over 60 career and technical programs. The college also offers both credit and non-credit continuing education and special training programs.

TCC has grown from a single location to four campuses, administrative offices, a regional visual arts center, a historical theater, and an advanced technology center. Classes are also offered at off-campus locations.

The Portsmouth Campus, formerly the site of Frederick College, was donated by Frederick W. Beazley and the Beazley Foundation. It opened in the fall of 1968 as the original site of TCC. Overlooking Hampton Roads harbor, the campus is located west of the city of Portsmouth, near Interstate 664. The Frederick W. Beazley Classroom Building houses academic programs, administration, the Learning Resources Center, and student services.

The Virginia Beach Campus was established in temporary quarters on Camp Pendleton, a state military reservation, in 1971. A permanent campus was constructed on land donated by the City of Virginia Beach at the geographical center of the city and opened in the fall of 1974. Five academic buildings, each named for the boroughs of Virginia Beach, house academic programs, a Learning Resources Center, administrative offices, and student services. Recent additions to the campus include an advanced technology center and a new science building.

The Chesapeake Campus was established in 1973 when the City of Chesapeake purchased the former Chesapeake College. The campus is located between the rapidly growing communities of Great Bridge and Deep Creek. The George B. Pass Building houses academic programs, administration, laboratories, student services, and the Learning Resources Center. The Marian P. Whitehurst Technology Center houses academic programs, administration, laboratories, and a conference center.

The Visual Arts Center, TCC at Olde Towne Portsmouth, opened in the spring of 1995. As a regional center for the arts, the center contains the Belle B. Goodman Gallery, as well as classroom and studio facilities.

The Norfolk Campus opened January 1997 in Norfolk as a part of the city’s redevelopment effort. The Martin Building, donated by the heirs of Alvah H. Martin, houses the campus Learning Resources Center, classrooms, faculty and administrative offices, and training and conference facilities. The Mason C. Andrews Science Building houses student services, laboratories, classrooms, and faculty offices. The Stanley C. Walker Technologies Building houses computer laboratories, classrooms, and faculty offices. The TCC Jeanne and George Roper Center for Performing Arts houses a theater that seats over 600, classrooms, and computer laboratories.
general information

College district administrative offices are located at 121 College Place, Norfolk. A new facility houses the Office of the President and the Offices of Academic and Student Affairs, Institutional Effectiveness, Grants, Finance, Administrative Services, Accounting, Human Resources, Payroll, Purchasing, Marketing, Creative Services, Publications, and the Office of Information Systems.

accreditation and recognition

Tidewater Community College, a member of the Virginia Community College System, is governed by the State Board for Community Colleges and subject to policies of the State Council of Higher Education for Virginia.

TCC is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award the associate degree. The commission can be contacted at 1866 Southern Lane, Decatur, Georgia, 30033; telephone number (404) 679-4500.

Curricula of the college are approved by the State Board for Community Colleges and the TCC Board. Two-year associate degree programs are also approved by the State Council of Higher Education for Virginia.

Certain curricula of the college are accredited by specialized accrediting organizations. They include health science programs, accredited by the Commission on Accreditation of Allied Health; education programs through the American Association of Medical Assisting; the American Council on Occupational Therapy Education; the American Health Information Management Association; the Commission on Accreditation in Physical Therapy Education; the Joint Review Committee for Diagnostic Medical Sonography; the Joint Review Committee on Education in Radiologic Technology; the Committee on Accreditation for Respiratory Therapy; the National League for Nursing Accrediting Commission; the Virginia Board of Nursing; and Commission on Accreditation of Allied Health Education Programs for EMT Professions. The Funeral Services Program is accredited by the American Board of Funeral Service Education. The Culinary Arts Program is accredited by the American Culinary Federation’s accrediting commission.

tidewater community college mission statement

Tidewater Community College provides collegiate education and training to adults of all ages and backgrounds, helping them achieve their individual goals and contribute as citizens and workers to the vitality of an increasingly global community.

Commitments that Inform the Mission:

• Open access to high-quality, affordable education to prepare students for transfer to a four-year baccalaureate institution, as well as for entry or advancement in the workforce.

• Cultural diversity as a critically important strength for students to meet the changing needs of a pluralistic, democratic society.
general information

- Lifelong learning to heighten the awareness of students to multiple paths for achievement, while helping them pursue the choices most conducive to their individual needs.
- Partnerships and proactive responsiveness to develop cutting-edge programs that meet the changing needs of students and industry, while contributing to the economic, civic and cultural vitality of the region, the Commonwealth, the nation, and the international community.
- A comprehensive range of programs and services recognized for excellence by leaders of business, industry, and government, and by educators in K-12 education and four-year colleges and universities.

tidewater community college educational foundation, inc.
The Tidewater Community College Educational Foundation, Inc. exists to accept contributions and gifts that will be used for the support of the college, its programs, and its students. The foundation is incorporated in the Commonwealth of Virginia and is approved by the Internal Revenue Service as a nonprofit, tax-exempt charitable organization.

Gifts and contributions to the foundation are tax deductible for the donor and can be made in the form of cash, negotiable securities, equipment, facilities, supplies, real estate, or buildings. Donors can designate the foundation as part of their estate planning and/or as a beneficiary in insurance policies; or they may establish memorial funds through the foundation on behalf of individuals and families.

virginia tidewater consortium
Tidewater Community College is a member of the Virginia Tidewater Consortium for Higher Education. For further information, contact Enrollment Services or visit www.vtc.odu.edu.

programs
Tidewater Community College is a comprehensive institution of higher education offering programs of instruction generally extending no longer than two years beyond the high school level.

career and technical education
Career and technical education programs prepare students for employment. They are designed to meet the increasing demand for technicians, paraprofessionals, skilled craft workers, and specialized clerical workers in industry, business, government, and the professions. These programs, which normally require two years or less of training beyond high school, include preparation for careers in agriculture, business, engineering, health and medicine, industry, service, and other technical and occupational fields. The curricula are developed and offered primarily to meet regional needs.
Tech Prep Programs facilitate a seamless transition from high school to post-secondary education and the job market. Participants take a sequence of courses integrating academic and occupational preparation designed for a specific career cluster. Call (757) 822-7434 for additional information.

The college transfer programs include first-year and second-year courses in arts and sciences and pre-professional programs designed to meet standards acceptable for transfer to baccalaureate (four-year) degree programs. TCC transfer courses closely parallel those offered at four-year institutions.

High school juniors and seniors may be eligible to participate in dual enrollment programs with the public schools, provided they demonstrate readiness for college-level course work through the college’s mandatory placement testing program.

The International Programs office coordinates a number of activities that enhance curriculum and develop student awareness, understanding, and appreciation of the interconnectedness of the social and cultural mores among local, regional, state, national, and global communities. In addition, a variety of opportunities are available during the summer or semester break for students to study abroad. Additional information is available at www.tcc.edu, search keywords: “study abroad”.

General education provides students with a collegiate experience that addresses the knowledge, skills, attitudes, and values characteristic of educated persons. It promotes multiple disciplines, and honors the connections among bodies of knowledge. VCCS degree graduates will demonstrate competency in the following general education areas:
- Communication
- Critical Thinking
- Cultural and Social Understanding
- Information Literacy
- Personal Development
- Quantitative Reasoning
- Scientific Reasoning

Both the college’s accrediting association and the State Board for Community Colleges require that all curricula include general education components. The associate degree programs at Tidewater Community College support a collegiate experience that focuses on the above definition and attendant areas.
developmental studies

Developmental courses prepare students for admission to the college’s transfer and career and technical programs by helping them develop the basic skills and understanding necessary to succeed in college-level courses. Mandatory placement testing determines whether students are required to enroll in developmental courses.

continuing education

Continuing Education programs are designed to make lifelong learning possible for residents of the college’s service area. These programs include credit and non-credit courses and are offered during day, evening, and weekend hours. For additional information go to www.tcc.edu/wd.

workforce development

Tidewater Community College offers training programs and courses for business, industry, and government clients to ensure that employees have the right knowledge and skills for optimum job performance. Results-oriented profiles, assessments, training, and education assist businesses in retaining valuable associates. TCC offers workforce development programs at either the college’s or client’s location. The college’s business, industry and government training centers offer customized training as well as traditional credit courses, certification programs, collaboration services, teleconferencing, and other business essential services. Call (757) 822-1234 for additional information.

naval apprentice program

The Portsmouth Campus provides academic coursework for the Norfolk Naval Shipyard Cooperative Education Apprentice Program. Contact the Student Development office at the Portsmouth Campus for more information.

distance learning

Tidewater Community College offers a variety of classes through distance delivery, including telecourses, teleconference classes, and web-based online classes. Students are able to select from a wide range of courses taught by TCC faculty. These classes are of comparable academic quality and transfer exactly like their classroom counterparts. For technical requirements, resources for students, student success strategies, and schedules of classes, visit the Distance Learning website at www.tcc.edu/students/dtls or call (757) 822-1122 for additional information.

admission to the college

Prospective students are eligible for admission to Tidewater Community College if they have a high school diploma or the equivalent, or if they are 18 years of age or older and able to benefit from a program of instruction. The college reserves
the right to evaluate special cases and to refuse admission if such a refusal is considered to be in the best interest of the college.

Applications may be submitted in person, by mail, or online at www.tcc.edu. All prospective students are advised to consult with a counselor or academic advisor to discuss their educational interests and requirements for admission to a specific program. Applicants may be admitted as curricular or non-curricular students.

By submitting an application (paper or online) to the college, students are making a voluntary decision to participate in a collegiate experience and abide by the policies, rules, and regulations of TCC and the State Board for Community Colleges. In granting admission to an applicant, the college extends the privilege of joining the college community. Students may remain a part of that community as long as the required academic and behavior standards of the college and the VCCS are met.

Tidewater Community College does not discriminate on the basis of race, color, religion, national origin, political affiliation, veteran status, gender, age, sexual orientation, or disability in its programs or activities. Inquiries related to the college’s nondiscrimination policies may be directed to the Director of Human Resources, Post Office Box 9000, Norfolk, VA 23509-9000, 757-822-1708.

TCC is authorized under Federal Law to enroll non-immigrant alien students. Applicants with disabilities are not required to identify themselves. However, students wishing to request special assistance or academic accommodations because of a disability or chronic health problem should contact Disability Services at their home campus 45 days prior to the first day of classes. Students seeking accommodations or program modifications must provide justification and documentation that is less than three years old.

Curricular students are those who have been admitted to one of the college’s academic programs. All curricular students are required to take placement tests and see a counselor for interpretation of the results. To be admitted as a curricular student, applicants must:

- Submit a completed official Application for Admission.
- Complete Student Assessment Program placement testing.
- Submit official transcripts from all high schools, colleges, and universities attended. Note: The VCCS Student Information System academic records are sufficient for students transferring course work within the VCCS.

High school transcripts are not required if the record is more than 10 years old or if the college determines that high school transcripts are not necessary for admission to the college or to a particular curriculum.

Non-curricular students, those who have not requested formal admission to a curriculum, must submit a completed official Application for Admission and may be required to complete Student Assessment Program placement testing.
exceptions to general admissions policy

High school dual enrollment students will be considered for admission to Tidewater Community College according to the Virginia Plan for Dual Enrollment. Other applicants not meeting the college’s general admissions criteria may apply to the college for special consideration. Generally, enrollment of individuals who have not met the general admissions requirements is intended to enhance and enrich the student’s traditional secondary education experience.

Dual enrollment in developmental studies courses by high school students is prohibited because it takes the place of traditional experiences that are available through public or private school systems, other agencies, or from a home schoolteacher or tutor. However, high school seniors enrolled in their final term prior to their graduation may enroll in developmental courses when a need is indicated by placement test results. In all cases, these special-admission applicants must complete placement tests with scores high enough to waive developmental studies courses ENG 1, ENG 3, ENG 4, ENG 5, and MTH 2.

All individuals applying for admission under special provisions must meet with a Campus Dean for Student Services or designee to review the appropriateness of the requested college credit course(s) as it relates to the student’s educational goals. Eligibility for continued enrollment will be reviewed each term and authorized by a Campus Dean for Student Services or designee based on educational performance (the student must have completed all previous college courses with a grade point average of at least 2.0). The applicant who is admitted under special provisions will be classified as non-curricular until s/he qualifies for general admission as a regular student.

Family Educational Rights and Privacy Act (FERPA) regulations must be discussed with the student and parent to clarify disclosure regulations concerning personally identifiable information.

Individuals who do not meet the college’s general admission requirements, but apply as an exception to the general admissions policy, may be considered provided they meet one of the following criteria:

1. The applicant must have a written recommendation from the high school principal or designee, who must certify that the individual is eligible for enrollment at the high school and amply prepared for a college-level course. Applicants who are not eligible for enrollment at the high school due to disciplinary reasons will not be considered for admission to TCC.

2. Applicants who are home-schooled students must: a) provide a copy of their authorization to home-school provided by the division school system; b) provide official evidence that they are performing at their appropriate grade level, as determined by the division superintendent (options include: results from the same or alternate forms of standardized achievement tests used in the Virginia State Assessment Program or results from other assessments which, in the judgment of the division superintendent, indicate that the student is achieving at an adequate level); and c) provide a written recommendation from their tutor or a teacher certifying that the applicant is performing at the required grade level.
Applicants will participate in the college’s placement testing program to
demonstrate prerequisite academic preparedness. All applicants shall meet course
prerequisites as determined by the college.

The college reserves the right to evaluate special cases and to refuse
admission to an applicant if such refusal is considered to be in the best
interest of the college.

classification of students

curricular
A curricular student is either a full-time or a part-time student working
toward completion of a certificate or associate degree at the college.
Students are classified as curricular students when they have been placed
in one of the college’s specific programs of study, called a curriculum. To
be placed in a curriculum, a student must be a high school graduate or
have earned a General Educational Development diploma (GED), have
completed required developmental courses, or have been otherwise
determined to be qualified for admission. All information required for
admission to the college must be retained in the student’s academic file.

non-curricular
A student who has not requested admission to a curriculum is classified as
a non-curricular student. Non-curricular students may register for courses for any
of the following reasons:

• to upgrade skills for a current job
• to develop skills for a new job
• to explore a new career
• to take classes for personal satisfaction or general knowledge
• to take classes at TCC while maintaining primary enrollment with another
  college or university
• to take classes at TCC for transfer to another college or university without
  completing graduation requirements for a TCC degree
• to take college-level classes as a high school student
• to enroll with special approval (usually for one semester) to meet general or
  specific admission requirements as stated in the TCC Catalog
• to enroll in classes while waiting for admission to a program with restricted
  enrollment or competitive admissions

full-time
A full-time student is one who is enrolled in 12 or more credit hours of course
work in a semester or summer session.
part-time
A part-time student is one who carries fewer than 12 credit hours during a semester or summer session.

academic load
The minimum full-time academic load is 12 credit hours. The maximum load, without special permission, is 18 credit hours.

student level
Students are classified as freshmen until they have completed 30 credits of course work in a degree program. Students are classified as sophomores after completing 30 credits of course work in a degree program.

campus of record
Applicants must select a campus of record—Chesapeake, Norfolk, Portsmouth, or Virginia Beach—when applying for admission. Students may take classes and perform many administrative functions at any campus, but student records will be maintained at the designated campus of record. To change a campus of record classification, students should contact Enrollment Services on any campus.

assessment and placement testing
To be successful in a program of study at TCC, students must have fundamental skills in English (reading and writing) and mathematics. To ensure that students are prepared to benefit from their courses, the college has developed the Student Assessment Program for placement testing.

A series of computerized placement assessment tests—COMPASS—is used to evaluate students’ reading, writing, and mathematics skills. These tests are not admissions tests. Instead, test results are used to assist students in identifying academic strengths, recognizing specific skills that need further development, and planning the best sequence of courses.

COMPASS tests can be taken on any campus. Prior to testing, students must pay a testing fee at the campus Business office, and a receipt and a photo ID must be presented at the exam site.

Students with documented disabilities should contact Student Development or Disability Services for placement testing accommodations.

For more information on the Student Assessment Program, contact campus Enrollment Services.
required testing

• New students who plan to enter either an associate degree or certificate program must take the English (reading and writing) and mathematics placement tests and see a counselor to review test results.

• Non-curricular students who plan to enroll in any English or history course must take the placement tests for English (reading and writing).

• Non-curricular students who plan to enroll in any mathematics course must take the mathematics placement test.

• Non-curricular students who have completed nine credit hours at TCC and have a grade point average below 2.0 must take the placement tests before enrolling in any additional credit course work.

• If English is not a student’s first language, s/he must document English proficiency or take the COMPASS/ESL placement test before enrolling in any courses at the college. If the test results indicate a need for ESL instruction, the student must successfully complete the required ESL courses before enrolling in any non-ESL courses. For more information on assessment testing, visit the website at www.tcc.edu, search keyword: “compass”, or contact the campus Welcome and Entry Center.

• Students applying for admission under special provisions must participate in the placement testing program to demonstrate prerequisite academic preparedness.

• With evidence of satisfactory performance (a grade of C or better) in English and mathematics courses taken at another higher education institution, students may be exempt from placement testing at TCC.

• Students may be exempt from placement testing based on the following scores on the ACT or SAT college entrance exams, provided the scores are less than three years old:

  ACT Verbal (Writing and Reading), minimum score 21
  ACT Mathematics, minimum score 21
  SAT Verbal (Writing and Reading), minimum score 500
  SAT Mathematics, minimum score 500

required enrollment in developmental courses

• Students who do not achieve the appropriate scores on the English placement tests must enroll in developmental and/or study skills courses and complete them successfully before enrolling in other English or history courses.

• Students who do not achieve the appropriate scores on the mathematics placement test must enroll in developmental courses and complete them successfully before enrolling in other mathematics courses.

• Students who do not achieve an appropriate score on the reading portion of the English placement test must successfully complete the required
developmental reading and/or study skills courses before enrolling in most college-level courses.

- If a student’s COMPASS/ESL test results indicate a need for ESL instruction, s/he must successfully complete the prescribed ESL courses before enrolling in non-ESL courses.

- Students who do not achieve the required score on the ACT or SAT test must enroll in developmental courses and complete them successfully before enrolling in other college-level courses.

Developmental courses prescribed through the Student Assessment Program are considered prerequisites for college-level courses. The college reserves the right to withdraw a student from any class for which s/he did not complete the appropriate prerequisites.

ability to benefit

Students who have not earned an Advanced Studies, Standard, or Modified Standard high school diploma or GED will be required to demonstrate ability to benefit from instruction at TCC if they apply for financial aid. Student Assessment Program test results may serve as official documentation of ability to benefit.

other admission requirements

admission requirements for international students

In addition to the general admission requirements of the college, all international applicants must also meet the admission requirements established by the International Student Services (ISS) office before enrolling at the college. If an international applicant has obtained a student visa to attend another college, s/he may be eligible for admission to TCC as a transfer student. Contact the International Student Services office for information regarding F1 transfer applications. Non-immigrant students holding or seeking F1 status can obtain the necessary forms and instructions on how to apply for an I-20 from the International Student Services office. Prospective students in non-immigrant classes other than F1 are required to meet with the International Student Advisor to determine admission eligibility and/or limitations.

For more information and specific application deadlines, please visit the International Student Services office at the Virginia Beach Campus (757) 822-7342 or the ISS website at www.tcc.edu/students/iss.

admission to specific courses

Students may be required to successfully complete designated courses or meet specific conditions before enrolling in certain courses. These prerequisites are listed in each semester’s “TCC Schedule of Classes.” Developmental courses prescribed through the Student Assessment Program are considered prerequisites for college-level courses. The college reserves the right to
withdraw a student from any class for which s/he did not complete the appropriate prerequisites. The College’s student information system (SIS) may block a student from registering for a course if the prerequisites have not been met.

admission to specific curricula

Students applying for admission to an associate degree program (Associate of Arts, Associate of Science, Associate of Applied Arts, or Associate of Applied Science) must have an Advanced Studies, Standard, or Modified Standard high school diploma or equivalent, have completed prescribed developmental courses, or otherwise be considered eligible by the college. Students may also be required to submit additional information with the application.

Some curricula may specify admission requirements in addition to the college’s general admission requirements. Students who do not meet all program admission requirements may be able to make up deficiencies by successfully completing prescribed developmental courses or other course prerequisites.

curriculum changes

To change curricula, students should consult a counselor or academic advisor to make sure that all prerequisites for admission to the new program have been met. Students must also complete a Curricula Change form, available from campus Enrollment Services. Students certified for veteran’s benefits must also notify their campus of record Veterans Affairs office of the change.

admission priorities

When enrollments must be limited for any curriculum, priority shall be given to all qualified applicants who are residents of the political subdivisions supporting the college and to Virginia residents not having access to a given program at their local community college, provided such students apply for admission to the program prior to registration or by a deadline established by the college. In addition, residents of localities with which the college has clinical-site or other agreements may receive equal consideration for admission.

reapplication

Students who have interrupted their enrollment at the college for more than three years must reapply by submitting an updated application for admission to campus Enrollment Services.

senior citizens higher education act

Any person 60 years or older who has been living in Virginia for a minimum of one year qualifies for free tuition benefits for credit classes on a space available basis if his or her Virginia taxable income is not more than $15,000. Any person 60 years or older, regardless of income level, who has been domiciled in Virginia for a minimum of one year qualifies for free tuition to audit credit classes or non-credit
classes on a space available basis. For further information, contact Enrollment Services on any campus for credit classes, and Workforce Development for non-credit classes. Registration dates for these credit classes are restricted to those listed in the class schedule for credit. For non-credit classes, registration is available on the first day the class meets.

credit for other education and experience

transferring from other colleges

Normally, transfer students who are eligible for re-entrance at the last college they attended are also eligible for admission to Tidewater Community College. Students who are not eligible to return to a previous college may not be permitted to enroll at TCC.

Students enrolled in a curriculum or plan of study at TCC are eligible to request a transcript evaluation for the purpose of awarding advanced standing or transfer credit for coursework completed elsewhere. Credit is awarded based on the student’s plan of study. Credit awarded for one plan of study may not apply to a new curriculum and a re-evaluation of transfer credits may be necessary. Students seeking a re-evaluation of credits when a plan of study has been officially changed may do so by making a request in writing to the college Registrar.

transcripts from institutions outside the u.s.

Transfer credit may be awarded for coursework completed at international colleges and universities that are accredited or approved by the appropriate Ministry of Education or other governmental agency and evaluated by one of the professional organizations or agencies that is a member of the National Association of Credential Evaluators or is approved by the Virginia Department of Education.

transfer credit appeals procedure

The Central Records office notifies the student when the evaluation of transfer credit has been completed. A student may appeal a decision regarding the transferability of a specific course(s) or the applicability of a specific course to program requirements in the student’s academic plan. The appeal must be filed in writing within 15 business days of the official notification of transcript evaluation results. Specific information on the transferability of credit and procedures for appealing transfer credit decisions is available from Enrollment Services or on the TCC website at www.tcc.edu, search keyword: “transcripts”.

credit by examination

Students who believe they are qualified to receive credit for certain college courses based on their educational background, work experience, or former
independent study may receive college credit by earning acceptable scores on tests offered through the College Level Examination Program (CLEP) of the Educational Testing Service, the Proficiency Examination Program (PEP) of American College Testing, or the Defense Activity for Non-Traditional Education Support Program Subject Standardized Tests (DANTES).

Students may also receive credit through the Advanced Placement Program (AP) in a participating high school.

All test scores must be sent directly from the testing agency to:
TCC Central Records office, P. O. Box 9000, Norfolk, VA 23510

Students must also submit an online Request for Evaluation form at www.tcc.edu, search keywords: “evaluation request”. For more information, contact Enrollment Services.

Where no standardized examination exists, academic deans may authorize the administration of locally-developed challenge exams.

credit by examination for information technologies certifications

Students who hold industry-recognized certifications may be prepared to challenge for credit a Tidewater Community College course that covers much of the same material. However, TCC’s courses provide instructional content that frequently goes beyond the scope of the knowledge and skills required for a particular certification. Local testing is required to determine if a student is to be awarded credit for the course related to the certification. The procedure for such testing follows:

• Students who hold industry-recognized certification in information technology (such as Microsoft, Novell, etc.) must present the certification documentation to the appropriate campus academic dean for evaluation for credit. In order to be eligible for such an evaluation, the student must be enrolled in one of the college’s Information Technology (IT) curricula.

• Based on the information presented, the academic dean will determine what course(s) the student is eligible to challenge. The student will be informed of the objectives for the course that form the basis of the challenge examination.

• In order to be granted credit for the course, the student must successfully pass a TCC examination that includes both a written and a hands-on component. A faculty member in the appropriate discipline will grade the examination.

• If credit is awarded, no letter grade is assigned on the student’s transcript. Rather, a code will be placed on the transcript indicating credit was awarded by exam.

• Upon recommendation of the faculty, the appropriate academic dean shall submit the necessary substitution form to the campus Enrollment Services office for the credit to be entered on the student’s record.
substitution of curriculum requirements

If a student has earned credit for a course that has not previously been used to satisfy a requirement in the curriculum, and s/he wants to substitute that course for one required in the curriculum, the student should consult a counselor or academic advisor, complete a Course Substitution Form, and submit the completed form to his/her academic dean for approval. The course that is substituted must meet the content and/or spirit of the course that is being replaced. Course substitutions granted for one curriculum may not apply to a new curriculum if the student changes his/her plan of study.

credit for military service experience and education

Credit may be allowed for courses completed in military service schools if such credit is recommended in the American Council on Education’s Guide to the Evaluation of Educational Experiences in the Armed Services, and if the work is applicable to the student’s program of study. To receive this credit, students enrolled in a curriculum must submit the appropriate documentation and an evaluation request to: TCC Central Records office, P. O. Box 9000, Norfolk, VA 23510

In addition, students must also submit an online Request for Evaluation form at www.tcc.edu, search keywords: “evaluation request”. Veterans may also receive a waiver of credit for physical education requirements by submitting a discharge certificate or other appropriate certification to Enrollment Services or, in the case of students receiving veterans’ benefits, to the Veterans Affairs office. This waiver carries no credit, so students must earn elective credits to meet the total credit requirements for their curriculum.

service-members opportunity colleges

Tidewater Community College is an institutional member of Service-members Opportunity College (SOC), a group of approximately 1,000 colleges and universities providing voluntary post-secondary education to members of the military throughout the world. This program is designed to ease the transfer of course credits, provide flexible academic residency requirements, and provide appropriate credit for learning received through military training and experiences.

Within the framework of SOC, TCC actively participates in SOCAD, SOCNNAV, SOCMAR, and SOCGUARD. The SOCNNAV program is available for naval and coast guard personnel. The SOCAD program is available for army, army reserve, and National Guard personnel. The SOCMAR program is available for marine personnel. These programs guarantee the transfer of comparable courses among participating colleges and universities. The college also participates in the Concurrent Admissions Program (CONAP) offered by SOC in cooperation with the U. S. Army or the U. S. Army Reserve. For more information, consult the Enrollment Services office at the Virginia Beach Campus (757) 822-7104.
registration information

enrollment

To take courses at TCC, students may enroll using the online student information system (www.tcc.edu/sis), or the touchtone telephone enrollment system (757) 822-2000, come in person to any campus or off-campus enrollment site, or mail materials according to the instructions and the deadline listed in the “TCC Schedule of Classes.” Currently enrolled students in good academic and financial standing at the college may consult their counselor or academic advisor prior to the enrollment period.

Students with academic blocks on their records because they are on academic suspension or dismissal may NOT register until granted readmission. Students with administrative blocks on their records—holds due to unpaid library charges, financial aid overpayments, or other student debts to the college—may NOT register until their record is cleared.

Students are encouraged to enroll prior to the first day of classes. Students who add a class or register after the first day of classes are counted absent from class meetings missed as a result of late registration.

Complete enrollment procedures are outlined in the TCC Schedule of Classes published each semester, and assistance is available on each campus.

online enrollment

The SIS (www.tcc.edu/sis) enables students to access information and perform a number of functions over the Internet. Eligible students can register online, add or drop classes, check their schedules, find open sections of classes, and pay tuition and fees using MasterCard and VISA.

Through SIS students also have access to their personal information: address, financial aid and payment history, unofficial transcript, and transfer credit evaluation.

touchtone enrollment

The touchtone response system enables students with counselor approval to enroll or drop and add courses from any touchtone phone. The system also provides information on course availability in case the student’s first choice is not available. Once registered, students can use an approved credit card to pay tuition by touchtone.

The touchtone system has a special security feature that allows students to choose a PIN number, providing easy access to personal as well as general college information. Students can review their address, class schedule, and financial information, as well as graduation application deadlines, computer competency graduation requirements, and other important announcements.
academic load

The full-time course load is 12 to 18 credit hours. Students should consult a counselor to plan an academic load that will be compatible with their work schedule, family responsibilities, health, and other obligations. As a rule, one credit hour of course work requires at least two hours of study outside of class each week.

Students who wish to take more than 18 credit hours of course work in a session must obtain the approval of the campus provost or designee.

Students who have received an academic warning or are on academic probation may be required to take a reduced course load for the next semester.

academic advisors and counselors

Counselors are professional staff located in the campus student development or counseling center. Academic advisors are faculty members who help students plan a course of study in their academic area. Both are available to act as academic consultants and can assist students with planning a program of study for graduation, employment, or transfer. Students are encouraged to consult a counselor or an academic advisor before each registration period and to confer with a counselor or academic advisor frequently during the semester regarding academic matters. The student is responsible, however, for ensuring that graduation requirements are fulfilled.

minimum enrollment requirement for classes

Each course is offered on condition of adequate enrollment. The college reserves the right to cancel or discontinue any course offered, either because of inadequate enrollment or for any other reason deemed appropriate by the college.

auditing a course

To audit a course (attend class without taking examinations or receiving credit), students must obtain permission from the appropriate academic dean or designee on the campus where the course is taught. Students must then register for the course and pay full tuition.

To change the status of a course from audit to credit, students must complete the change by the end of the add period. To change the status of a course from credit to audit, students must complete the change by the official last day for withdrawal from a class without academic penalty. Contact Enrollment Services for assistance.

Audited courses are not counted as part of the student’s academic load when full-time or part-time status is reported to the Financial Aid office or to an external party such as the Social Security Administration, an employer, health insurance carrier, the Immigration and Naturalization Service, or the Department of Veterans Affairs.
general information

change of registration

After the initial enrollment in classes, students must follow established procedures for making any changes to their course schedule or plan of study. A change is not official until all required procedures are completed online, through the touchtone system, in person, or by providing written permission to a representative authorized to act on behalf of the student. To prevent any problems with permanent college records, financial aid status, or veterans’ benefits, students are encouraged to consult a counselor or an academic advisor to make changes to their enrollment.

types of changes

Adding a course means enrolling in a new course during the add period published in the TCC Schedule of Classes. Students may need special permission from the provost or designee to add a course after the first class meeting.

Dropping a course means officially canceling registration for a course on or before the last day to drop for a tuition refund published in the TCC Schedule of Classes. Enrollment in the course will not appear on the student’s college record, and the student will not receive a grade for the course.

Withdrawing from a course means officially leaving the course after the refund period. Enrollment in the course will appear on the student’s college record, and the student will receive a grade for the course. The college reserves the right to withdraw a student for just cause.

The deadlines for adding and dropping courses and withdrawing without academic penalty from regular session courses are published every semester in the TCC Schedule of Classes and the college calendar. Contact Enrollment Services for the last date to withdraw from special session courses.

course withdrawal

Students may withdraw from a course without academic penalty during the first 60 percent of a session and receive a grade of W (withdrawal). The last day to withdraw without academic penalty from regular session courses is published in the TCC Schedule of Classes. Contact Enrollment Services for the last day to withdraw from special session courses. After that date, students will receive a failing grade of F or U if they withdraw or are administratively withdrawn from a course.

Exceptions to this policy may be made only when initiated by the instructor and approved by the academic dean; only if the student is able to document mitigating circumstances; and only if the student was making satisfactory progress in the course.

Students should not stop attending college without officially withdrawing from all classes. Failure to properly withdraw from college may result in the assignment of F or U grade(s) to the permanent record. Please see a counselor or an academic advisor to consider options before withdrawing from college.
financial information

Tuition and fees
Tuition is subject to change by action of the State Board for Community Colleges. Call (757) 822-1122 for current tuition and fee rates.

The college assesses all students an institutional, technology, and student activity fee, payable with tuition on a per credit hour basis up to a maximum of 15 credit hours per semester. To cover licensing fees and administration costs, TCC also charges a fee for Student Assessment Program testing.

books and materials
Students are expected to buy all books, supplies, and consumable materials needed for their studies, with an estimated cost of $500 per semester for a full-time student. Barnes and Noble at Tidewater Community College serves all TCC locations, with the main bookstore located at MacArthur Center in Norfolk, a satellite bookstore at the Virginia Beach Campus, and kiosks at the Chesapeake and Portsmouth campuses. During peak book-selling periods, temporary on-campus distribution centers operate on the Chesapeake and Portsmouth campuses. Books and supplies are may be ordered online. For additional information go the bookstore's website at www.tcc.bncollege.com.

other expenses
Students may be required to pay facilities and equipment fees for physical education instruction in specific instances. Students may also have to pay transportation, admission, and other expenses related to field trips.

charges
Students are expected to pay charges for any property (such as laboratory or shop equipment, supplies, library books, and materials) that they damage or lose. For more information, see Services Denied for Debt. Students will also be charged a fee of $20.00 for each returned check.

student domicile
The college determines the student's eligibility for in-state tuition rates based on information supplied on the Application for Admission. This determination is made under provisions of Section 23-7.4 of the Code of Virginia. A copy of State Council of Higher Education for Virginia’s Guidelines for Determining Domicile and Eligibility for In-State Tuition Rates is on file at the reserve desk of each campus Learning Resources Center or is available on the State Council of Higher Education website at www.SCHEV.edu. For information on domicile determination, the appeal procedure and deadlines, consult the TCC Student Handbook.

refunds
Students may receive a full refund for classes dropped before the official last day to withdraw for tuition refund listed in the class schedule for regular session
general information

courses and available from Enrollment Services for special session classes. To obtain a refund after that date students must follow the tuition refund appeal procedure.

services denied for debt

Students will not be permitted to register or to attend classes, and the college will not issue transcripts, certificates, or degrees to the student, until all amounts due the college are paid in full.

student financial aid

Financial assistance is provided for students through one or more of the following sources: grants, scholarships, loans, and work study. The college does not discriminate on the basis of race, color, creed or religion, sex, age, national origin, or disability.

To be considered for most financial aid programs, students must apply for financial aid as soon as possible after January 1, and demonstrate need every school year. Campus-based aid is initially awarded on a first-come, first-served basis for Fall and Spring until funds are depleted. If a student does not attend the first semester, all awards will be canceled and the student must submit written documentation to have his/her financial aid awards re-processed. Depending on the availability of funds, campus-based aid probably will not be available to be re-awarded. To remain eligible for most programs, students must comply with Standards of Satisfactory Progress. Applications are available at each campus financial aid office or can be filed electronically on the Internet at www.fafsa.ed.gov. If the student does not have a Department of Education PIN number, the signature page must be downloaded and mailed, or the application will not be considered.

If a student withdraws from all classes, federal regulations require that a portion of tuition and fees covered by a financial aid program be refunded to that program. The percentage refunded to the program depends on the withdrawal date. The college may also retain an administrative fee when refunds are calculated.

Financial aid personnel are available on each campus to provide information about programs, application procedures, and eligibility. The financial aid program employs the following criteria and procedures in administering the financial aid programs described:

grants

Federal Pell Grant. The Pell Grant Program is a federal program designed to assist students in defraying the costs of attending college. Money received must be used solely for educational purposes which include tuition, fees, room, board, books, supplies, and miscellaneous expenses. Awards under this program are grants and do not require repayment.
Federal Supplemental Educational Opportunity Grant (FSEOG). Under this federal program, funds are available to provide grants to students who, for lack of financial means of their own or of their families, would be unable to enter and remain in college. The student must be enrolled for at least six credit hours and be eligible for the Federal Pell Grant. Awards under this program are grants and do not require repayment.

College Scholarship Assistance Program (CSAP). Under this state program, students are eligible for grants if they are Virginia residents and need financial assistance to attend college for at least six credit hours. This is a grant and does not require repayment.

Commonwealth Award (COMA). This state program, administered by the Virginia Community College System, is for Virginia residents with financial need. Students must be enrolled in at least six credit hours. The grant, which does not have to be repaid, cannot exceed the average cost of tuition.

Higher Education Teacher Assistance Program (HTAP). This state program is for students eligible to enroll in a K-12 teacher preparation program. Recipients must be Virginia residents, enrolled full time (12 credits or more) and have a cumulative grade point average (GPA) of at least 2.50. Students must be nominated by a faculty member.

Part-Time Tuition Assistance Program (PTAP). This program is for Virginia residents with financial need who are taking from one to six credit hours. The grant cannot exceed the cost of tuition.

Virginia Guaranteed Assistance Program (VGAP). This state program, administered by the VCCS, is for first-time, full-time freshmen. Recipients must be Virginia residents, must have graduated from a Virginia high school with at least a 2.5 cumulative grade point average, and must demonstrate financial need. The grant, which does not have to be repaid, cannot exceed the average cost of tuition.

scholarships

Private Scholarships. The scholarship program is supported by contributions made by local citizens, businesses, and organizations. While most scholarships are designated by the donors, a few may be available on a competitive basis. Information may be obtained from the Financial Aid office at each campus.

Nursing Scholarships. Students in the nursing curriculum are eligible to apply for state nursing scholarships. Applications and information are available at the Financial Aid office on the Portsmouth and Virginia Beach campuses.

Awards and Scholarships. Several types of scholarships and awards are made available from TCC local funds. See the TCC Scholarships and Employment Opportunities brochure or check with your campus Financial Aid office for more details.
employment

Federal Work-Study Program (FWSP). The Federal Work-Study Program provides part-time jobs for students who are in need of financial assistance in order to attend college. Employment may be on or off campus, and hourly wages comply with minimum wage laws. Students are paid every two weeks. Most students average ten to fifteen hours of work per week. Other employment opportunities are available through the TCC Service Corps.

loans

Federal Stafford Student Loan (FSSL). Stafford Student Loans are either subsidized or unsubsidized loans made by banks directly to students. Loan limits are $2,625 for freshmen and $3,500 for sophomores. If a student does not qualify for the full amount under the subsidized Stafford program, s/he may receive a combination of subsidized and unsubsidized loans totaling the loan limit. For more information, contact the Financial Aid office on your campus of record.

Federal Parent Loans for Undergraduate Students (FPLUS). FPLUS loans enable parents to borrow the student’s cost of attendance, minus other aid, for each dependent student who is enrolled at least half time (six credit hours per semester). To be eligible for this award, students must first apply for financial aid using the FAFSA.

special programs for assistance

Rehabilitative Services. The college cooperates with the State Department of Rehabilitative Services in providing education and training for qualified students with disabilities.

Virginia National Guard Tuition Assistance. Based on available funds, members of the National Guard who have been prior participants in the program may be considered for additional grants. Inquiries should be made to the Unit Commander.

Virginia Program for Children and Spouses of Deceased Law Enforcement, Firefighting and Rescue Squad Personnel. The Commonwealth of Virginia provides financial assistance for attendance at public higher education institutions to children or spouses of law enforcement officers; firefighters or rescue squad members; a sworn law enforcement officer; a special agent of the Department of Alcohol Beverage Control; a state correctional, regional or local jail officer; a Sheriff; a Deputy Sheriff; or a member of the Virginia National Guard serving in the Virginia National Guard or as a member of the United States Armed Forces, who were killed in the line of duty. This assistance covers the cost of tuition and required fees. For more information, contact your campus Business Manager.

Virginia War Orphans Education Program. The Virginia War Orphans Education Program provides educational assistance for children, or surviving children of certain veterans. Individuals entitled to this benefit may use it to pursue
any vocational, technical, undergraduate or graduate program of instruction.
Applications are available in the Veterans Affairs office on each campus. The
application should be submitted at least four months before the expected date
of enrollment.

tax credits
Tax credits provide benefits for community college students. The HOPE
Scholarship tax credit may apply to the first two years of a college or vocational
school program. The Lifetime Learning tax credit is for adults who want to return
to school, change careers, or upgrade skills. Consult your tax advisor to see if you
are eligible for these credits.

academic regulations
degrees and certificates
The college offers the following degrees and certificates upon successful
completion of an approved program.

The Associate of Arts Degree (AA) is awarded to students majoring in liberal
arts who may plan to transfer to a four-year college or university after completing
their community college program.

The Associate of Science Degree (AS) is awarded to students majoring in
specialized pre-professional programs who may plan to transfer to a four-year
college or university after completing their community college program.

The Associate of Applied Arts Degree (AAA) is awarded to students majoring
in one of the career and technical curricula who may plan to obtain full-time
employment immediately upon graduation from college.

The Associate of Applied Science Degree (AAS) is awarded to students
majoring in one of the career and technical curricula who may plan to obtain full-
time employment immediately upon graduation from college.

The Certificate is awarded to students who complete one of the approved
non-degree curricula consisting of a minimum of 30 semester credit hours in an
occupational area.

The Career Studies Certificate is awarded to students who complete one of
the approved non-degree curricula consisting of 9-29 semester credit hours in an
occupational area.

Degrees and certificates are awarded three times each year following the fall,
spring and summer sessions.

course credits
The semester-hour credit for each course is listed in the TCC Schedule of Classes
and with the course description in the TCC Catalog.

Each semester-hour of credit given for a course is based on one academic hour
(50 minutes) of formalized, structured instructional time per week for fifteen
weeks. This totals 750 minutes of instruction. In addition, each course requires an examination/evaluation period. Courses may consist of lectures, out-of-class study, laboratory and shop study, or combinations thereof, with credit awarded as follows:

- Lecture: One academic hour of lecture (including lecture, seminar, discussion or other similar activities) per week for 15 weeks plus the examination/evaluation period equals one collegiate semester-hour credit.
- Laboratory: Two to five academic hours, (depending on the discipline), of laboratory, clinical training, supervised work experience, coordinated internship, or other similar activities per week, for 15 weeks plus the examination/evaluation period equals one collegiate semester-hour credit.
- Asynchronous Distance Learning Courses: A mix of traditional contact hours and learning activities with students and faculty separated by time and place; content is equivalent to that of traditional lecture/laboratory classes.

course numbering

Courses numbered less than 100, ESL courses numbered 2 through 20, and developmental studies courses numbered 1-9 are not applicable toward associate degree programs. Some developmental courses, with the approval of the Vice President for Academic and Student Affairs (or designee), may provide credit applicable to certificate programs.

Courses numbered 10 through 99 (except for approved ESL courses) are basic occupational courses for certificate programs. The credits earned in these courses are applicable toward certificate programs but are not applicable toward an associate degree and do not qualify for federal financial aid.

Courses numbered 100 through 299 are freshman and sophomore courses applicable toward associate degree and certificate programs.

grading system

The quality of performance in any academic course is reported by a letter grade, which the instructor is responsible for assigning.

The grades of A, B, C, D, P and S are passing grades. Grades of F and U are failing grades. R and I are interim grades. Grades of W and X are final grades carrying no credit.

P - pass

No grade point credit. This grade applies only to non-developmental specialized courses and seminars approved by the appropriate academic dean. A maximum of seven semester credit hours with a P grade may be applied toward a degree or certificate.
S - satisfactory
No grade point credit. The grade of S is assigned for satisfactory completion of course objectives in developmental studies and ESL courses.

U - unsatisfactory
No grade point credit. The grade of U is assigned when the student has not made satisfactory progress in developmental studies, ESL courses, or courses taken on a Pass/Unsatisfactory basis.

R - re-enroll
No grade point credit. The grade of R is assigned when the student has made satisfactory progress but has not completed all of the instructional objectives for developmental studies or ESL courses. Students must re-enroll in the class to complete the course objectives.

W - withdrawal
No credit. A grade of W is awarded to students who withdraw or are withdrawn from a course after the add/drop period but prior to the completion of 60 percent of the session. After that time, the student will receive a grade of F except when making satisfactory progress and under mitigating circumstances, which must be approved by the course instructor and the appropriate academic dean. A copy of the withdrawal form and supporting documentation must be placed in the student’s academic file.

X - audit
No credit. Permission of the appropriate academic dean or designee is required to audit a course. After the last day for students to withdraw from class without penalty, the grade X is invalid for students enrolled in the course for credit.

I - incomplete
No credit. Used for verifiable unavoidable reasons. Since the “incomplete” extends the enrollment in the course, requirements for satisfactory completion will be established through student/faculty consultation. The I grade may be assigned only in the case of mitigating circumstances beyond the student's control, and only after at least 75 percent of the course has been satisfactorily completed. It is the student's responsibility to notify the instructor of the student's desire for a grade of I. Incomplete grades assigned for the fall semester must be made up by the last day of instruction in the following spring semester; incomplete grades assigned at the end of the spring semester and summer term must be made up by the last day of instruction in the following fall semester, unless the instructor establishes an earlier deadline. In exceptional cases, extensions of time needed to complete course work for I grades may be granted beyond the subsequent semester, with the written approval of the campus provost.
The instructor must submit a Grade Change form to change the grade from I to the grade received after course work is completed. If the work is not completed on time, another grade (B, C, D, F, R, U, or W) must be assigned based on the course work already completed. The W grade will be awarded only under mitigating circumstances, with documentation provided by the student and approved by the course instructor and the campus provost. A copy of the withdrawal form and supporting documentation must be placed in the student’s academic file.

computing the grade point average (GPA)

The grade point average is determined by multiplying the number of credits for each class by the number of points awarded for the grade received and dividing the total number of grade points earned by the number of credits attempted. Credits that do not generate grade points, such as credits for developmental courses, are not included in the calculation of credits attempted.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>Excellent</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>Good</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>Average</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>Poor</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>Failure</td>
</tr>
</tbody>
</table>

Developmental credits are not included in GPA computation. Grades of P, R, S, U, and W (withdrawal), I (incomplete), or X (audit) do not receive grade points.

semester GPA

The semester grade point average is determined by dividing the total number of grade points earned in all courses taken in a given semester by the total number of credits attempted for the semester.

curriculum GPA

The curriculum grade point average is determined by dividing the total number of grade points earned in all courses applicable to the student’s curriculum by the total number of credits attempted in courses applicable to that curriculum.

cumulative GPA

The cumulative grade point average is determined by dividing the total number of grade points earned in all courses by the total number of credits attempted.

See Repeated Course Policy for information on calculating GPA for non-developmental courses taken more than once.
repeated course policy

Beginning with the fall semester 1996, only the most recent attempt of a repeated course is used to calculate the cumulative GPA, and only credits earned in the most recent attempt are counted toward meeting curriculum requirements. Note: This policy applies only to courses first attempted in the summer 1988 or later, and does not affect GPA adjustments made for courses completed and repeated during the previous repeat policy (summer 1994 - summer 1996).

Some courses are exempt from consideration as repeats and an adjustment to GPA is not made. Exempted courses are those numbered in the 90s, 93s, 95s, 96s, 97s, 98s, and 99s, courses identified by the phrase “may be repeated for credit,” and selected other courses. Periodically, the VCCS will rename or renumber courses, but they remain equivalent to the courses as previously named or numbered. In such cases, completion of a renumbered/renamed course may be determined to be a repeat of a course completed previously under a different department and/or course number. These determinations are made on a college-wide basis, and exceptions cannot be made for an individual student.

Implementation of this policy does not affect any GPA calculations for prior terms or any academic, financial, or administrative events that have occurred in the past. Direct any questions to the coordinator of enrollment services.

limit on repeating a course

Students are limited to two attempts in the same credit or developmental course. (Grades of A, B, C, D, F, I, P, R, S, U, X and W count as attempts.) The appropriate academic dean must approve exceptions to this policy. This limitation does not apply to certain courses identified as repeatable for credit.

final grade appeal

The college’s grade appeal procedure provides a process for contesting final grades awarded. There are two grounds for appeal:

- the assignment of a grade in a manner other than that described on the course outline or amended by the instructor with appropriate notice;
- the assignment of a grade using a method other than that used for the other students in the class.

Students must submit a written final grade appeal to the Dean of Student Services (or designee) on the campus where the course was held and at least 10 working days prior to the first day of classes of the next academic term.
other academic regulations

course prerequisites

Students must successfully complete some courses before enrolling in others. These prerequisites are listed in each semester’s TCC Schedule of Classes and may include developmental courses identified through the college’s Student Assessment Program. The college reserves the right to withdraw students from courses in which they have enrolled without successfully completing the appropriate prerequisites.

course co-requisites

A co-requisite is a course that must be taken along with another course, unless the student has already completed it successfully. Co-requisites are listed in the “TCC Schedule of Classes” and may include developmental courses identified through the college’s Student Assessment Program. The college reserves the right to withdraw students from courses if they are not also enrolled in the co-requisite course or have not completed it successfully.

required declaration of curriculum

Students are expected to declare a curriculum by the time they have accumulated 24 semester hours of credit. Students who are uncertain about a curriculum should contact a counselor or academic advisor.

examinations

Students are expected to take examinations as scheduled. No exceptions will be made without the permission of the academic dean and the instructor of the course.

course attendance

Students are expected to be present and on time at all scheduled class and laboratory meetings. Instructors do not have to admit students who arrive late. If a student adds a class or registers after the first day of classes, s/he is counted absent from all class meetings missed. When absences in a course equal the number of weekly class sessions of that course, the student’s standing in that class may be in jeopardy.

If a student is absent more than 20 percent of scheduled instructional time for a course, attendance may be defined as unsatisfactory. This calculation includes absences occurring during the add/drop period.

Instructors may establish a more stringent attendance policy, and students are responsible for understanding the attendance requirements for each course in which they’re enrolled.
When an instructor determines that absences constitute unsatisfactory attendance, s/he may withdraw a student from the course. The student will receive a grade of W during the first 60 percent of a course. If the student is withdrawn after 60 percent of the class, a grade of F (or U in the case of a developmental course) will be assigned unless the student can document mitigating circumstances.

Students who are withdrawn from a class because of unsatisfactory attendance are not eligible for a refund of tuition and fees.

**academic standing**

Students are considered to be “in good academic standing” if they maintain a semester minimum GPA of 2.00, meet eligibility requirements, and are not on academic suspension or dismissal status.

**academic warning**

Students who fail to attain a minimum grade point average of 2.00 for any semester shall be placed on academic warning.

**academic probation**

Students who fail to maintain a cumulative grade point average of 1.50 after attempting twelve or more credit hours shall be on academic probation until such time as their cumulative average is 1.50 or better.

The statement “Placed on Academic Probation” will appear on the student’s permanent record. Students on academic probation must consult a counselor before registering and will usually be required to carry a reduced course load the next semester. Note: Although a grade point average between 1.5 and 1.99 may not result in formal academic probation, students must earn a minimum of 2.0 in their curriculum to receive an associate degree.

**academic suspension**

Students on academic probation who fail to earn a semester grade point average of 1.50 shall be placed on suspension only after they have attempted 24 semester credit hours.

The statement “Placed on Academic Suspension” will appear on the student’s permanent record. Academic Suspension normally shall be for one semester unless the student reapplies and is accepted for readmission to another curriculum. Whatever the time period, students on academic suspension may not re-enroll at the college until they are formally reinstated. To be considered for reinstatement, students must submit an Application for Readmission available from campus Enrollment Services.

Following reinstatement after academic suspension, students must earn a minimum 2.0 grade point average for the semester in which they return, and a
minimum 1.5 grade point average in all subsequent semesters for which they’re enrolled. Students remain on academic probation until the cumulative grade point average is raised to a minimum of 1.5.

academic dismissal

Students who are on academic suspension and do not maintain at least a 2.00 grade point average for the semester of their reinstatement to the college shall be academically dismissed. Students who have been placed on academic suspension and achieve a 2.00 for the semester of their reinstatement must maintain at least a cumulative 1.50 GPA in each subsequent semester of attendance. Students remain on probation until their cumulative GPA is raised to a minimum of 1.50. Failure to attain a cumulative 1.50 GPA in each subsequent semester until the cumulative GPA reaches 1.50 shall result in academic dismissal.

The statement “Placed on Academic Dismissal” will appear on the student’s permanent record. Academic dismissal is normally permanent. With good cause, students may reapply by submitting an Application for Readmission and may be accepted under special considerations.

academic renewal policy

Students who return to the college after a separation of five years or more may petition for academic renewal by submitting an Academic Renewal Petition Form to Enrollment Services.

If a student is determined to be eligible for academic renewal, D and F grades earned prior to re-enrollment will not be used in calculating the cumulative and curriculum grade point averages, subject to the following conditions:

• Prior to petitioning for academic renewal the student must demonstrate a renewed academic interest and effort by earning at least a 2.5 GPA in the first 12 semester hours completed after re-enrollment.
• All grades received at the college will remain a part of the student’s official transcript.
• Students will receive degree credit only for courses in which grades of C or better were earned prior to academic renewal, providing that such courses meet current curriculum requirements.
• Total hours for graduation will be based on all course work taken at the college after readmission, as well as former course work for which a grade of C or better was earned and credits transferred from other colleges or universities.
• The academic renewal policy may be used only once and cannot be revoked once approved. The notice “Academic Renewal has been granted” and the effective dates will appear on the official transcript.
honors

president’s honor roll

Students who have earned a minimum of 20 hours of credit at the college will be included on the president’s honor roll for each semester that the cumulative grade point average is 3.5 or higher.

dean’s list

Students who carry a minimum of 12 credit hours per semester will be included on the dean’s list for each semester in which they earn a grade point average of 3.2 or higher.

graduation honors

Students who have fulfilled the requirements for AA, AS, AAA, AAS, and one-year certificate programs are eligible for graduation honors, based on the minimum cumulative grade point averages listed below. Honors are not awarded for the career studies certificate.

3.2 Cum laude (with honor)
3.5 Magna cum laude (with high honor)
3.8 Summa cum laude (with highest honor)

graduation requirements

The student is responsible for fulfilling all graduation requirements and meeting all conditions listed below.

catalog determination and degree designation

The catalog year used to determine graduation requirements is the one in effect at the time the student is admitted to the curriculum from which s/he plans to graduate, provided the catalog is not more than six years old (including the year in which the student plans to graduate). Students may choose to graduate under the requirements listed in any subsequent catalog as long as it is not more than six years old (including the year in which s/he plans to graduate).

Only the degree title appears on the student’s diploma when the award is conferred. The degree major and specialization(s), if any, appear on the student’s permanent record (transcript). Multiple specializations within the same degree appear on the transcript provided students meet the additional requirements and apply to receive multiple specializations.

application for graduation

Students intending to graduate must officially apply for graduation by the application deadline. Details regarding deadlines and processes are located at www.tcc.edu, search keyword: “graduation”.
required computer competencies

Tidewater Community College endorses the principle of computer competency for all students intent on completing a curriculum in excess of 45 semester credits. Students must demonstrate all of the following competencies:

- Working knowledge of computing concepts, components, and operations to accomplish educational and career tasks.
- Use of the appropriate components of an integrated productivity software package involving word processing, spreadsheet, database, communication applications.
- Ability to access, retrieve, and apply networked information resources, e.g., on-line catalog, virtual libraries, and the internet.
- Use of telecommunication software, e.g., electronic mail, listservs, bulletin boards, and/or news groups, to communicate with faculty, students, and information providers.

Contact the campus Enrollment Services office for information on the ways in which students may fulfill these requirements. Students with disabilities that may be related to achieving and documenting computer competencies should contact the Disability Services representative at their campus of record. Successful completion of computer competency tests does not carry any academic credit.

student outcomes assessment requirement

As a part of the college’s efforts to improve institutional effectiveness, students may be required to take tests or complete surveys designed to measure student achievement in general education or selected majors prior to graduation. These assessment activities are required for the sole purpose of evaluating the college’s academic programs. Test results are confidential and aggregated across programs. No minimum score or level of achievement is required for graduation.

general education requirements

General education requirements address the knowledge, skills, attitudes, and values characteristic of educated persons. They are unbound by disciplines and honor the connections among bodies of knowledge. TCC degree graduates will demonstrate competency in the following general education areas:

- Communication
- Critical Thinking
- Cultural and Social Understanding
- Information Literacy
- Personal Development
- Quantitative Reasoning
- Scientific Reasoning

TCC’s associate degree programs support a collegiate experience that focuses on the above definition and attendant areas. Degree graduates will demonstrate competency in the following general education areas:
1. Communication
A competent communicator can interact with others using all forms of communication, resulting in understanding and being understood. Degree graduates will demonstrate the ability to:

   1.1 understand and interpret complex materials;
   1.2 assimilate, organize, develop, and present an idea formally and informally;
   1.3 use standard English;
   1.4 use appropriate verbal and non-verbal responses in interpersonal relations and group discussions;
   1.5 use listening skills; and
   1.6 recognize the role of culture in communication.

2. Critical Thinking
A competent critical thinker evaluates evidence carefully and applies reasoning to decide what to believe and how to act. Degree graduates will demonstrate the ability to:

   2.1 discriminate among degrees of credibility, accuracy, and reliability of inferences drawn from given data;
   2.2 recognize parallels, assumptions, or presuppositions in any given source of information;
   2.3 evaluate the strengths and relevance of arguments on a particular question or issue;
   2.4 weigh evidence and decide if generalizations or conclusions based on the given data are warranted;
   2.5 determine whether certain conclusions or consequences are supported by the information provided; and
   2.6 use problem solving skills.

3. Cultural and Social Understanding
A culturally and socially competent person possesses an awareness, understanding, and appreciation of the interconnectedness of the social and cultural dimensions within and across local, regional, state, national, and global communities. Degree graduates will demonstrate the ability to:

   3.1 assess the impact that social institutions have on individuals and culture—past, present, and future;
   3.2 describe their own as well as others’ personal ethical systems and values within social institutions;
   3.3 recognize the impact that arts and humanities have upon individuals and cultures;
   3.4 recognize the role of language in social and cultural contexts;
   3.5 recognize the interdependence of distinctive world-wide social, economic, geopolitical, and cultural systems.

To submit an application for Graduation go to www.tcc.edu, search keywords: “graduation application”.
4. Information Literacy
A person who is competent in information literacy recognizes when information is needed and has the ability to locate, evaluate, and use it effectively. Degree graduates will demonstrate the ability to:

4.1 determine the nature and extent of the information needed;
4.2 access needed information effectively and efficiently;
4.3 evaluate information and its sources critically and incorporate selected information into his or her knowledge base;
4.4 use information effectively, individually or as a member of a group, to accomplish a specific purpose; and
4.5 understand many of the economic, legal, and social issues surrounding the use of information and access and use information ethically and legally.

5. Personal Development
An individual engaged in personal development strives for physical well-being and emotional maturity. Degree graduates will demonstrate the ability to:

5.1 develop and/or refine personal wellness goals; and
5.2 develop and/or enhance the knowledge, skills, and understanding to make informed academic, social, personal, career, and interpersonal decisions.

6. Quantitative Reasoning
A person who is competent in quantitative reasoning possesses the skills and knowledge necessary to apply the use of logic, numbers, and mathematics to deal effectively with common problems and issues. A person who is quantitatively literate can use numerical, geometric, and measurement data and concepts, mathematical skills, and principles of mathematical reasoning to draw logical conclusions and to make well-reasoned decisions. Degree graduates will demonstrate the ability to:

6.1 use logical and mathematical reasoning within the context of various disciplines;
6.2 interpret and use mathematical formulas;
6.3 interpret mathematical models such as graphs, tables and schematics, and draw inferences from them;
6.4 use graphical, symbolic, and numerical methods to analyze, organize, and interpret data;
6.5 estimate and consider answers to mathematical problems in order to determine reasonableness; and
6.6 represent mathematical information numerically, symbolically, and visually, using graphs and charts.
general information

7. Scientific Reasoning
A person who is competent in scientific reasoning adheres to a self-correcting system of inquiry (the scientific method) and relies on empirical evidence to describe, understand, predict, and control natural phenomena. Degree graduates will demonstrate the ability to

7.1 generate an empirically evidenced and logical argument;
7.2 distinguish a scientific argument from a non-scientific argument;
7.3 reason by deduction, induction, and analogy;
7.4 distinguish between causal and correlational relationships; and
7.5 recognize methods of inquiry that lead to scientific knowledge.

associate degree requirements
To be awarded an associate degree from the college, the student must fulfill the following requirements:

- Fulfill all of the course and credit hour requirements of the degree curriculum, with a minimum of 25 percent of the credit hours earned in course work taken at Tidewater Community College;
- Earn a grade point average of at least 2.0 in all studies completed that are applicable toward graduation in the curriculum;
- Complete one course designated “international.” (Applies to AA and AS graduates only);
- Submit an Application for Graduation online at www.tcc.edu, search keyword: “graduation” by the college’s published deadline. (Deadlines are published in the TCC Schedule of Classes);
- Satisfy computer competency requirements. For correct information on how to satisfy this computer competency requirement, see www.tcc.edu, search keywords: “computer competencies”;
- Resolve all financial obligations to the college and return all learning resources and other college materials; and
- Be certified by appropriate college officials for graduation.

certificate requirements
To be eligible for graduation with a certificate from the college, the student must fulfill the following requirements:

- Fulfill all of the course and credit hour requirements of the certificate curriculum, with a minimum of 25 percent of the credit hours earned in course work taken at Tidewater Community College;
- Earn a grade point average of at least 2.0 in all studies completed that are applicable toward graduation in the curriculum;
- Submit an Application for Graduation online at www.tcc.edu, search keyword: “graduates” by the college’s published deadline. (Deadlines are published in the TCC Schedule of Classes.)
general information

- Resolve all financial obligations to the college and return all learning resources and other college materials; and
- Be certified by appropriate college officials for graduation.

Students graduating with a certificate consisting of more than 45 credit hours must also meet the college’s computer competency requirement. Information on how to satisfy this requirement is located on the College’s website at: www.tcc.edu/students/graduates/computer.htm.

second degree or certificate

In awarding students an additional certificate or degree, the college may grant credit for all previously completed applicable courses that are requirements of the additional degree or certificate. However, the awards must differ from one another by at least 25 percent of the credits required.

commencement

The college holds two formal commencement ceremonies each year for students who meet graduation requirements for one-year and two-year curricula. Attendance at these formal commencement ceremonies is strongly encouraged.

college records policies

student address of record

Official communications from the college are sent to the address given to campus Enrollment Services by the student and/or to the student’s TCC email address. To make address changes, students must complete a Student Data Change form and submit it to a campus Enrollment Services office.

final grade reports

Final grades for each term become a part of the student’s permanent record and are recorded on the official transcript. Term grade reports are available to the student via the college’s website (www.tcc.edu) through the Student Information System (SIS).

transcripts and certifications

A transcript is a copy of a student’s permanent academic record. An official transcript carries the college seal. Students must submit a written request or web request to receive a personal copy of their transcript or to send a copy of their transcript elsewhere. Transcripts sent to educational institutions or agencies must be official and carry the college seal. Generally, transcripts given or mailed directly to a student will not bear the college seal and will be stamped “Issued to Student.” Students must settle all financial obligations with the college before a transcript will be released. Visit www.tcc.edu, search keyword: “transcripts”, for options for requesting official transcripts.
Official transcripts normally take seven to fourteen working days to process, or longer during heavy registration periods or grade processing times. Transcripts for students who have taken courses on the quarter system (prior to summer 1988) or through cross-registration may take up to 14 working days to process.

Students can obtain an unofficial copy of their transcript by using the Student Information System (SIS) at www.tcc.edu.

To request a hard copy of the unofficial transcript, students must complete a request form and present the completed form and a picture ID to the Enrollment Services office. The college can provide most unofficial transcripts on the same day. Some requests must be sent to Central Records if the records are very old or involve cross-registration.

Certifications are letters or forms verifying a student’s enrollment status for health and auto insurance companies, military IDs, scholarships, job applications, promotion packages, etc. These requests normally take seven to fourteen working days or longer to process during heavy registration periods or grade processing times. Students must settle all financial obligations with the college before a certification will be released. Contact the campus Enrollment Services office to request certifications.

Students must present a picture ID to pick up transcripts or certifications. A third party may pick up a student’s transcript or certification, but only if the student has provided the college written permission—dated and signed by the student, to release the document to a specific individual. That individual must present his or her picture ID.

Contact Enrollment Services for information and assistance with transcripts and certifications.

hold on records

Students will not be permitted to register, nor will the college issue transcripts, certificates, or degrees to a student, until all financial obligations to the college have been settled.

family educational rights and privacy act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. TCC policy governing a student’s right to access, challenge the accuracy, or request release of his/her education record and grades may be found at www.tcc.edu, search keyword: “ferpa”.

directory information policy

The following information is considered directory information, which may be released without student authorization unless the student notifies the Enrollment Services office in writing by the end of the first week of classes that the information should not be released:
general information

1. Student’s name
2. Participation in officially recognized activities and sports
3. Address
4. Telephone listing
5. Weight and height of members of athletic teams
6. Electronic mail address
7. Degrees, honors and awards received
8. Date and place of birth
9. Major field of study
10. Dates of attendance
11. Grade level
12. The most recent educational agency or institution attended
13. Course credit load

The college must comply with judicial orders or lawfully issued subpoenas provided the institution makes a reasonable attempt to notify the student in advance of the compliance.

student records retention policy

The permanent record is the only official document of a student’s academic history and the only official document used for record reconciliation. All other student documents are subject to disposal by the college in accordance with state policy.

student conduct

The chancellor of the VCCS is authorized by the State Board for Community Colleges to impose appropriate penalties including expulsion from the college for student conduct which tends to discredit or injure the college. This authority has been delegated by the chancellor to the administration of each community college, subject to review by the chancellor or a delegated representative.

The VCCS guarantees to students the privilege of exercising their rights of citizenship under the Constitution of the United States without fear of prejudice and takes special care to ensure due process and to spell out defined routes of appeal when students feel their rights have been violated.

Students are considered to be responsible adults and are expected to maintain standards of conduct appropriate to membership in the college community. The college, therefore, emphasizes standards of student conduct rather than limits or restrictions on students. Guidelines and regulations governing student conduct usually are developed by representatives of the student body, faculty, counseling staff, and administration.

The college reserves the right to take disciplinary action compatible with its own best interest if such action is clearly necessary. Failure to meet standards of conduct acceptable to the college may result in disciplinary probation, suspension, dismissal, or other penalty depending upon the nature of the offense.
Students who are dismissed must reapply to the college. Readmission is not assured.

right to attend class
Students have the right to attend duly assigned classes on any TCC Campus. That right includes the right to attend the class without physical violence, fear of violence, psychological abuse, or racial, sexual, or other harassment.

academic conduct
academic freedom
Tidewater Community College is committed to the concept of academic freedom as presented in the American Association of University Professors policy statement.

Membership in the academic community imposes on students, faculty members, administrators, and trustees an obligation to respect the dignity of others, to acknowledge their right to express differing opinions, and to foster and defend intellectual honesty, freedom of inquiry and instruction, and free expression on and off the campus (AAUP Policy Documents & Reports, 1990 edition, 77).

Academic institutions exist for the transmission of knowledge, the pursuit of truth, the development of students, and the general well-being of society. Free inquiry and free expression are indispensable to the attainment of these goals. As members of the academic community, students should be encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth.

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus, and the larger community. Students should exercise their freedom with responsibility.

The responsibility to secure and to respect general conditions conducive to the freedom to learn is shared by all members of the academic community (AAUP Policy Documents & Reports, 1990 edition, 153).

Students should be free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study in which they are enrolled.

Students should have protection through orderly procedures against prejudiced or capricious academic evaluation. At the same time, they are responsible for maintaining standards of academic performance established for each course in which they are enrolled (AAUP Policy Documents & Reports, 1990 edition, 154).

If a problem arises concerning class content and/or procedures, it is appropriate for a student to discuss the problem with the faculty member before seeking help from an administrator. If a student feels that s/he has been injured by an infringement of academic freedom, the Student Grievance Procedure provides an avenue for resolution. The purpose of the Student Grievance Procedure is to
general information

provide equitable and orderly process to resolve grievances, other than appeals of final grades, by students at TCC.

academic misconduct

Academic misconduct includes, but is not limited to, the following actions:

• cheating on an examination or quiz—either giving or receiving information;
• copying information from another person on graded assignments;
• using unauthorized materials during tests;
• collaboration during examinations;
• buying, selling or stealing examinations;
• arranging a substitute for oneself during examinations;
• substituting for another person, or arranging such a substitution;
• plagiarism—intentional or accidental;
• submission of work other than your own for written assignments;
• collusion with another person or persons in submitting work for credit, in class or lab, unless such collaboration is approved in advance by the instructor.

faculty disposition of academic misconduct

Faculty members processing an instance of apparent academic misconduct in which the penalty sought is not dismissal from the college will employ the following procedure:

Faculty members who have reliable evidence of academic misconduct will (1) investigate the matter, and (2) review the facts of the matter and the proposed penalty with the appropriate academic dean. They may then take one or more of the following actions:

• require the work to be accomplished again;
• give no credit for the test, paper or exercise;
• assign a grade of W or F for the course; or
• refer the matter to the campus Dean for Student Services or designee for possible disciplinary sanction through the college’s disciplinary procedure.

If the faculty member chooses to refer the matter to the campus dean or designee for disposition, the Plenary Disciplinary Procedure shall be followed, and dismissal from the college is a possibility.

Students may appeal a faculty penalty through the Student Final Grade Appeal Procedure when a final course grade is involved, or through the Student Grievance Procedure for penalties not involving final course grades.
student misconduct
behavior subject to disciplinary action

Students may be subject to disciplinary action for on-campus or off-campus conduct. Federal, state and local laws apply on campus. Disciplinary action may be initiated for academic misconduct, which also may lead to criminal charges, in the following circumstances:

1. **Criminal Charges**: when a student is formally charged with the commission of a crime.

2. **Threat to Health or Safety**: when the student’s continued presence at the college is deemed to constitute a threat to the health, safety, or welfare of members of the campus community.

3. **Bomb Threat, Fire Alarm**: when a student activates a fire alarm, or makes a threat to damage or bomb college property, or encourages, incites, entices, or solicits any person to commit such a threat, the student shall be disciplined by the college and recommended for criminal prosecution to the full extent of the law.

4. **Weapons**: when a student is in possession, on his/her person or in his/her car, or uses weapons, including guns, knives, etc.

5. **Obscenity, Profanity**: when a student utters obscene or profane words.

6. **Assault, Battery, Fighting**: when a student engages in assault or battery, or fighting.

7. **Sexual Assault, Stalking**: when a student engages in sexual assault or stalking.

8. **Hazing, Harassment**: when a student engages in hazing, psychological abuse, racial, sexual, or other harassment.

9. **Theft**: when a student engages in theft, larceny, embezzlement, or the temporary taking of the property of another.

10. **Property Destruction**: when a student destroys, damages, defaces, or misuses public or private property.

11. **Illegal Entry**: when a student illegally enters or occupies state property.

12. **Riot**: when a student engages in a riot or a disorderly assembly.

13. **Gambling**: when a student engages in unauthorized gambling or gaming.

14. **Alcoholic Beverages**: When a student possesses, consumes, or displays behavior arising out of the consumption of alcoholic beverages.

15. **Drugs**: when a student engages in the possession, use, sale, or manufacture of illegal or controlled drugs.

16. ** Forgery**: when a student forges, alters, or misuses college documents or records, including student identification cards.
17. **Computer Security:** when a student engages in unauthorized use of computer resources, or makes unauthorized efforts to penetrate or modify any computing hardware or software, or uses computer resources to effect any of the acts prohibited by the TCC Student Handbook.

Disciplinary action by the college is not a criminal process, and the double jeopardy doctrine does not apply to student discipline. The college may elect to process a charge of misconduct even if the student may be or has been charged with a criminal offense arising out of the same act. The college will not delay its processing of a matter because of pending criminal charges, a trial, or an appeal.

Disciplinary action may also be initiated when a student is reported to college officials for conduct prejudicial to the academic or other functions of the college. Such conduct includes, but is not limited to, the following:

1. **Disruption.** Disruption of a classroom, laboratory, library, office, public student space (such as a student center), meeting, or hearing.
2. **Cheating.** Assisting or engaging in academic cheating or plagiarism.
3. **False Information.** Providing false information to the college.
4. **Registration Data.** Tampering with student registration data, or misuse of the student registration PIN number.
5. **Debt.** Issuing bad checks or failing to pay a debt owed to the college.
6. **Children on Campus.** Failure to comply with college policy regarding children on campus.
7. **Smoking.** Smoking tobacco or similar products inside college buildings, or in areas of the college grounds where smoking is prohibited.
8. **Littering.** Littering college grounds or buildings.
9. **Traffic Rules.** Failure to obey traffic and parking rules, or failure to obey commands of college security staff.
10. **Failure to comply.** Failure to comply with an official and proper order of a duly designated college official, or with any college policy or procedure.

In summary, rights and responsibilities are equal for all persons. Freedom of speech includes the freedom not to listen. Federal, state, and local laws apply on the campuses. Rights and responsibilities are irrevocably intertwined. Personal conduct, both on and off campus, reflects equally upon the student, the student’s family, and the college. Disorderly conduct will not be tolerated. The college places primary responsibility for student conduct on the student. Students are also responsible for the conduct of their guests at college events.

**acceptable use of electronic resources**

As part of its mission, the college provides access to the internet on each campus. In accordance with the American Library Association’s position on the widest possible access to all resources of the internet without discriminating
against any category of library user, our patrons are allowed the fullest access to the internet, unless restricted by federal, state, local, and institutional laws and policies. These include laws dealing with copyright, libel, obscenity, and plagiarism. Since the internet is an unregulated information source, the college has no control over the information found therein and cautions that the internet may contain inaccurate materials or materials of a controversial nature. The staff reserves the right to monitor its computer resources to protect the integrity of the computing systems, to track problems, and to insure equal and appropriate access to all users (i.e., time limits can be imposed during high use periods). Computer users are asked to employ common sense and courtesy in their use of the college's resources.

computer ethics guideline

State Law (Article 71 of Title 182 of the Code of Virginia) classifies damage to computer hardware or software (182-1524), unauthorized examination (182-1525), or unauthorized use (182-1526) of computer systems as (misdemeanor) crimes. Computer fraud (182-1523) and use of a computer as an instrument of forgery (182-1524) can be felonies.

discrimination or harassment

It is the policy of Tidewater Community College to provide equal employment and educational opportunities for all persons without regard to race, color, religion, national origin, political affiliation, veteran status, gender, age, or sexual orientation and for all otherwise qualified persons with disabilities. This policy permits appropriate employment preferences for veterans and specifically prohibits discrimination against veterans.

TCC does not tolerate discrimination or harassment on the basis of race, color, religion, national origin, political affiliation, veteran status, gender, age, sexual orientation, or disability.

sexual harassment

The harassment of students, faculty, or staff due to their sex is prohibited. College disciplinary or grievance procedures will be utilized when allegations of sexual harassment are made. The college will utilize the Notice of Investigative Guidance on Sexual Harassment, published by the U.S. Office of Education’s Office of Civil Rights, in addressing such matters.

Tidewater Community College’s position is that sexual assault and sexual harassment are forms of misconduct that undermine the integrity of the student and employment relationship. No student or employee—either male or female—should be subject to unsolicited and unwelcome sexual overtures or conduct, either verbal or physical. Sexual misconduct does not refer to occasional compliments of a socially acceptable nature. It refers to behavior that is not welcome, that is personally offensive, and that debilitates morale, and therefore, interferes with work and academic effectiveness. Such behavior may result in disciplinary action up to and including dismissal. Additionally, a student or employee charged with sexual misconduct can be prosecuted under Virginia criminal statutes.
general information

smoking
Smoking and/or the use of any tobacco product is prohibited in all buildings at TCC and in state-owned vehicles.

weapons and firearms
Tidewater Community College’s employees (including temporary workers provided by other employers), vendors, contractors, students, and volunteers are prohibited from carrying, maintaining, or storing a firearm or weapon on college property and in any college facility, even if the owner has a valid permit.

Any such individual who is reported or discovered to possess a firearm or weapon in violation of this policy will be asked to remove it immediately. Failure to comply may result in the imposition of appropriate employee or student sanctions, including disciplinary action, and/or arrest.

The college provides an exception to this prohibition for sworn law enforcement officials appointed pursuant to appropriate sections of the Code of Virginia and sworn federal law enforcement officers.

academic services
The college’s full range of academic services, including tutoring and other individual assistance with academic matters, is described more fully in the TCC Student Handbook.

learning resources centers (LRC)
Each campus houses a library and learning laboratory in a Learning Resources Center (LRC). A separate Slide and Print Library is located at the Visual Arts Center.

The Learning Resources Centers contain research materials in both print and electronic format to support the courses, curricula, and mission of the college. Library materials include books, newspapers, magazines, journals and an extensive collection of indexes, abstracts and full text databases. Materials in the Learning Laboratories include videotapes, audiotapes, films, cd-roms, computer files, and other audiovisual materials. In addition, faculty members may place materials on reserve in the Library or the Learning Laboratory for their students’ use. Library and Learning Laboratory staff members are available to help students take full advantage of the available resources. The Learning Resources Centers maintain a web site that provides access to the LRC catalog, the electronic research resources, and to many of the services the LRC provides.

Students must have a valid Tidewater Community College ID card in order to check out LRC materials for home use or to access materials in restricted LRC locations. Students are responsible for the LRC materials they use. Patrons who fail to return books/materials by the due date will receive 30 days notice prior to being submitted to the college collection office. Patrons will be charged for the cost of the materials as well as a collection fee. The college will use
internal and external resources as necessary to ensure the collection of the debt. Student records will be sealed and no services will be provided until the entire debt is satisfied. Additional LRC policy documents are identified on the LRC website at www.tcc.edu, search keywords: “LRC usage” and are available in the campus LRCs.

interactive computer laboratories
Interactive computer labs are located on the Norfolk and Portsmouth campuses and provide self-paced computer training for students and the public. Call (757) 822-1310 for information on the courses offered.

service learning
Service Learning is a teaching method that provides students with a better understanding of why education is important and applicable to everyday life. Students learn and develop through experiences that meet community needs. Meaningful service in the community, along with structured reflection on that service, are incorporated into the curriculum. Students practice newly acquired skills and knowledge in real-life situations and extend learning into the community to enhance classroom learning and foster a sense of caring for others.

student services
Tidewater Community College's student services programs are described in more detail in the TCC Student Handbook.

counseling
Counselors are available by appointment or on a walk-in basis to assist students with academic, career, and life planning. They help students explore their interests and identify career goals. With a counselor’s assistance, students develop an educational plan to meet their goals whether it is to continue their education at a four-year college or university, to prepare for immediate entry into the job market, or to develop skills for career advancement or personal growth.

Counselors can help students address issues related to career indecision, academic difficulty, time management, low self-esteem, and other obstacles to academic success. They teach a variety of courses on study skills, career development, college survival skills, time management, and test-taking skills.

TCC counseling offices offer individual and group counseling to help students with these concerns. Referral to appropriate local resources is available if a student requires additional professional assistance.
transfer counseling
Transfer counselors can assist students with selecting a transfer institution and designing a program to maximize transferability of courses to public or private colleges and universities in Virginia or another state.

career development
The college offers a comprehensive program to help students develop, evaluate, and implement a career plan. This approach helps students become aware of their interests, skills, values, and life-style preferences and relate them to a career decision. Resources are available to direct students to accurate, up-to-date information about future job outlooks and salaries. Each campus offers individual career counseling and seminars, workshops, and short courses on career-related topics.

student development
The college offers a variety of activities to orient students to the college and help them acquire the skills necessary for success. Courses such as study skills, college success skills, career planning, and other student development classes fulfill the orientation requirement in degree and certificate programs. Students should examine their curriculum to see if a particular SDV course is required. If not, students should choose the topic that best meets their orientation needs.

job referral service
The college offers an employment referral service designed to assist students and graduates in finding employment. Job listings are received from various employers (local companies, federal government, state and city agencies and many more), and posted online to the HireNet.net website. The college also provides additional services such as on-campus recruitment by local employers, assistance with resume writing and interviewing skills. For additional information, contact a campus Student Employment Services office (757) 822-7228 or the Career Services office.

cooperative education program
The Cooperative Education Program is designed to provide students with practical work experience that carries college credit for participating in a coordinated, paid learning program with a cooperating employer. “Co-op” bridges the gap between theory and practice by allowing students to apply skills learned in the classroom on the job. With the assistance and advice from the Cooperative Education office, students can decide if cooperative education will enhance their academic program.
international student services
Non-immigrant students holding or seeking F-1 visa status can obtain the necessary forms and instructions on how to apply for an I-20 from the International Student Services office. Prospective students in non-immigrant classes other than F-1 are required to meet with the International Student Advisor to determine admission eligibility and/or limitations. Advising services for international students are available at the Virginia Beach Campus.

disability services
The mission of TCC's Disabilities Services is to ensure compliance with state and federal law by providing eligible students with disabilities equal access to the curriculum, facilities and support services. In furtherance of this mission, college-wide disabilities services promote awareness through the dissemination of information to the college community, including training and consultation with faculty.

A counselor is available on each campus to help students with physical, sensory, and/or learning disabilities, or chronic health problems that require assistance, academic accommodations, or program modifications. The Coordinator for Disability Services is based at the Norfolk Campus and maintains office hours at the other campuses. Students needing accommodations are encouraged to contact the disability counselor 45 days before classes begin. Telephone numbers for Disability Services are listed in the directory for each campus. All contacts and services are confidential.

financial aid
Each campus maintains a Financial Aid office, where students can receive information about types of financial aid, application forms, and assistance in completing applications for financial assistance. The Financial Aid office also monitors students' eligibility and coordinates disbursement of financial aid awards.

open door project
The Open Door Project is a federally funded Student Support Services/TRIO program that provides academic support and personal services to eligible students at the Norfolk and Portsmouth campuses. The goal of the project is to help participants improve their academic performance, stay in college, and graduate from TCC, and transfer to a four-year college or university. For more information, contact the Open Door Project office at (757)-822-1218.

the women’s center
The TCC Women’s Center maintains an office on each campus to provide services that help women achieve their academic and personal goals. Among the services offered are workshops, counseling, weekly support groups, crisis intervention, and help in obtaining financial assistance. In addition, the Center...
offers a skills training program in conjunction with TCC Workforce Training and Services. Contact the campus Women’s Center office for more information.

veterans affairs office
A Veterans Affairs office on each campus assists students in applying for VA benefits, in certifying eligibility, and in maintaining accurate enrollment and student status records.

student activities
TCC provides a comprehensive student activities program that includes publications, intramural athletics, honor societies, campus and community-based cultural and social events, and student clubs and organizations recognized by the Student Government Association and approved by the appropriate college authorities.

college governance
The collegial governance of Tidewater Community College is founded on the belief that the internal constituencies of the institution—administration, faculty, classified employees, and students—are to be genuinely represented and have a meaningful voice in the decisions affecting the operation, policy development, and strategic planning of the college. The purpose of the TCC Governance Structure is to define the roles that board members, administrators, faculty, classified staff, and students should play in shared responsibility and cooperative action. The design of the governance system adheres to two basic operating principles—that people’s time is a precious commodity that should not be wasted, and that people do their best work when there is a high expectation that their work will matter.

Mutual trust, good faith, support, and commitment to the institution and its students are essential to the success of shared governance. Because shared governance is intended to serve the entire college, it is incumbent upon all constituent groups, committees, and task forces to ensure that representation from all areas of the college is fair, timely, and inclusive.

For further information on college governance, visit the college website at www.tcc.edu, search keyword: “governance”.

student life policies
children on campus
TCC has no facilities to provide care for the children of students or visitors. Children cannot be left unattended on the grounds, in automobiles, snack bars, lounge areas, administrative offices, registration sites, or Learning Resources Centers. Children cannot be taken into classrooms or laboratories. Failure to comply with this policy will lead to disciplinary action or, in appropriate circumstances, to referral to appropriate law enforcement officials.
general information

health insurance
Recognizing that comprehensive health care insurance is often vital to one’s efforts to maintain a healthy life-style, the college makes health care insurance available to TCC students who desire coverage. Students can obtain information and an application in the office of the campus Dean for Student Services. International students can obtain health insurance information from the International Student Services office on the Virginia Beach campus.

drug and alcohol abuse prevention
The unlawful possession, use, or distribution of drugs and alcohol by students and employees on college property or as a part of any college activity is prohibited.

The legal sanctions under federal and state law for unlawful possession, use, or distribution of illicit drugs and alcohol include fines and imprisonment.

Substantial health risks have long been associated with the use of illicit drugs and alcohol. These include death; severe impairment of respiratory, circulatory, and other systems; damage to various organs, including, but not limited to, the liver and the brain; and a host of other drug and alcohol induced health risks.

Drug and alcohol counseling, treatment, or rehabilitation programs are available by contacting each campus Counseling Center, or may be obtained from the Community Services Board in the student’s or employee’s city of residence, or from any private provider.

Students attending a community college may not possess, sell, use, give away, or otherwise distribute illegal drugs. Students violating this policy are subject to suspension, expulsion, or other appropriate discipline. College charges will be processed against students in the normal manner provided by the college rules.

Faculty members, staff members, or any employee of a community college may not possess, sell, use, give away, or otherwise distribute illegal drugs. Faculty members, staff members, or any employees of a community college violating this rule are subject to suspension or other appropriate discipline as provided in the policies, procedures and regulations of the State Board for Community Colleges and/or the State Personnel Statutes and/or the laws of the Commonwealth of Virginia, the counties, and city governments.

In cases where the president or the president’s designee believes that the continued presence of a person charged with possession, sale, use or distribution of illegal drugs presents a serious and immediate threat to the welfare of the college community, the students, faculty members, or staff members will be afforded due process and a hearing as soon as possible, after which appropriate action will be taken.

The college is pledged in every way possible to help individuals achieve a realistic understanding of the consequences of drug use for themselves and society. Only informed men and women can hope to make the responsible decisions required to prevent the proliferation of drug abuse. Literature concerning drugs is available from the counselors. Counseling assistance is also available on a confidential basis for any member of the college community who needs this help.
general information

health services

TCC does not provide health services, emergency or otherwise. In case of emergency, call 911 or ask the campus switchboard operator to call 911.

inclement weather conditions policy

When weather conditions make it necessary to delay opening, cancel classes, or close the college, one of the following notices will be provided by the TCC Information Center and local radio and television stations. Please do not call any other college telephone numbers.

Students can determine the college’s status by calling (757) 822-1122, checking the radio or television stations, or the college’s website (www.tcc.edu). One of the following notices will be provided:

1. Message: The college is closed. The college is closed day and evening for students and staff.
2. Message: The college will open/close at (    ). The college will open/close at designated time for students and staff.
3. Message: The college will open at 4:00 p.m. The college will be closed for day classes and day staff, but will open for evening classes and evening staff.
4. Message: Evening classes are cancelled. The college is closed for evening students and staff.

student handbook

The college publishes the TCC Student Handbook along with this Catalog. The TCC Student Handbook contains more information about college procedures, as well as the full text of college policies. Copies are available in campus libraries and in student services offices.

curricula of study

state policy on transfer

In 1991, the State Council of Higher Education for Virginia (SCHEV) and the Virginia Community College System (VCCS) adopted the State Policy on Transfer to ensure transferability of the Associate of Arts and Associate of Science degrees from community colleges. Graduates of TCC’s university-parallel degree programs who are accepted into a baccalaureate degree program can expect to be classified as juniors and to have met lower-level general education requirements at public four-year colleges and universities in Virginia. Details on the state transfer policy are available at www.schev.edu.

Note: While TCC’s Associate of Science degree in General Studies may be transferable to many four-year institutions, the flexible design of the program is not intended to ensure the same ease of transferability as the other transfer degrees.
articulation agreements

Tidewater Community College works with baccalaureate degree-granting institutions to develop articulation agreements that guarantee transfer students are treated on an equal basis with the receiving institution's native students. The Virginia Community College System also negotiates agreements with four-year institutions that guarantee admission to qualified students enrolled in any community college in the VCCS.

TCC's guaranteed admissions and articulation agreements apply only to graduates of the College's university-parallel transfer degree programs. Students interested in transferring to a four-year institution prior to completing the associate degree must apply through the transfer institution's competitive admissions process, and transferability of course work will be evaluated on a course-by-course basis.

TCC works continuously to create additional transfer options and enhance and update existing transfer agreements. Guaranteed admissions agreements are currently available with Christopher Newport University, the College of William and Mary, James Madison University, Longwood University, Norfolk State University, Old Dominion University, Radford University, the University of Mary Washington, the University of Virginia, the University of Virginia's College at Wise, Virginia Commonwealth University, Virginia State University, and Virginia Tech's colleges of Agriculture and Life Sciences and Engineering for students who meet the conditions outlined in the agreements. TCC or the VCCS also has signed agreements with Cappella University, Emory and Henry College, Hampton University's College at Virginia Beach, Lynchburg College, Mary Baldwin College, Randolph College, Regent University, Regis University, Saint Leo University, Strayer University, Sweet Briar College, the University of Phoenix, and Virginia Union University. Most general agreements guarantee admission to the university, but not necessarily to the student's major of choice. Many programs have competitive admissions that require students to meet additional grade point average and course requirements for admission to the program.

Program-to-program articulation agreements provide benefits for students who go beyond the guarantees outlined in the State Policy on Transfer and the guaranteed admissions agreements. Details on the transfer agreements are available from a campus transfer counselor or academic advisor. Students are advised to consult frequently with an advisor or counselor to get the most accurate information on transfer and articulation.

general education requirements

In selecting courses, students are expected to follow the curriculum outline for their intended major. The following list is provided as a guide to planning and is not intended to be a comprehensive summary of TCC courses that may be used to meet general education requirements in associate degree programs. For the purposes of transfer, the list includes courses most commonly accepted to meet core requirements at public four-year institutions. While transfer students who complete the associate's degree can expect to have met the lower-level general education requirements, transcripts for transfer students who do not complete the associate's degree will be reviewed by the receiving institution on a course-
by-course basis. Not all courses listed below will meet core requirements at all four-year institutions, but students may receive elective credit.

While general education courses other than those designed specifically for transfer may be used to meet portions of the general education requirements, principles published by the Commission on Colleges of the Southern Association of Colleges and Schools require that general education courses be general in nature and not “…narrowly focused on those skills, techniques, and procedures peculiar to a particular occupation or profession.”

Credits transferred into TCC from an accredited institution may be used to satisfy these requirements, but students should request a transcript evaluation to determine which courses may be applied. With careful planning, some general education courses may also meet prerequisites for courses in the major. Students are advised to consult a TCC advisor or counselor and appropriate transfer guides to ensure that selected courses will meet TCC’s and the intended transfer institution’s requirements.

**College Composition:** ENG 111, ENG 112

**Speech/Communications:** SPD 100, SPD 110

**Humanities, Fine Arts, and Foreign Languages:** ART 201, ART 202, ENG 125, ENG 241, ENG 242, ENG 243, ENG 244, ENG 251, ENG 252, ENG 253, FRE 203, FRE 204, HUM 201, HUM 202, HUM 241, HUM 242, HUM 256, HUM 259, HUM 260, MUS 121, MUS 122, MUS 221, MUS 222, PHI 101, PHI 102, PHI 111, PHI 220, PHI 226, REL 200, REL 210, REL 215, REL 230, SPA 203, SPA 204, SPD 130, SPD 141, SPD 142, SPD 151

**Social and Behavioral Sciences:** ECO 120, ECO 201, ECO 202, GEO 200, GEO 210, GEO 220, GEO 221, GEO 222, GEO 225, HIS 101, HIS 102, HIS 111, HIS 112, HIS 121, HIS 122, HUM 210, PLS 130, PLS 211, PLS 212, PLS 241, PLS 242, PSY 200, PSY 201, PSY 202, PSY 215, PSY 216, PSY 230, SOC 201, SOC 202, SOC 211, SOC 212, SOC 268, SSC 210

**Natural Sciences:** BIO 101, BIO 102, BIO 141, BIO 142, CHM 111, CHM 112, GOL 105, GOL 106, GOL 110, GOL 111, GOL 112, NAS 125, NAS 130, NAS 131, NAS 132, PHY 201, PHY 202, PHY 241, PHY 242

**Mathematics:** MTH 115, MTH 116, MTH 152, MTH 158, MTH 163, MTH 166, MTH 173, MTH 240, MTH 270

**Health and Physical Education:** DIT 125, HLT 100, HLT 106, HLT 110, HLT 116, HLT 121, HLT 122, HLT 130, HLT 138, HLT 200, HLT 204, HLT 215, HLT 226, PED (any activity course)

**Student Development:** SDV 100 or other appropriate SDV course

---

1 May be used in applied programs only
2 VCCS/TCC requirements; generally not transferable or transferable as elective credit
major field course requirements and prerequisites

**AA/AS Degrees:** In selecting courses, students are expected to follow the curriculum outline for their intended major and specialization. Students who plan to transfer to a four-year college or university are urged to acquaint themselves with the requirements of the institution and major department to which they intend to transfer. With careful planning, students may be able to meet both general education requirements and prerequisites for the major with the same course(s), allowing greater flexibility in selecting electives. Students should consult their advisor or counselor to select courses most appropriate for their curriculum. Many TCC courses are transferable as general electives even if they do not fulfill core requirements.

**AAA/AAS Degrees and Certificates:** In selecting courses, students are expected to follow the curriculum outline for their intended major and specialization. Where appropriate, students may select courses from lists of approved courses provided by their division office to meet requirements in the major. While general education courses other than those designed specifically for transfer may be used to meet portions of the general education requirements, principles published by the Commission on Colleges of the Southern Association of Colleges and Schools require that general education courses be general in nature and not “…narrowly focused on those skills, techniques, and procedures peculiar to a particular occupation or profession.” AAS/AAA degrees generally are not designed for transfer, but students can increase the transferability of selected applied degree programs by substituting transfer courses where appropriate to meet program requirements.

general electives

In addition to general education and courses required for their major, students may also have the opportunity to enroll in a credit course as a general elective. The curriculum outline for each program lists specific courses students must take to complete the degree or certificate, and most programs limit student choice to lists of approved courses. Some programs, however, may provide flexibility for students to select any credit course at the 100- or 200-level in which they have an interest. Transfer students are advised to consult a TCC advisor or counselor and the transfer institution’s transfer guide to determine transferability of elective courses.
college/university transfer programs

<table>
<thead>
<tr>
<th>college/university transfer programs</th>
<th>associate degree</th>
<th>specialization</th>
</tr>
</thead>
<tbody>
<tr>
<td>liberal arts</td>
<td>page 67</td>
<td></td>
</tr>
<tr>
<td>business administration</td>
<td>page 68</td>
<td></td>
</tr>
<tr>
<td>engineering</td>
<td>page 69</td>
<td></td>
</tr>
<tr>
<td>general studies</td>
<td>page 70</td>
<td></td>
</tr>
<tr>
<td>science</td>
<td>page 71</td>
<td></td>
</tr>
<tr>
<td>computer science</td>
<td>page 72</td>
<td></td>
</tr>
<tr>
<td>social science</td>
<td>page 72</td>
<td></td>
</tr>
</tbody>
</table>

The Associate of Arts degree program is designed for students who plan to transfer to a four-year college or university to pursue a Bachelor of Arts (BA) degree program in the liberal arts. Four-year liberal arts programs prepare graduates for a wide variety of jobs in business, the arts, education, medical and legal professions, and in social and public service occupations. Liberal studies emphasize language, literature, philosophy, mathematics, science, social science and analytical and critical thinking skills, all of which prepare students for lifelong learning and social, cultural, and technological change.

Courses required for the Liberal Arts degree are available on all four campuses.

**Associate of Arts Degree:**
**Liberal Arts (648)**

**Semester 1 (Based on a Fall Semester start)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective³</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 158</td>
<td>College Algebra (or MTH 163)</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beginning Foreign</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language Sequence³</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective³</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education³</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18
### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective(^2)</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 240</td>
<td>Statistics (or MTH 164)</td>
<td>3</td>
<td>MTH 158 or MTH 163</td>
</tr>
<tr>
<td>SPD 100</td>
<td>Principles of Public Speaking(^2)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beginning Foreign</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language Sequence(^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education(^1)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Humanities/Social Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective(^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intermediate Foreign</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language Sequence(^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science with Lab(^1)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective(^1)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Humanities/Social Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective(^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intermediate Foreign</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Language Sequence(^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science with Lab(^1)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective(^1)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

**Total Minimum Credits** 61

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. Students should consult an academic advisor or counselor to choose the appropriate course(s).
2. Students may substitute SPD 110 for SPD 100. Consult transfer institution to ensure that the substitution is appropriate for intended transfer program.
3. Students may select any of the following courses to meet this requirement: HIS 101, 102, 111, 112, 121, or 122.

**Note:** Students who already have foreign language proficiency or have successfully completed two years of a foreign language in high school may petition for advanced placement. Students placed into an advanced course in foreign language (102, 203, or 284), may substitute courses from the approved list of humanities and social sciences on page 64 for the language credits needed to complete the degree. When selecting a foreign language, students are required to choose full-year sequences.

---

### Business Administration

The Associate of Science degree program in Business Administration is designed for students who plan to transfer to a four-year college or university to pursue a Bachelor of Science (BS) degree in business administration. Typical majors include accounting, economics, information systems, international business, finance, management, marketing, and public administration.

Courses required for the Business Administration degree are available on all four campuses.

### Associate of Science Degree: Business Administration (213)

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective(^3)</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td>Science with Lab(^1)</td>
</tr>
</tbody>
</table>

**Semester Total** 18

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective(^3)</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 270</td>
<td>Applied Calculus</td>
<td>3</td>
<td>MTH 163 or MTH 166</td>
</tr>
<tr>
<td></td>
<td>Science with Lab(^1)</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECO 201</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
<td>Humanities Elective(^1)</td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education(^1)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Elective(^2)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

---

The Associate of Science degree program in Business Administration is designed for students who plan to transfer to a four-year college or university to pursue a Bachelor of Science (BS) degree in business administration. Typical majors include accounting, economics, information systems, international business, finance, management, marketing, and public administration.

Courses required for the Business Administration degree are available on all four campuses.

### Associate of Science Degree: Business Administration (213)

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective(^3)</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td>Science with Lab(^1)</td>
</tr>
</tbody>
</table>

**Semester Total** 18

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective(^3)</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 270</td>
<td>Applied Calculus</td>
<td>3</td>
<td>MTH 163 or MTH 166</td>
</tr>
<tr>
<td></td>
<td>Science with Lab(^1)</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECO 201</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
<td>Humanities Elective(^1)</td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education(^1)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Elective(^2)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

---

The Associate of Science degree program in Business Administration is designed for students who plan to transfer to a four-year college or university to pursue a Bachelor of Science (BS) degree in business administration. Typical majors include accounting, economics, information systems, international business, finance, management, marketing, and public administration.

Courses required for the Business Administration degree are available on all four campuses.

### Associate of Science Degree: Business Administration (213)

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective(^3)</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td>Science with Lab(^1)</td>
</tr>
</tbody>
</table>

**Semester Total** 18

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective(^3)</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 270</td>
<td>Applied Calculus</td>
<td>3</td>
<td>MTH 163 or MTH 166</td>
</tr>
<tr>
<td></td>
<td>Science with Lab(^1)</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECO 201</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
<td>Humanities Elective(^1)</td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education(^1)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Elective(^2)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

---

The Associate of Science degree program in Business Administration is designed for students who plan to transfer to a four-year college or university to pursue a Bachelor of Science (BS) degree in business administration. Typical majors include accounting, economics, information systems, international business, finance, management, marketing, and public administration.

Courses required for the Business Administration degree are available on all four campuses.
### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 212</td>
<td>Principles of Accounting II</td>
<td>3</td>
<td>ACC 211</td>
</tr>
<tr>
<td>BUS 216</td>
<td>Probability and Statistics for Business and Economics</td>
<td>3</td>
<td>MTH 163 and ITE 115</td>
</tr>
<tr>
<td>ECO 202</td>
<td>Principles of Microeconomics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities Elective¹</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education¹</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Approved Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

**Total Minimum Credits** 60

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. Students should consult an academic advisor or counselor to choose the appropriate course(s).

2 The following courses are recommended to satisfy the approved elective: BUS 100, ENG 131, ITP 100, ITP 132, PLS 241, SPD 100 or SPD 110.

3 Students may select any of the following courses to meet this requirement: HIS 101, 102, 111, 112, 121, or 122.

### Engineering

The Associate of Science degree program in Engineering is designed for students who plan to transfer to a four-year college or university to pursue a Bachelor of Science (BS) degree in engineering in one of several fields. The two-year engineering degree program includes general education and engineering courses, which cover theoretical concepts and practical applications. Graduates with the baccalaureate degree find careers in aerospace, computer, environmental, civil, electrical/electronics, mechanical, mining/metallurgical, and nuclear engineering.

Admission to the engineering curriculum requires satisfactory completion of the following high school units or their equivalents: four units of English; four units of mathematics (two units of algebra, one unit of plane geometry, one unit of advanced mathematics or trigonometry and solid geometry); one unit of laboratory science and one unit of social studies.

Engineering courses required for the transfer engineering degree are available only at the Virginia Beach Campus.

### Associate of Science Degree: Engineering (831)

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 111</td>
<td>College Chemistry I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EGR 120</td>
<td>Introduction to Engineering</td>
<td>2</td>
<td>MTH 164, MTH 166 or Placement into MTH 173</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective¹</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 173</td>
<td>Calculus with Analytic Geometry I</td>
<td>5</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engr and Technologies</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 112</td>
<td>College Chemistry II</td>
<td>4</td>
<td>CHM 111</td>
</tr>
<tr>
<td>EGR 110</td>
<td>Engineering Graphics</td>
<td>3</td>
<td>MTH 164, MTH 166 or Placement into MTH 173</td>
</tr>
<tr>
<td>ENG 112</td>
<td>College Composition II²</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>MTH 174</td>
<td>Calculus with Analytic Geometry II</td>
<td>4</td>
<td>MTH 173</td>
</tr>
<tr>
<td>Approved Engineering Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 125</td>
<td>Introduction to Engineering Methods (C++)</td>
<td>4</td>
<td>EGR 110</td>
</tr>
<tr>
<td>MTH 279</td>
<td>Ordinary Differential Equations</td>
<td>4</td>
<td>MTH 174</td>
</tr>
<tr>
<td>PHY 241</td>
<td>University Physics I</td>
<td>4</td>
<td>MTH 173</td>
</tr>
<tr>
<td>Approved Engineering Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective¹</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

#### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities Electives¹</td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>MTH 277</td>
<td>Vector Calculus</td>
<td>4</td>
<td>MTH 174 or equivalent</td>
</tr>
<tr>
<td>PHY 242</td>
<td>University Physics II</td>
<td>4</td>
<td>PHY 241</td>
</tr>
<tr>
<td>Approved Engineering Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education¹</td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

**Total Minimum Credits** 71
general studies

The Associate of Science degree in General Studies is a flexible transfer degree that offers the student an opportunity to combine courses to meet specific career goals as well as lower level general education requirements at a four-year college or university. The program consists of 44 credits of general education with 18 additional hours that may be selected in consultation with an advisor or counselor to ensure they are appropriate to meet the student’s transfer and educational goals.

This program is not meant to insure the same ease of transferability as the other transfer degrees, but through articulation agreements, students may use a limited number of courses from selected applied programs to transfer to corresponding professional programs at four-year colleges and universities.

Students can maximize the transferability of the General Studies degree by selecting courses from those listed under General Education Requirements on page 64.

Note: Through an articulation agreement with Old Dominion University, students enrolled in the Developmental Disabilities certificate program who wish to pursue a baccalaureate degree in Special Education can follow a prescribed academic plan for the AS degree in General Studies that includes a limited number of courses from the certificate program. For additional information, contact Gerald Mayhew at 822-5220 or a transfer counselor at the Chesapeake Campus.

Courses required for the General Studies degree are available on all four campuses.

---

### Transfer Education

1. Eligible courses are listed page 64 in the 2008-2009 catalog. Students should consult a faculty advisor or counselor to choose the appropriate course(s).

2. Recommended courses for approved engineering electives:

<table>
<thead>
<tr>
<th>Old Dominion University: Civil Engineering</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 140 (3); EGR 245 (3); EGR 246 (3)</td>
<td>(9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Old Dominion University: Computer Engineering</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 260 (3); EGR 261 (3); EGR 262 (2); EGR 270 (4)</td>
<td>(12)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Old Dominion University: Electrical Engineering</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 260 (3); EGR 261 (3); EGR 262 (2); EGR 270 (4)</td>
<td>(12)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Virginia Tech: Civil and Environmental Engineering</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 140 (3); EGR 245 (3); EGR 246 (3); EGR 247 (1)</td>
<td>(10)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Virginia Tech: Computer Engineering</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 140 (3); EGR 245 (3); EGR 246 (3)</td>
<td>(9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Virginia Tech: Electrical Engineering</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 140 (3); EGR 260 (3); EGR 261 (3)</td>
<td>(9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Virginia Tech: Mechanical Engineering</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 140 (3); EGR 245 (3); EGR 246 (3)</td>
<td>(9)</td>
</tr>
</tbody>
</table>

3. Students may select any of the following courses to meet this requirement: HIS 101, 102, 111, 112, 121, or 122.

4. Students who plan to transfer to Old Dominion University are advised to take ENG 131 in place of ENG 112.

### Associate of Science Degree: General Studies (699)

**Semester 1 (Based on a Fall Semester start)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
<td>Placement into ENG 111</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science with Lab</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
<td>Placement into ENG 111</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science with Lab</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

**Semester 3**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 100</td>
<td>Principles of Public Speaking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Approved Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 15

**Semester 4**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 12

**Total Minimum Credits** 62
1 Eligible courses are listed on page 64 in the 2008-2009 catalog. Students should consult an academic advisor or counselor to choose the appropriate course(s). MTH 103, MTH 121, and MTH 126 cannot be used to fulfill the mathematics requirement.
2 Students may substitute SPD 110 for SPD 100. Consult transfer institution to ensure that the substitution is appropriate for intended transfer program.
3 The “Approved Electives” may be satisfied with any Lab Science, Social Science, or Humanities electives listed on page 64 of the 2008-2009 catalog without an approved waiver/substitution required.
4 Students may select any of the following courses to meet this requirement: HIS 101, 102, 111, 112, 121, or 122.

---

**science**

The Associate of Science degree program in Science prepares students to transfer to a four-year college or university to pursue a Bachelor of Science (BS) degree in science and related fields: biology, chemistry, dental hygiene, forestry, general science, geophysical science, mathematics, medical technology, nuclear medicine, nursing, pharmacy, and physics. The program also prepares students for medical, dental, and veterinary studies. Courses required for the Science degree are available on all four campuses.

**Associate of Science Degree:**

**Science (880)**

**Semester 1 (Based on a Fall Semester start)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective2</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science with Lab</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**  15

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective2</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 164</td>
<td>Precalculus II</td>
<td>3</td>
<td>MTH 163</td>
</tr>
<tr>
<td></td>
<td>Science with Lab</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**  14

Curriculum Options/Recommendations: Course requirements differ from college to college and major to major. Students should consult a transfer counselor or academic advisor to plan a course of study and investigate the requirements of transfer institutions before choosing mathematics courses, laboratory sciences, and electives.

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. Students should consult an academic advisor or counselor to choose the appropriate course(s). Sequenced lab courses required in natural and physical sciences.
2 Students may substitute SPD 110 for SPD 100. Consult transfer institution to ensure that the substitution is appropriate for intended transfer program.
3 Students may select any of the following courses to meet this requirement: HIS 101, 102, 111, 112, 121, or 122.

Preparation for Medical Dental and Veterinary Studies: Students should take MTH 163-164 and at least one semester of calculus (MTH 119). Biology (BIO 101-102), Chemistry (CHM 111-112), Organic Chemistry (CHM 241-242), and Physics (PHY 201-202) are the introductory level laboratory sciences generally completed at the freshman/sophomore level.

Bonfante Library/PAS/General Science: Students should take MTH 163-164 and at least one semester of calculus (MTH 119). Biology (BIO 101-102), Chemistry (CHM 111-112), Organic Chemistry (CHM 241-242), and Physics (PHY 201-202) are the introductory level laboratory sciences generally completed at the freshman/sophomore level.
Computer Science
The Associate of Science degree in Science with a specialization in Computer Science is designed for students who plan to transfer to a four-year college or university to pursue a baccalaureate degree in computer science. This degree program also meets the needs of students seeking teacher certification in secondary mathematics or computer science.

CSC courses required for the computer science specialization are offered exclusively at the Virginia Beach Campus.

Associate of Science Degree: Science Specialization: Computer Science (880.01)

<table>
<thead>
<tr>
<th>Semester 1 (Based on a Fall Semester start)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course No.</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>CSC 110</td>
</tr>
<tr>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
</tr>
<tr>
<td>MTH 173</td>
</tr>
<tr>
<td>SDV 100</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

| Semester Total | 16 |

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 201</td>
<td>Computer Science I</td>
<td>4</td>
<td>CSC 110</td>
</tr>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective³</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 174</td>
<td>Calculus with Analytic Geometry II</td>
<td>4</td>
<td>MTH 173</td>
</tr>
</tbody>
</table>

| Semester Total | 14 |

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 205</td>
<td>Computer Organization</td>
<td>3</td>
<td>CSC 110</td>
</tr>
<tr>
<td>CSC 210</td>
<td>Programming with C++</td>
<td>4</td>
<td>CSC 201</td>
</tr>
<tr>
<td></td>
<td>Science with Lab¹</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective³</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

| Semester Total | 15 |

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 215</td>
<td>Advanced Computer Organization</td>
<td>3</td>
<td>CSC 205</td>
</tr>
<tr>
<td></td>
<td>Humanities Electives¹</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science with Lab¹</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective³</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

| Semester Total | 16 |

Total Minimum Credits | 61 |

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. Students should consult an academic advisor or counselor to choose the appropriate course(s). Sequenced lab courses required in natural and physical sciences.

2 Students may substitute SPD 110 for SPD 100. Consult transfer institution to ensure that the substitution is appropriate for intended transfer program.

3 Students may select any of the following courses to meet this requirement: HIS 101, 102, 111, 112, 121, or 122.

Social Sciences

The Associate of Science degree in Social Sciences is designed for students who plan to transfer to a four-year college or university to pursue a baccalaureate degree in one of the social or behavioral sciences. Social Sciences include academic disciplines such as anthropology, economics, geography, history, political science, sociology, and psychology. The AS in Social Sciences also prepares students for some teacher certification programs.

Courses required for the Social Sciences degree are available on all four campuses.

Associate of Science Degree: Social Sciences (882)

<table>
<thead>
<tr>
<th>Semester 1 (Based on a Fall Semester start)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course No.</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
</tr>
<tr>
<td>MTH 158</td>
</tr>
<tr>
<td>SDV 100</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

| Semester Total | 16 |
### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS</td>
<td>History Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MTH 240</td>
<td>Statistics (or MTH 164)</td>
<td>3</td>
<td>MTH 158 or MTH 163</td>
</tr>
<tr>
<td></td>
<td>Science with Lab&lt;sup&gt;1&lt;/sup&gt;</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 100</td>
<td>Principles of Public Speaking&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities or Social</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 15

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Humanities Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities or Social</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities or Social</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 15

**Total Minimum Credits** 62

---

<sup>1</sup> Eligible courses are listed on page 64 in the 2008-2009 catalog. Students should consult an academic advisor or counselor to choose the appropriate course(s).

<sup>2</sup> Students may substitute SPD 110 for SPD 100. Consult transfer institution to ensure that the substitution is appropriate for intended transfer program.

<sup>3</sup> Students may select any of the following courses to meet this requirement: HIS 101, 102, 111, 112, 121, or 122.
<table>
<thead>
<tr>
<th>Program</th>
<th>Associate Degree</th>
<th>Specialization or Technical Plans</th>
<th>Certificate</th>
<th>Career Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>Page 77</td>
<td></td>
<td>Page 77</td>
<td>Page 78</td>
</tr>
<tr>
<td>Acquisition and Procurement</td>
<td></td>
<td></td>
<td></td>
<td>Page 129</td>
</tr>
<tr>
<td>Administering Programs for Young Children</td>
<td></td>
<td></td>
<td></td>
<td>Page 95</td>
</tr>
<tr>
<td>Administration of Justice</td>
<td>Page 78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Assistant (Administrative Support Technology)</td>
<td>Page 79</td>
<td>Page 79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising Design (Graphic Design)</td>
<td></td>
<td></td>
<td>Page 105</td>
<td></td>
</tr>
<tr>
<td>Air Conditioning and Refrigeration</td>
<td></td>
<td></td>
<td>Page 81</td>
<td></td>
</tr>
<tr>
<td>American Sign Language (ASL)</td>
<td></td>
<td></td>
<td></td>
<td>Page 83</td>
</tr>
<tr>
<td>Architectural Drafting and Design (Computer Aided Drafting and Design Technology)</td>
<td>Page 89</td>
<td>Page 89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASL - English Interpretation</td>
<td>Page 82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate Designer (Interior Design)</td>
<td></td>
<td></td>
<td>Page 128</td>
<td></td>
</tr>
<tr>
<td>Auto Parts Management Trainee</td>
<td></td>
<td></td>
<td>Page 84</td>
<td></td>
</tr>
<tr>
<td>Automotive Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automotive Brakes, Suspension, and State Inspection</td>
<td></td>
<td></td>
<td></td>
<td>Page 85</td>
</tr>
<tr>
<td>Automotive Electrical/Electronic, Air Conditioning</td>
<td></td>
<td></td>
<td></td>
<td>Page 85</td>
</tr>
<tr>
<td>Automotive Engine Diagnosis</td>
<td></td>
<td></td>
<td></td>
<td>Page 85</td>
</tr>
<tr>
<td>Automotive Heavy-Duty Engine and Transmission</td>
<td></td>
<td></td>
<td></td>
<td>Page 86</td>
</tr>
<tr>
<td>Automotive Service and Parts Specialist</td>
<td></td>
<td></td>
<td></td>
<td>Page 86</td>
</tr>
<tr>
<td>Catering</td>
<td></td>
<td></td>
<td></td>
<td>Page 113</td>
</tr>
<tr>
<td>Child Development</td>
<td></td>
<td></td>
<td></td>
<td>Page 95</td>
</tr>
<tr>
<td>Civil Engineering Technology</td>
<td>Page 87</td>
<td></td>
<td></td>
<td>Page 88</td>
</tr>
<tr>
<td>Classical Cooking</td>
<td></td>
<td></td>
<td></td>
<td>Page 113</td>
</tr>
<tr>
<td>Computer Aided Drafting and Design Technology</td>
<td>Page 89</td>
<td></td>
<td>Page 91</td>
<td></td>
</tr>
<tr>
<td>Construction Trades/Air Conditioning (Technical Studies)</td>
<td>Page 147</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Controls (Electromechanical)</td>
<td></td>
<td></td>
<td></td>
<td>Page 97</td>
</tr>
<tr>
<td>Crafts (Studio Arts)</td>
<td>Page 145</td>
<td>Page 145</td>
<td></td>
<td>Page 100</td>
</tr>
<tr>
<td>Critical Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culinary Arts (Hospitality Management)</td>
<td>Page 112</td>
<td>Page 113</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database Specialist</td>
<td></td>
<td></td>
<td></td>
<td>Page 124</td>
</tr>
<tr>
<td>Developmental Disabilities</td>
<td></td>
<td></td>
<td></td>
<td>Page 91</td>
</tr>
<tr>
<td>Diagnostic Medical Sonography</td>
<td></td>
<td></td>
<td>Page 92</td>
<td></td>
</tr>
<tr>
<td>Diesel and Industrial Machine Repair</td>
<td></td>
<td></td>
<td></td>
<td>Page 86</td>
</tr>
<tr>
<td>Early Childhood Development</td>
<td>Page 93</td>
<td></td>
<td></td>
<td>Page 95</td>
</tr>
<tr>
<td>Early Childhood Instruction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>Associate Degree</td>
<td>Specialization or Technical Plans</td>
<td>Certificate</td>
<td>Career Studies</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-----------------------------------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Educational Support Specialist</td>
<td></td>
<td></td>
<td></td>
<td>Page 95</td>
</tr>
<tr>
<td>Electrical Wiring</td>
<td></td>
<td></td>
<td></td>
<td>Page 97</td>
</tr>
<tr>
<td>Electricity (Electromechanical Controls Technology)</td>
<td></td>
<td></td>
<td></td>
<td>Page 96</td>
</tr>
<tr>
<td>Electronics and Computer Engineering Technology (Electronics Technology)</td>
<td></td>
<td></td>
<td></td>
<td>Page 98</td>
</tr>
<tr>
<td>Electronics Technology</td>
<td></td>
<td></td>
<td></td>
<td>Page 98</td>
</tr>
<tr>
<td>Emergency Medical Technician - Paramedic</td>
<td></td>
<td></td>
<td></td>
<td>Page 101</td>
</tr>
<tr>
<td>Emergency Medical Services</td>
<td></td>
<td></td>
<td></td>
<td>Page 99</td>
</tr>
<tr>
<td>Emergency Medical Technician - Intermediate</td>
<td></td>
<td></td>
<td></td>
<td>Page 101</td>
</tr>
<tr>
<td>Financial Services</td>
<td></td>
<td></td>
<td></td>
<td>Page 102</td>
</tr>
<tr>
<td>Fine Arts (Studio Arts)</td>
<td></td>
<td></td>
<td></td>
<td>Page 146</td>
</tr>
<tr>
<td>Fire Science</td>
<td></td>
<td></td>
<td></td>
<td>Page 102</td>
</tr>
<tr>
<td>Food Service Management (Hospitality Management)</td>
<td></td>
<td></td>
<td></td>
<td>Page 114</td>
</tr>
<tr>
<td>Funeral Services</td>
<td></td>
<td></td>
<td></td>
<td>Page 103</td>
</tr>
<tr>
<td>General Secretary</td>
<td></td>
<td></td>
<td></td>
<td>Page 80</td>
</tr>
<tr>
<td>Gerontology</td>
<td></td>
<td></td>
<td></td>
<td>Page 105</td>
</tr>
<tr>
<td>Graphic Design</td>
<td></td>
<td></td>
<td></td>
<td>Page 106</td>
</tr>
<tr>
<td>Health Information Technology</td>
<td></td>
<td></td>
<td></td>
<td>Page 108</td>
</tr>
<tr>
<td>Health Sciences</td>
<td></td>
<td></td>
<td></td>
<td>Page 109</td>
</tr>
<tr>
<td>Horticulture: Greenhouse Production and Garden Center Management</td>
<td></td>
<td></td>
<td></td>
<td>Page 109</td>
</tr>
<tr>
<td>Horticulture: Landscape Design and Management (also see Turfgrass Management)</td>
<td></td>
<td></td>
<td></td>
<td>Page 110</td>
</tr>
<tr>
<td>Human Services</td>
<td></td>
<td></td>
<td></td>
<td>Page 116</td>
</tr>
<tr>
<td>Industrial Maintenance Technology (Industrial)</td>
<td></td>
<td></td>
<td></td>
<td>Page 117</td>
</tr>
<tr>
<td>Industrial Management (Industrial)</td>
<td></td>
<td></td>
<td></td>
<td>Page 118</td>
</tr>
<tr>
<td>Industrial Manufacturing Engineering Technology (Industrial)</td>
<td></td>
<td></td>
<td></td>
<td>Page 119</td>
</tr>
<tr>
<td>Industrial Supervision (Industrial)</td>
<td></td>
<td></td>
<td></td>
<td>Page 120</td>
</tr>
<tr>
<td>Information Systems Technology</td>
<td></td>
<td></td>
<td></td>
<td>Page 123</td>
</tr>
<tr>
<td>Inspections/Lab Technology (Civil Engineering)</td>
<td></td>
<td></td>
<td></td>
<td>Page 124</td>
</tr>
<tr>
<td>Interior Design</td>
<td></td>
<td></td>
<td></td>
<td>Page 88</td>
</tr>
<tr>
<td>Kitchen Management</td>
<td></td>
<td></td>
<td></td>
<td>Page 114</td>
</tr>
<tr>
<td>Land Surveying</td>
<td></td>
<td></td>
<td></td>
<td>Page 88</td>
</tr>
<tr>
<td>Legal Assistant (also see Paralegal Studies)</td>
<td></td>
<td></td>
<td></td>
<td>Page 137</td>
</tr>
<tr>
<td>Lodging Management (Hospitality Management)</td>
<td></td>
<td></td>
<td></td>
<td>Page 115</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
<td></td>
<td>Page 116</td>
</tr>
</tbody>
</table>
### Program List

<table>
<thead>
<tr>
<th>Program</th>
<th>Associate Degree</th>
<th>Specialization or Technical Plans</th>
<th>Certificate</th>
<th>Career Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maritime Logistics (Management)</td>
<td>Page 130</td>
<td>Page 131</td>
<td></td>
<td>Page 131</td>
</tr>
<tr>
<td>Mechanical Drafting and Design (Computer Aided Drafting and Design Technology)</td>
<td>Page 90</td>
<td>Page 90</td>
<td></td>
<td>Page 90</td>
</tr>
<tr>
<td>Medical Assisting</td>
<td></td>
<td></td>
<td></td>
<td>Page 131</td>
</tr>
<tr>
<td>Medical Office Administration</td>
<td></td>
<td></td>
<td></td>
<td>Page 132</td>
</tr>
<tr>
<td>Medical Secretary (Administrative Support Technology)</td>
<td>Page 80</td>
<td>Page 80</td>
<td></td>
<td>Page 81</td>
</tr>
<tr>
<td>Modeling and Simulation (Technical Studies)</td>
<td></td>
<td></td>
<td></td>
<td>Page 148</td>
</tr>
<tr>
<td>Multimedia (Graphic Design)</td>
<td>Page 107</td>
<td>Page 107</td>
<td></td>
<td>Page 107</td>
</tr>
<tr>
<td>Music</td>
<td></td>
<td></td>
<td></td>
<td>Page 133</td>
</tr>
<tr>
<td>Network Administration</td>
<td></td>
<td></td>
<td></td>
<td>Page 125</td>
</tr>
<tr>
<td>Network Engineer - Windows 2003</td>
<td></td>
<td></td>
<td></td>
<td>Page 125</td>
</tr>
<tr>
<td>Network Infrastructure Specialist</td>
<td></td>
<td></td>
<td></td>
<td>Page 125</td>
</tr>
<tr>
<td>Network Security</td>
<td></td>
<td></td>
<td></td>
<td>Page 126</td>
</tr>
<tr>
<td>Nursing</td>
<td>Page 133</td>
<td></td>
<td></td>
<td>Page 133</td>
</tr>
<tr>
<td>Occupational Safety (Industrial)</td>
<td>Page 121</td>
<td>Page 121</td>
<td></td>
<td>Page 121</td>
</tr>
<tr>
<td>Occupational Therapy Assistant</td>
<td>Page 135</td>
<td></td>
<td></td>
<td>Page 135</td>
</tr>
<tr>
<td>Paralegal Studies: General Practice</td>
<td>Page 136</td>
<td>Page 137</td>
<td></td>
<td>Page 138</td>
</tr>
<tr>
<td>Paralegal Studies: Litigation</td>
<td>Page 138</td>
<td>Page 139</td>
<td></td>
<td>Page 140</td>
</tr>
<tr>
<td>Photography (Studio Arts)</td>
<td>Page 146</td>
<td>Page 146</td>
<td></td>
<td>Page 146</td>
</tr>
<tr>
<td>Physical Therapist Assistant</td>
<td>Page 140</td>
<td></td>
<td></td>
<td>Page 140</td>
</tr>
<tr>
<td>Polysomnography</td>
<td></td>
<td></td>
<td></td>
<td>Page 141</td>
</tr>
<tr>
<td>Programmer Trainee</td>
<td></td>
<td></td>
<td></td>
<td>Page 126</td>
</tr>
<tr>
<td>Quality Assurance (Industrial)</td>
<td>Page 122</td>
<td>Page 122</td>
<td></td>
<td>Page 122</td>
</tr>
<tr>
<td>Radiography</td>
<td>Page 142</td>
<td></td>
<td></td>
<td>Page 142</td>
</tr>
<tr>
<td>Respiratory Therapy</td>
<td>Page 143</td>
<td></td>
<td></td>
<td>Page 143</td>
</tr>
<tr>
<td>Retail Operations</td>
<td></td>
<td></td>
<td></td>
<td>Page 130</td>
</tr>
<tr>
<td>School Age Care</td>
<td></td>
<td></td>
<td></td>
<td>Page 95</td>
</tr>
<tr>
<td>Small Business Management</td>
<td></td>
<td></td>
<td></td>
<td>Page 130</td>
</tr>
<tr>
<td>Supervisory Management</td>
<td></td>
<td></td>
<td></td>
<td>Page 130</td>
</tr>
<tr>
<td>Theatre Arts: Performance Theatre</td>
<td></td>
<td></td>
<td></td>
<td>Page 149</td>
</tr>
<tr>
<td>Theatre Arts: Technical Theatre</td>
<td></td>
<td></td>
<td></td>
<td>Page 149</td>
</tr>
<tr>
<td>Theatre Arts: Theatre Arts</td>
<td></td>
<td></td>
<td></td>
<td>Page 150</td>
</tr>
<tr>
<td>Truck Driving</td>
<td></td>
<td></td>
<td></td>
<td>Page 150</td>
</tr>
<tr>
<td>Turfgrass Management (Horticulture)</td>
<td></td>
<td></td>
<td></td>
<td>Page 112</td>
</tr>
<tr>
<td>Web Development Specialist</td>
<td></td>
<td></td>
<td></td>
<td>Page 127</td>
</tr>
<tr>
<td>Welding</td>
<td></td>
<td></td>
<td></td>
<td>Page 150</td>
</tr>
<tr>
<td>Web Development Specialist</td>
<td></td>
<td></td>
<td></td>
<td>Page 151</td>
</tr>
</tbody>
</table>
accounting

Associate of Applied Science Degree: Accounting (203)

- Certificate: Accounting Specialist (202.01)
- Career Studies: Accounting Technician (221.203.03)

The accounting program offers three levels of programs, all built on the solid foundation of courses contained in the career studies program. The programs prepare students for entry-level positions or help students update their skills and knowledge if they are already working in the accounting field.

The career studies program prepares students for employment in accounts receivable or accounts payable, or as a payroll clerk or bank teller.

The same hours meet some of the educational requirements for students who have already earned a baccalaureate degree and wish to sit for the Certified Public Accountant (CPA) exam. These classes also serve as a unique review mechanism for CPA candidates. Additionally, they meet federal government guidelines for accounting course work to qualify for positions or promotion in the government workforce.

A cooperative education program enables students to earn academic credit while gaining work experience at local sites.

Associate of Applied Science Degree: Accounting (203)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 100</td>
<td>Introduction to Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 212</td>
<td>Principles of Accounting II</td>
<td>3</td>
<td>ACC 211</td>
</tr>
<tr>
<td>ACC 215</td>
<td>Computerized Accounting</td>
<td>3</td>
<td>ACC 211</td>
</tr>
<tr>
<td>BUS 125</td>
<td>Applied Business Mathematics</td>
<td>3</td>
<td>MTH 121</td>
</tr>
<tr>
<td>BUS 200</td>
<td>Principles of Management</td>
<td>3</td>
<td>BUS 100</td>
</tr>
<tr>
<td>ECO 120</td>
<td>Survey of Economics</td>
<td>3</td>
<td>(or ECO 201 or ECO 202)</td>
</tr>
<tr>
<td>Humanities Elective 2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 18

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 241</td>
<td>Business Law I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACC 221</td>
<td>Intermediate Accounting I</td>
<td>4</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 231</td>
<td>Cost Accounting I</td>
<td>3</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 261</td>
<td>Principles of Federal Taxation I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective 2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 222</td>
<td>Intermediate Accounting II</td>
<td>4</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 241</td>
<td>Auditing I</td>
<td>3</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 297</td>
<td>Cooperative Education in</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Accounting (or Business Elective 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 220</td>
<td>Introduction to Business Statistics</td>
<td>3</td>
<td>MTH 121</td>
</tr>
<tr>
<td>Health/Physical Education 2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 15

Total Minimum Credits 66

Certificate: Accounting Specialist (202.01)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACC 261</td>
<td>Principles of Federal Taxation I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 241</td>
<td>Business Law I (or ACC 215)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Applications and Concepts 1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 13
Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 212</td>
<td>Principles of Accounting II</td>
<td>3</td>
<td>ACC 211</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 10

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 221</td>
<td>Intermediate Accounting I</td>
<td>4</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 222</td>
<td>Intermediate Accounting II</td>
<td>4</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 231</td>
<td>Cost Accounting I</td>
<td>3</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 241</td>
<td>Auditing I</td>
<td>3</td>
<td>ACC 212</td>
</tr>
</tbody>
</table>

Semester Total 14

Total Minimum Credits 37

Career Studies: Accounting Technician (221.203.03)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACC 261</td>
<td>Principles of Federal Taxation I</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 6

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 212</td>
<td>Principles of Accounting II</td>
<td>3</td>
<td>ACC 211</td>
</tr>
<tr>
<td>BUS 241</td>
<td>Business Law I (or ACC 215)³</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 6

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 221</td>
<td>Intermediate Accounting I</td>
<td>4</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 222</td>
<td>Intermediate Accounting II</td>
<td>4</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 231</td>
<td>Cost Accounting I</td>
<td>3</td>
<td>ACC 212</td>
</tr>
<tr>
<td>ACC 241</td>
<td>Auditing I</td>
<td>3</td>
<td>ACC 212</td>
</tr>
</tbody>
</table>

Semester Total 14

Total Minimum Credits 37

1. ITE 115 satisfies the college’s computer competency requirement for graduation.
2. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
3. Business electives include courses which have the following prefix: ACC, AST, BUS, ECO, FIN, HR, LG, ITD, ITE, ITN, ITP, MKT, and REA.
4. Students with a baccalaureate degree who wish to complete requirements to sit for the Certified Public Accountant (CPA) examination must take BUS 241. Those who are employed in government positions who require college credit in accounting for promotion or those seeking government employment and other students should take ACC 215.

administration of justice

Associate of Applied Science Degree: Administration of Justice (400)

The curriculum provides a broad educational foundation and allows the option of concentrating in various specialties including law enforcement, corrections, or industrial security.

The Associate of Applied Science degree provides entry into the law enforcement field and can lead to promotion to a higher rank and/or supervisory position.

For employment with most criminal justice agencies, the following qualifications are prerequisites: good physical condition, free from any physical or mental condition which might adversely affect performance; normal hearing, color vision, and eye vision correctable to 20/20; weight in proportion to height; no convictions of any crime involving moral turpitude or conviction of any felony. A background investigation will be conducted by the employing agency to confirm the foregoing.

Under a formal articulation agreement with Saint Leo University, and with appropriate course substitutions, students may be able to transfer coursework into a baccalaureate degree program. Students interested in transferring should see a TCC advisor early in their academic program and should consult Saint Leo’s catalog, transfer guide, and website.

Associate of Applied Science Degree Administration of Justice (400)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJ 110</td>
<td>Introduction to Law Enforcement</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ADJ 111</td>
<td>Law Enforcement Organization and Administration I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>PSY 255</td>
<td>Psychological Aspects of Criminal Behavior (or ADJ 247)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Total Minimum Credits 37
Semester 2
Course No. | Course Title                  | Credits | Prerequisite
---        | -----------------------------|---------|-------------
ADJ 140    | Introduction to Corrections  | 3       |             
ADJ 201    | Criminology                  | 3       |             
ENG 112    | College Composition II       | 3       | ENG 111     
Social Science Elective 1 | 3       |
Humanities Elective 1  | 3       |

| Semester Total | 15 |

Semester 3
Course No. | Course Title                        | Credits | Prerequisite
---        | -----------------------------------|---------|-------------
ADJ 211    | Criminal Law, Evidence and Procedures I | 3       |             
ADJ 105    | The Juvenile Justice System         | 3       |             
Mathematics Elective 1  | 3       | Placement 
Science with Lab 1 | 4       |
Health/Physical Education 1  | 2       |
Elective 2  | 3       |

| Semester Total | 18 |

Semester 4
Course No. | Course Title                             | Credits | Prerequisite
---        | ----------------------------------------|---------|-------------
ADJ 212    | Criminal Law, Evidence and Procedures II | 3       | ADJ 211     
ADJ 236    | Principles of Criminal Investigation    | 3       |             
ADJ 299    | Supervised Study in ADJ                 | 4       |             
SPD 100    | Principles of Public Speaking 2         | 3       |             
Science with Lab 2 | 4       |

| Semester Total | 17 |

Total Minimum Credits 66

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2 Students may substitute SPD 110 for SPD 100.

Associate of Applied Science Degree: Administrative Support Technology

Specialization: Administrative Assistant (298.05)

- Specialization: Medical Secretary (298.11)
- Career Studies: General Secretary (221.298.07)
- Career Studies: Medical Secretary (221.285.06)

Administrative Assistant
This program will train students to take on the role of administrative assistant. It also acts as an ideal refresher program for those returning to the field, or as a means of upgrading skills for professional advancement.

Students can choose from two programs, depending on the level of professional development students seek. Career studies graduates become general office assistants, file clerks, or administrative support assistants. With the A.A.S. degree, students can become an administrative assistant, executive secretary, or office manager.

Cooperative education allows students to earn academic credit while they gain work experience at local sites.
Career and Technical Education

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 102</td>
<td>Keyboarding II</td>
<td>3</td>
<td>AST 101 or equivalent</td>
</tr>
<tr>
<td>AST 141</td>
<td>Word Processing I</td>
<td>4</td>
<td>AST 101 or equivalent</td>
</tr>
<tr>
<td>AST 154</td>
<td>Voice Recognition</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>AST 205</td>
<td>Business Communications</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>BUS 125</td>
<td>Applied Business Mathematics</td>
<td>3</td>
<td>MTH 121</td>
</tr>
<tr>
<td>ECO 120</td>
<td>Survey of Economics (or ECO 201)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 220</td>
<td>Accounting for Small Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AST 201</td>
<td>Keyboarding III</td>
<td>3</td>
<td>AST 102</td>
</tr>
<tr>
<td>AST 243</td>
<td>Office Administration I</td>
<td>3</td>
<td>AST 101 or equivalent</td>
</tr>
<tr>
<td>ITE 130</td>
<td>Introduction to Internet Services</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PSY</td>
<td>Psychology Elective¹</td>
<td>3</td>
<td>Health/Physical Education¹</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 236</td>
<td>Specialized Software Applications²</td>
<td>4</td>
<td>AST 101 or equivalent</td>
</tr>
<tr>
<td>AST 244</td>
<td>Office Administration II</td>
<td>3</td>
<td>AST 243</td>
</tr>
<tr>
<td>AST 257</td>
<td>Word Processing Desktop Publishing</td>
<td>4</td>
<td>AST 141</td>
</tr>
<tr>
<td>AST 297</td>
<td>Cooperative Education (or Business elective²)</td>
<td>3</td>
<td>Humanities Elective¹</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

**Total Minimum Credits** 68

Medical Secretary

Students in this program acquire skills in medical transcription, medical terminology, medical office procedures, records management, and word processing. The career studies program provides training as a receptionist or clerical office assistant in a medical office. An Associate of Applied Science degree in this field will prepare students for work as a medical office specialist.

A cooperative education program allows students to earn academic credit while they gain work experience at local sites.

Associate of Applied Science Degree: Administrative Support Technology

Specialization: Medical Secretary (298.11)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 101</td>
<td>Keyboarding I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HLT 143</td>
<td>Medical Terminology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>PSY</td>
<td>Psychology Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2. AST 236 satisfies the college’s computer competency requirement for graduation.
3. Business electives include courses which have the following prefix: ACC, AST, BUS, ECO, FIN, HRI, ITD, ITE, ITN, ITP, LGL, MKT, and REA.

Career Studies: General Secretary (221.298.07)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 101</td>
<td>Keyboarding I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AST 234</td>
<td>Records and Database Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AST 243</td>
<td>Office Administration I</td>
<td>3</td>
<td>AST 101 or equivalent</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
</tbody>
</table>

**Semester Total** 12

1. Career and technical education

 tidewater community college

2. Tidewater Community College
## Career and Technical Education

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 102</td>
<td>Keyboarding II</td>
<td>3</td>
<td>AST 101 or equivalent</td>
</tr>
<tr>
<td>AST 141</td>
<td>Word Processing I</td>
<td>4</td>
<td>AST 101 or equivalent</td>
</tr>
<tr>
<td>AST 205</td>
<td>Business Communications</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>BUS 125</td>
<td>Applied Business Mathematics</td>
<td>3</td>
<td>MTH 121</td>
</tr>
<tr>
<td>HLT 144</td>
<td>Medical Terminology II</td>
<td>3</td>
<td>HLT 143</td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 17

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 220</td>
<td>Accounting for Small Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AST 201</td>
<td>Keyboarding III</td>
<td>3</td>
<td>AST 102</td>
</tr>
<tr>
<td>AST 234</td>
<td>Records and Database Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AST 271</td>
<td>Medical Office Procedures I</td>
<td>3</td>
<td>AST 102 should be taken prior to or with AST 271</td>
</tr>
<tr>
<td>ITE 130</td>
<td>Introduction to Internet Services</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 17

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 245</td>
<td>Medical Machine Transcription</td>
<td>3</td>
<td>AST 102; HLT 143</td>
</tr>
<tr>
<td>AST 295</td>
<td>Medical Insurance and Coding</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AST 297</td>
<td>Cooperative Education in AST (or approved elective)²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 100</td>
<td>Introduction to Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECO 120</td>
<td>Survey of Economics (or ECO 201)</td>
<td>3</td>
<td>Humanities Elective¹</td>
</tr>
</tbody>
</table>

**Semester Total**: 18

**Total Minimum Credits**: 68

---

### Career Studies: Medical Secretary (221.285.06)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 101</td>
<td>Keyboarding I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AST 234</td>
<td>Records and Database Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AST 295</td>
<td>Medical Insurance and Coding</td>
<td>3</td>
<td>HLT 143</td>
</tr>
<tr>
<td>HLT 143</td>
<td>Medical Terminology I</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 12

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 102</td>
<td>Keyboarding II</td>
<td>3</td>
<td>AST 101</td>
</tr>
<tr>
<td>AST 141</td>
<td>Word Processing I</td>
<td>4</td>
<td>AST 101</td>
</tr>
<tr>
<td>AST 245</td>
<td>Medical Machine Transcription</td>
<td>3</td>
<td>AST 102; HLT 143</td>
</tr>
<tr>
<td>AST 271</td>
<td>Medical Office Procedures I</td>
<td>3</td>
<td>AST 102 should be taken prior to or with AST 271</td>
</tr>
<tr>
<td>HLT 144</td>
<td>Medical Terminology II</td>
<td>3</td>
<td>HLT 143</td>
</tr>
</tbody>
</table>

**Semester Total**: 16

**Total Minimum Credits**: 28

---

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

2 Approved electives: AST 236 or AST 257.

---

### Air Conditioning and Refrigeration

#### Certificate: Air Conditioning and Refrigeration (903.02)

This program prepares students to begin work in the field of heating, ventilation, air conditioning, and refrigeration and also provides current workers the opportunity to upgrade skills and knowledge.

The certificate program prepares students for technician jobs working on residential or commercial air conditioning systems, or positions as a sales representative or a control services technician.

Many of the courses in the certificate program may be applied to an air conditioning degree plan available under the A.A.S. in Technical Studies. See the Technical Studies program plans for details.
## Career and Technical Education

**Certificate: Air Conditioning and Refrigeration (903.02)**

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR 111</td>
<td>Air Conditioning and Refrigeration Controls I</td>
<td>3</td>
<td>Co-req: AIR 121</td>
<td></td>
</tr>
<tr>
<td>AIR 121</td>
<td>Air Conditioning and Refrigeration II</td>
<td>3</td>
<td>Co-req: AIR 111</td>
<td></td>
</tr>
<tr>
<td>AIR 161</td>
<td>Heating, Air, and Refrigeration Calculations I</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIR 154</td>
<td>Heating Systems I</td>
<td>3</td>
<td>Co-req: AIR 111</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR 112</td>
<td>Air Conditioning and Refrigeration Controls II</td>
<td>3</td>
<td>AIR 111</td>
<td></td>
</tr>
<tr>
<td>AIR 122</td>
<td>Air Conditioning and Refrigeration II</td>
<td>3</td>
<td>AIR 121</td>
<td></td>
</tr>
<tr>
<td>AIR 165</td>
<td>Air Conditioning Systems I</td>
<td>3</td>
<td>AIR 161</td>
<td></td>
</tr>
<tr>
<td>AIR 206</td>
<td>Psychrometrics</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTH 103</td>
<td>Applied Technical Mathematics</td>
<td>3</td>
<td>Placement</td>
<td></td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td></td>
<td><strong>15</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 3</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR 116</td>
<td>Duct Construction and Maintenance</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIR 200</td>
<td>Hydronics</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIR 235</td>
<td>Heat Pumps</td>
<td>3</td>
<td>AIR 112 &amp; AIR 122</td>
<td></td>
</tr>
<tr>
<td>AIR 238</td>
<td>Advanced Troubleshooting and Service (or AIR 181)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td></td>
<td><strong>10</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Total Minimum Credits** 41

**American Sign Language**

**Associate of Applied Science Degree: ASL-English Interpretation (640)**

- Career Studies: American Sign Language (221.640.01)

American Sign Language (ASL) is the natural language of deaf people in the United States. Two programs in ASL and Interpretation are designed to prepare hearing students to communicate with deaf people, and then to interpret between deaf and hearing people.

The Career Studies Certificate in American Sign Language is a one-year, part-time program. Prospective students include parents of deaf children and people who plan to work in deaf-related fields, such as social work, vocational rehabilitation, deaf education, etc. Office personnel who want to make their businesses more “deaf-friendly” will benefit from this program of study. The program does not prepare a student to perform interpreting services between spoken English users and ASL users. Proficient ASL users require further training to become interpreters.

The ASL-English Interpretation Associate of Applied Science (A.A.S.) degree is an aggressive two-year, full-time course of study designed to benefit those who are interested in providing communication access between deaf and hearing people. The requirements for admission to the program are proficiency in American Sign Language and proficiency in English as demonstrated by placement into ASL 261 and placement into ENG 111. Students must earn at least a C or better in each applicable prerequisite course in order to register for its subsequent course. Successful completion of this program prepares the student to pursue either a Virginia Quality Assurance Screening (VQAS) Level III, or national certification. These credentials qualify the student to interpret in entry-level settings, either in education or the community.

These two programs of study are not intended to prepare students for transfer into a baccalaureate degree program. The limited number of general education courses required in the program may be transferable to four-year colleges and universities.

For further information go to: www.tcc.edu search keyword ASL. For academic counseling, career advisement, and admission to the ASL Studies or the Interpreter Education program, please contact the program head at 757-822-5018tty or tcgries@tcc.edu.
Associate of Applied Science Degree:  
ASL-English Interpretation (640)

**Semester 1 (Based on a Fall Semester start)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASL 220</td>
<td>Comparative Linguistics: ASL and English</td>
<td>3</td>
<td>ASL 201</td>
</tr>
<tr>
<td>ASL 261</td>
<td>American Sign Language V</td>
<td>3</td>
<td>ASL 202 or Instructor Permission</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>INT 105</td>
<td>Interpreting Foundations I</td>
<td>3</td>
<td>Placement into ASL 261 and ENG 111</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASL 262</td>
<td>American Sign Language VI</td>
<td>3</td>
<td>ASL 261</td>
</tr>
<tr>
<td>INT 106</td>
<td>Interpreting Foundations II</td>
<td>3</td>
<td>INT 105</td>
</tr>
<tr>
<td>INT 107</td>
<td>Translation Skills</td>
<td>3</td>
<td>INT 105</td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Math</td>
<td>3</td>
<td>Placement</td>
</tr>
</tbody>
</table>

**Semester Total** 12

**Semester 3**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 130</td>
<td>Interpreting: An Introduction to the Profession</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>INT 133</td>
<td>ASL-to-English Interpretation I</td>
<td>3</td>
<td>INT 107</td>
</tr>
<tr>
<td>INT 134</td>
<td>English-to-ASL Interpretation I</td>
<td>3</td>
<td>INT 107</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 12

**Semester 4**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 233</td>
<td>ASL-to-English Interpretation II</td>
<td>3</td>
<td>INT 133 and INT 134</td>
</tr>
<tr>
<td>INT 234</td>
<td>English-to-ASL Interpretation II</td>
<td>3</td>
<td>INT 133 and INT 134</td>
</tr>
<tr>
<td>INT 235</td>
<td>Interpreting in Educational Settings</td>
<td>3</td>
<td>ASL 102 and INT 130</td>
</tr>
<tr>
<td></td>
<td>Psychology Elective¹</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 12

**Semester 5**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 236</td>
<td>Interpreting in Special Settings</td>
<td>3</td>
<td>ASL 102 and INT 130</td>
</tr>
<tr>
<td>INT 250</td>
<td>Dialog Interpretation</td>
<td>3</td>
<td>INT 233 and INT 234</td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 8

**Semester 6**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 290</td>
<td>Coordinated Internship</td>
<td>5</td>
<td>INT 130, 233, and INT 234</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 8

**Total Minimum Credits** 65

---

Career Studies: American Sign Language (221.640.01)

**Semester 1 (Fall, First Eight-Week)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASL 101</td>
<td>American Sign Language I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ASL 125</td>
<td>History and Culture of the U.S. Deaf Community</td>
<td>3</td>
<td>ASL 101</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 7

**Semester 1 (Fall, Second Eight-Week)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASL 102</td>
<td>American Sign Language II</td>
<td>3</td>
<td>ASL 101</td>
</tr>
</tbody>
</table>

**Semester Total** 3

**Semester 2 (Spring, First Eight-Week)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASL 201</td>
<td>American Sign Language III</td>
<td>3</td>
<td>ASL 102</td>
</tr>
<tr>
<td>ASL 150</td>
<td>Careers: Working with Deaf and Hard-of-Hearing People</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 5

**Semester 2 (Spring, Second Eight-Week)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASL 202</td>
<td>American Sign Language IV</td>
<td>3</td>
<td>ASL 201</td>
</tr>
</tbody>
</table>

**Semester Total** 3

**Total Minimum Credits** 18

---

¹ Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
career and technical education


automotive technology

Associate of Applied Science Degree: Automotive Technology (909)

- Career Studies: Auto Parts Management Trainee (221.909.62)
- Career Studies: Automotive Brakes, Suspensions, and State Inspections (221.909.02)
- Career Studies: Automotive Electrical, Electronics, and Air Conditioning (221.909.45)
- Career Studies: Automotive Engine Diagnosis (221.909.01)
- Career Studies: Automotive Heavy-Duty Engine and Transmissions (221.909.06)
- Career Studies: Automotive Service and Parts Specialist (221.909.03)
- Career Studies: Diesel and Industrial Machine Repair (221.920.62)

This National Automotive Technician Education Foundation (NATEF) Certified Automotive Technician Training Program prepares students to begin employment as automotive technicians or to upgrade their skills if they are already employed in the field. The program also prepares students for the National Institute for Automotive Service Excellence (ASE) Certified Automotive Technician examinations and Virginia state inspection certification.

The career studies programs in Automotive Technology will give students the background they need for entry-level positions as an engine performance, air conditioning, or electrical technician. Completion of any of these programs can lead to employment as an automotive tune-up specialist, troubleshooter, or diagnostic specialist. With the associate’s degree, students may become a diagnostician, line technician, service advisor, manager, or manufacturing representative.

The college offers the Toyota T-TEN Automotive Technology program. This is a program in automotive technology that is a partnership with Toyota Motor Sales, Toyota and Lexus dealers, and the college. Its mission is to support Toyota and Lexus dealerships success by providing skilled, entry-level automotive service personnel. Students are provided specific Toyota training in addition to the regular A.A.S. automotive technology curriculum.

The college also offers the DaimlerChrysler College Automotive program (CAP). Along with classroom instruction, CAP offers on-site training at sponsoring Chrysler, Dodge, and Jeep dealerships under the direction of master technicians. Students rotate class time and internship while fulfilling requirements of an A.A.S. degree in Automotive Technology.

The college also offers the Honda PACT (Professional Automotive Career Training) program. This partnership with American Honda Motor Co., Honda and Acura dealers, and the college, offers students the classroom time, lab time, and dealership facets as they complete the requirements for an A.A.S. degree in Automotive Technology.

Associate of Applied Science Degree: Automotive Technology (909)

Semester 1 (Based on a Fall semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 166</td>
<td>Automotive Diagnostics I</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>AUT 167</td>
<td>Automotive Diagnostics II</td>
<td>5</td>
<td>AUT 166</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 106</td>
<td>Preparation for Employment</td>
<td>1</td>
<td>(or SDV 100)</td>
</tr>
<tr>
<td>Health/Physical Education</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 15

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 168</td>
<td>Automotive Diagnostics III</td>
<td>5</td>
<td>AUT 166</td>
</tr>
<tr>
<td>AUT 169</td>
<td>Automotive Diagnostics IV</td>
<td>5</td>
<td>AUT 166</td>
</tr>
<tr>
<td>MTH 103</td>
<td>Applied Technical Mathematics or MTH 121</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 16

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 297</td>
<td>Cooperative Education in Automotive</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 3

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 220</td>
<td>Automotive Diagnostics V</td>
<td>5</td>
<td>AUT 166</td>
</tr>
<tr>
<td>AUT 221</td>
<td>Automotive Diagnostics VI</td>
<td>5</td>
<td>AUT 166</td>
</tr>
<tr>
<td>AUT 297</td>
<td>Cooperative Education in Automotive</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 15
Semester 5
Course No. | Course Title | Credits | Prerequisite
--- | --- | --- | ---
AUT 247 | Automotive Diagnostics VII | 5 | AUT 166
AUT 248 | Automotive Diagnostics VIII | 5 | AUT 166
AUT 297 | Cooperative Education in Automotive | 2 | Health/Physical Education 1
 | Social Science Elective 1 | 1 | 3

Semester Total 16
Total Minimum Credits 65

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

Career Studies: Auto Parts Management Trainee (221.909.62)
This career studies certificate is offered in partnership with Advance Auto Parts.

Semester 1
Course No. | Course Title | Credits | Prerequisite
--- | --- | --- | ---
BUS 100 | Introduction to Business | 3 | 
BUS 205 | Human Resource Management | 3 | 
ENG 111 | English Composition I | 3 | Placement
MKT 100 | Principles of Marketing | 3 | 

Semester Total 12

Semester 2
Course No. | Course Title | Credits | Prerequisite
--- | --- | --- | ---
AST 205 | Business Communications | 3 | ENG 111
BUS 200 | Principles of Management | 3 | BUS 100
 | Approved Electives* | 3 | 
 | Approved Electives* | 3 | 

Semester Total 12

Semester 3
Course No. | Course Title | Credits | Prerequisite
--- | --- | --- | ---
BUS 202 | Applied Management Principles | 3 | BUS 200

Semester Total 3
Total Minimum Credits 27

* Students may select electives from the following list without approval:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 220</td>
<td>Accounting for Small Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AUT 101</td>
<td>Introduction to Automotive Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AUT 166</td>
<td>Automotive Diagnostics I</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>AUT 167</td>
<td>Automotive Diagnostics II</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>AUT 297</td>
<td>Cooperative Education in Automotive</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>BUS 111</td>
<td>Principles of Supervision</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MKT 110</td>
<td>Principles of Selling</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MKT 260</td>
<td>Customer Service Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MKT 271</td>
<td>Consumer Behavior</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 106</td>
<td>Preparation for Employment</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Career Studies: Automotive Brakes, Suspension, and State Inspection (221.909.02)

Semester 1
Course No. | Course Title | Credits | Prerequisite
--- | --- | --- | ---
AUT 101 | Introduction to Automotive Systems | 3 | 
AUT 166 | Automotive Diagnostics I | 5 | 

Semester Total 8

Semester 2
Course No. | Course Title | Credits | Prerequisite
--- | --- | --- | ---
AUT 220 | Automotive Diagnostics V | 5 | AUT 166
AUT 221 | Automotive Diagnostics VI | 5 | AUT 166
AUT 297 | Cooperative Education in Automotive | 5 | 

Semester Total 15
Total Minimum Credits 23

Career Studies: Automotive Electrical, Electronic, and Air Conditioning (221.909.45)

Semester 1
Course No. | Course Title | Credits | Prerequisite
--- | --- | --- | ---
AUT 101 | Introduction to Automotive Systems | 3 | 
AUT 166 | Automotive Diagnostics I | 5 | 
AUT 167 | Automotive Diagnostics II | 5 | 

Semester Total 13

Semester 2
Course No. | Course Title | Credits | Prerequisite
--- | --- | --- | ---
AUT 169 | Automotive Diagnostics IV | 5 | AUT 166
AUT 297 | Cooperative Education in Automotive | 5 | 

Semester Total 10
Total Minimum Credits 23

Career Studies: Automotive Engine Diagnostics (221.909.01)

Semester 1
Course No. | Course Title | Credits | Prerequisite
--- | --- | --- | ---
AUT 101 | Introduction to Automotive Systems | 3 | 
AUT 166 | Automotive Diagnostics I | 5 | 
AUT 167 | Automotive Diagnostics II | 5 | AUT 166

Semester Total 13
### Career and Technical Education

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 168</td>
<td>Automotive Diagnostics III</td>
<td>5</td>
<td>AUT 166</td>
</tr>
<tr>
<td>AUT 297</td>
<td>Cooperative Education in Automotive</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Total</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Minimum Credits</td>
<td>23</td>
</tr>
</tbody>
</table>

### Career Studies: Automotive Heavy-Duty Engine and Transmission (221.909.06)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 101</td>
<td>Introduction to Automotive Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AUT 166</td>
<td>Automotive Diagnostics I</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Total</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Minimum Credits</td>
<td>23</td>
</tr>
</tbody>
</table>

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 247</td>
<td>Automotive Diagnostics VII</td>
<td>5</td>
<td>AUT 166</td>
</tr>
<tr>
<td>AUT 248</td>
<td>Automotive Diagnostics VIII</td>
<td>5</td>
<td>AUT 166</td>
</tr>
<tr>
<td>AUT 297</td>
<td>Cooperative Education in Automotive</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Total</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Minimum Credits</td>
<td>23</td>
</tr>
</tbody>
</table>

### Career Studies: Automotive Service and Parts Specialist (221.909.03)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 117</td>
<td>Keyboarding</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>AUT 101</td>
<td>Introduction to Automotive Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AUT 170</td>
<td>Automotive Systems Operations</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I (or ENG 131)</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SPD 110</td>
<td>Introduction to Speech</td>
<td>3</td>
<td>Communication (or SPD 100)</td>
</tr>
</tbody>
</table>

| Semester Total | 13 |

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUT 110</td>
<td>Automotive Business Practices</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Total</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Minimum Credits</td>
<td>23</td>
</tr>
</tbody>
</table>

### Career Studies: Diesel and Industrial Machine Repair (221.920.62)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL 121</td>
<td>Diesel Engines I</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>DSL 143</td>
<td>Diesel Truck Electrical Systems</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

| Semester Total | 10 |

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL 122</td>
<td>Diesel Engines II</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>DSL 152</td>
<td>Diesel Power Trains, Chassis, and Suspension</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>DSL 161</td>
<td>Air Brake Systems I</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

| Semester Total | 11 |

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL 133</td>
<td>Diesel Fuel and Injection Systems</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Total</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Minimum Credits</td>
<td>27</td>
</tr>
</tbody>
</table>

---

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
civil engineering

Associate of Applied Science Degree: Civil Engineering Technology (915)

- Career Studies: Civil Engineering Technician (221.915.02)
- Career Studies: Inspections/Lab Technology (221.915.03)
- Career Studies: Land Surveying (221.915.01)

The Civil Engineering Technology program prepares students to enter the field with instruction in theoretical concepts and practical experience. Options include three different career studies and an associate’s degree.

The Surveying certificate is designed to provide the formal theoretical and laboratory course work necessary for graduates to achieve a career as a Land Surveyor and prepare for the Land Surveyors-In-Training Examination.

Students earning the Inspection/Lab Technician career studies certificate become inspector assistants or construction material testers.

The Civil Engineering Technician career studies certificate prepares graduates to take entry-level positions in the fields of laboratory testing, drafting, and transportation.

With the associate’s degree, graduates work as civil engineering technicians, construction inspectors, estimators, surveyors, construction superintendents, or civil or highway engineering aides.

Associate of Applied Science Degree: Civil Engineering Technology (915)

Semester 1 (Based on a Fall semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 110</td>
<td>Introduction to Civil Engineering Technology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CIV 116</td>
<td>Topographic Drafting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and Technologies</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

| Humanities Elective¹ | 3 |
| Social Science Elective¹ | 3 |

Semester Total 15

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 115</td>
<td>Civil Engineering Drafting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIV 135</td>
<td>Construction Management and Estimating</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>MTH 164</td>
<td>Precalculus II</td>
<td>3</td>
<td>MTH 163</td>
</tr>
</tbody>
</table>

| Social Science Elective² | 3 |

Semester Total 18

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 171</td>
<td>Surveying I</td>
<td>3</td>
<td>MTH 115</td>
</tr>
<tr>
<td>CIV 228</td>
<td>Concrete Technology</td>
<td>2</td>
<td>Co-req: CIV 229</td>
</tr>
<tr>
<td>CIV 229</td>
<td>Concrete Laboratory</td>
<td>1</td>
<td>Co-req: CIV 228</td>
</tr>
<tr>
<td>CIV 235</td>
<td>Asphalt Technology</td>
<td>2</td>
<td>Co-req: CIV 236</td>
</tr>
<tr>
<td>CIV 236</td>
<td>Asphalt Laboratory</td>
<td>1</td>
<td>Co-req: CIV 235</td>
</tr>
<tr>
<td>MEC 131</td>
<td>Mechanics I – Statics for Engineering Technology</td>
<td>3</td>
<td>MTH 116</td>
</tr>
</tbody>
</table>

| Health/Physical Education¹ | 2 |
| Approved Technical Elective² | 3 |

Semester Total 17

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 172</td>
<td>Surveying II</td>
<td>3</td>
<td>CIV 171</td>
</tr>
<tr>
<td>CIV 225</td>
<td>Soil Mechanics</td>
<td>2</td>
<td>Co-req: CIV 226</td>
</tr>
<tr>
<td>CIV 226</td>
<td>Soil Mechanics Laboratory</td>
<td>1</td>
<td>Co-req: CIV 225</td>
</tr>
<tr>
<td>CIV 240</td>
<td>Fluid Mechanics and Hydraulics</td>
<td>3</td>
<td>MEC 131</td>
</tr>
<tr>
<td>MEC 132</td>
<td>Mechanics II – Strength of Materials for Engineering Technology</td>
<td>3</td>
<td>MEC 131</td>
</tr>
</tbody>
</table>

| Approved Technical Elective² | 3 |

Semester Total 15

Total Minimum Credits 65

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).
2 Eligible courses for Approved Technical Elective include DRF 151, DRF 201, GIS 200, GIS 201 and any course with a CIV prefix not required for degree.
# Career and Technical Education

## Career Studies: Civil Engineering Technician (221.915.02)

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 110</td>
<td>Introduction to Civil Engineering Technology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CIV 116</td>
<td>Topographic Drafting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIV 171</td>
<td>Surveying I</td>
<td>3</td>
<td>MTH 115</td>
</tr>
<tr>
<td>CIV 228</td>
<td>Concrete Technology</td>
<td>2</td>
<td>Co-req: CIV 229</td>
</tr>
<tr>
<td>CIV 229</td>
<td>Concrete Laboratory</td>
<td>1</td>
<td>Co-req: CIV 228</td>
</tr>
<tr>
<td>CIV 235</td>
<td>Asphalt Technology</td>
<td>2</td>
<td>Co-req: CIV 236</td>
</tr>
<tr>
<td>CIV 236</td>
<td>Asphalt Laboratory</td>
<td>1</td>
<td>Co-req: CIV 235</td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
</tbody>
</table>

**Semester Total**: 17

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 115</td>
<td>Civil Engineering Drafting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIV 120</td>
<td>Masonry Technology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIV 172</td>
<td>Surveying II</td>
<td>3</td>
<td>CIV 171</td>
</tr>
<tr>
<td>CIV 225</td>
<td>Soil Mechanics</td>
<td>2</td>
<td>Co-req: CIV 226</td>
</tr>
<tr>
<td>CIV 226</td>
<td>Soil Mechanics Laboratory</td>
<td>1</td>
<td>Co-req: CIV 225</td>
</tr>
</tbody>
</table>

**Semester Total**: 12

**Total Minimum Credits**: 29

---

## Career Studies: Land Surveying (221.915.01)

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 116</td>
<td>Topographic Drafting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIV 171</td>
<td>Surveying I</td>
<td>3</td>
<td>MTH 115 or placement into MTH 166</td>
</tr>
<tr>
<td>GIS 200</td>
<td>Geographic Information Systems I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 166</td>
<td>Precalculus with Trigonometry</td>
<td>5</td>
<td>Placement</td>
</tr>
</tbody>
</table>

**Semester Total**: 15

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 115</td>
<td>Civil Engineering Drafting</td>
<td>3</td>
<td>CIV 171</td>
</tr>
<tr>
<td>CIV 256</td>
<td>Global Positioning Systems for Land Surveying</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIV 257</td>
<td>Mapping Standards, Virginia Rules and Statutes, and Surveying Law</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CIV 258</td>
<td>Photogrammetry and Remote Sensing</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CIV 259</td>
<td>Virginia Coordinate Systems</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 14

**Total Minimum Credits**: 29

---

## Career Studies: Inspections/Lab Technology (221.915.03)

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 110</td>
<td>Introduction to Civil Engineering Technology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CIV 228</td>
<td>Concrete Technology</td>
<td>2</td>
<td>Co-req: CIV 229</td>
</tr>
<tr>
<td>CIV 229</td>
<td>Concrete Laboratory</td>
<td>1</td>
<td>Co-req: CIV 228</td>
</tr>
<tr>
<td>CIV 235</td>
<td>Asphalt Technology</td>
<td>2</td>
<td>Co-req: CIV 236</td>
</tr>
<tr>
<td>CIV 236</td>
<td>Asphalt Laboratory</td>
<td>1</td>
<td>Co-req: CIV 235</td>
</tr>
</tbody>
</table>

**Semester Total**: 8

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIV 225</td>
<td>Soil Mechanics</td>
<td>2</td>
<td>Co-req: CIV 226</td>
</tr>
<tr>
<td>CIV 226</td>
<td>Soil Mechanics Laboratory</td>
<td>1</td>
<td>Co-req: CIV 225</td>
</tr>
</tbody>
</table>

**Semester Total**: 3

**Total Minimum Credits**: 11

---

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).

2. Eligible courses for Approved Technical Elective include DRF 151, DRF 201, GIS 200, GIS 201 and any course with a CIV prefix not required for degree.
Career and Technical Education

Computer Aided Drafting and Design Technology

Associate of Applied Science Degree in Computer Aided Drafting and Design Technology

- Specialization: Architectural Drafting and Design (729.01)
- Specialization: Mechanical Drafting and Design (729)
- Certificate: Computer Aided Drafting and Design Technology (727.02)

Architectural Drafting and Design Technology

The associate’s degree prepares students for employment as an advanced CADD drafter or designer for an architectural or civil engineering firm. Under a formal articulation agreement with Old Dominion University (ODU), and with appropriate course substitutions, students may transfer coursework into a related baccalaureate degree program. Students interested in transferring should see a TCC counselor or advisor early in their academic plan and consult ODU’s catalog, transfer guide, and website for additional information.

The architectural drafting specialization is offered at the Virginia Beach Campus.

Associate of Applied Science Degree: Computer Aided Drafting and Design Technology

Specialization: Architectural Drafting and Design (729.01)

Semester 1 (Based on a Fall semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 100</td>
<td>Introduction to Architecture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DRF 151</td>
<td>Engineering Drawing Fundamentals I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DRF 201</td>
<td>Computer Aided Drafting and Design I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and Technologies</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 121</td>
<td>Architectural Drafting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ARC 133</td>
<td>Construction Methodology &amp; Procedures I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>DRF 202</td>
<td>Computer Aided Drafting and Design II</td>
<td>4</td>
<td>DRF 201</td>
</tr>
<tr>
<td>MTH 164</td>
<td>Precalculus II</td>
<td>3</td>
<td>MTH 163</td>
</tr>
</tbody>
</table>

Approved Technical Elective1 3

Health/Physical Education1 1

Semester Total 17

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 122</td>
<td>Architectural Drafting II</td>
<td>3</td>
<td>ARC 121</td>
</tr>
<tr>
<td>ARC 221</td>
<td>Architectural CAD Applications Software</td>
<td>3</td>
<td>DRF 201</td>
</tr>
<tr>
<td>MEC 131</td>
<td>Mechanics I – Statics for Engineering Technology</td>
<td>3</td>
<td>MTH 116 or MTH 164</td>
</tr>
<tr>
<td>PHY 201</td>
<td>General College Physics I</td>
<td>4</td>
<td>MTH 115 or MTH 163</td>
</tr>
</tbody>
</table>

Health/Physical Education1 1

Social Science Elective1 3

Semester Total 17

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 280</td>
<td>Design Capstone Project</td>
<td>3</td>
<td>(ARC 122 and ARC 221) or (DRF 201 and DRF 211)</td>
</tr>
<tr>
<td>MEC 132</td>
<td>Mechanics II – Strength of Materials for Engineering Technology</td>
<td>3</td>
<td>MEC 131</td>
</tr>
<tr>
<td>PHY 202</td>
<td>General College Physics II</td>
<td>4</td>
<td>PHY 201</td>
</tr>
</tbody>
</table>

Humanities Elective1 3

Social Science Elective1 3

Semester Total 16

Total Minimum Credits 67

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).
2 Consult with your faculty advisor or counselor. Eligible courses for Approved Technical Elective include any ARC, MEC or DRF courses not required in the program.
3 Students planning on transferring to a four-year program should take PHY 201-202 and not technical electives.
Mechanical Drafting and Design Technology

The Mechanical Drafting and Design Technology specialization is offered at the Portsmouth and Virginia Beach campuses and focuses on preparing students to work successfully in computer aided design and related computer aided manufacturing operations (CAD/CAM). Graduates typically find employment in the fields of mechanical and machine design, structural, manufacturing, civil engineering, marine design, construction, and related areas. Using Autodesk Software, students learn to prepare working drawings reflecting national and international standards, practices, and procedures. Additionally, students learn to prepare engineering drawings supporting mechanical engineering and design utilizing welding details, industrial piping, geometric dimensioning and tolerancing (GD&T), electrical schematics, sheet metal developments, and solid modeling.

Business and industry professionals can update their skills and knowledge relating to: AutoCAD and Autodesk Software, current ANSI and ISO Standards and procedures, and improve their knowledge of material selection and processing for efficient design.

TCC utilizes the latest Autodesk Software Products. The Portsmouth Campus is a Premier Authorized Training Center for AutoCAD (ATC).

The CADD Certificate program provides the student with the basic skills and knowledge necessary for an entry-level position as a CAD operator or drafting/design assistant.

The degree program provides a more thorough background, with performance skills, and experiences necessary for higher-level positions and the potential for success in the field. Graduates of the program are prepared for employment in CAD/CAM areas of business and industry. Under a formal articulation agreement with Old Dominion University (ODU), and with appropriate course substitutions, students may transfer coursework into a related baccalaureate degree program. Students interested in transferring should see a TCC counselor or advisor early in their academic plan and consult ODU’s catalog, transfer guide, and website for additional information.

In addition to providing for college transfer opportunities and preparing students to move directly into business and industry upon graduation, the CADD Program is designed to work in partnership with local business and industry to meet their educational and training needs.

The Northrop Grumman Newport News Design Co-Op Work-Study program is an example of that cooperation. Northrop Grumman Newport News (NGNN) and Tidewater Community College have entered into an agreement to jointly train the next generation of marine designers at NGNN. There is no previous design experience required to begin this program. NGNN will pay all of the tuition costs of accepted CADD students to complete their A.A.S. Degree in the Mechanical Drafting and Design Technology Program. This educational opportunity is based on a coordinated program of full-time study and on-the-job work experiences. Students will participate in a program of full-time academic studies at TCC and two semesters of full-time employment at NGNN, where the student will be working in the design and engineering area. Students will work under the guidance and direction of practicing professional engineers and designers. Generally, CADD students are accepted into the Co-Op program at selected times of the year, defined by NGNN. Students starting the Co-Op program at the beginning of the CADD program would be expected to complete their A.A.S. Degree in two and one-half years. Upon completion of the A.A.S. Mechanical Drafting and Design Technology degree, the student may be offered a full-time job with Northrop Grumman Newport News in a design-related area. Contact Lorenz Drake (822-2426 or e-mail ldrake@tcc.edu) or Ralph Denton (822-7178 or e-mail rdenton@tcc.edu) for specific information about this Co-Op Work-Study program.

Associate of Applied Science Degree: Computer Aided Drafting and Design Technology

Specialization: Mechanical Drafting and Design Technology (729)

Semester 1 (Based on a Fall semester start)

Course No. Course Title Credits Prerequisite
DRF 151 Engineering Drawing Fundamentals I 3
DRF 201 Computer Aided Drafting and Design I 4
ENG 111 College Composition I 3 Placement
MEC 111 Materials for Industry 3
MTH 163 Precalculus I 3 Placement
SDV 101 Orientation to Engineering and Technologies 1

Semester Total 17
<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 152</td>
<td>Engineering Drawing</td>
<td>3</td>
<td>DRF 151</td>
<td></td>
</tr>
<tr>
<td>DRF 202</td>
<td>Computer Aided Drafting and Design II</td>
<td>4</td>
<td>DRF 201</td>
<td></td>
</tr>
<tr>
<td>MTH 164</td>
<td>Precalculus II</td>
<td>3</td>
<td>MTH 163</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Ed.</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 3</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 211</td>
<td>Advanced Technical Drafting I</td>
<td>3</td>
<td>DRF 152</td>
<td></td>
</tr>
<tr>
<td>DRF 241</td>
<td>Parametric Solid Modeling</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEC 131</td>
<td>Mechanics I – Statics for Engineering Technology</td>
<td>3</td>
<td>MTH 116 or MTH 164</td>
<td></td>
</tr>
<tr>
<td>PHY 201</td>
<td>General College Physics I</td>
<td>4</td>
<td>MTH 115 or MTH 163</td>
<td></td>
</tr>
<tr>
<td>(or Approved Technical Elective)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved Technical Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 4</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 212</td>
<td>Advanced Technical Drafting II</td>
<td>3</td>
<td>DRF 201 and DRF 202</td>
<td></td>
</tr>
<tr>
<td>DRF 280</td>
<td>Design Capstone Project</td>
<td>3</td>
<td>(ARC 122 and ARC 221) or (DRF 201 and DRF 211)</td>
<td></td>
</tr>
<tr>
<td>MEC 132</td>
<td>Mechanics II – Strength of Materials for Engineering Technology</td>
<td>3</td>
<td>MEC 131</td>
<td></td>
</tr>
<tr>
<td>PHY 202</td>
<td>General College Physics II</td>
<td>4</td>
<td>PHY 201</td>
<td></td>
</tr>
<tr>
<td>(or Approved Technical Elective)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health/Physical Ed.</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total Minimum Credits | 67 |

**Certificate: Computer Aided Drafting and Design Technology (727.02)**

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 151</td>
<td>Engineering Drawing</td>
<td>3</td>
<td>DRF 151</td>
<td></td>
</tr>
<tr>
<td>DRF 201</td>
<td>Computer Aided Drafting and Design I</td>
<td>4</td>
<td>DRF 201</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
<td></td>
</tr>
<tr>
<td>MEC 111</td>
<td>Materials for Industry</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and Technologies</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 152</td>
<td>Engineering Drawing</td>
<td>3</td>
<td>DRF 151</td>
<td></td>
</tr>
<tr>
<td>DRF 202</td>
<td>Computer Aided Drafting and Design II</td>
<td>4</td>
<td>DRF 201</td>
<td></td>
</tr>
<tr>
<td>DRF 297</td>
<td>Cooperative Education in CADD</td>
<td>3</td>
<td>Approved Technical Elective</td>
<td></td>
</tr>
<tr>
<td>(or Approved Technical Elective)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approved Technical Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total Minimum Credits | 33 |

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).
2. Consult with your faculty advisor or counselor. Eligible courses include any ARC, MEC, or DRF courses not required in the program.
3. Students planning on transferring to a four-year program should take PHY 201-202 and not technical electives.

**Career Studies Certificate: Developmental Disabilities Specialist (221.480.12)**

The Career Studies Certificate in Developmental Disabilities prepares students for paraprofessional positions in schools and agencies working with children and adults with disabilities. Internships are available in a variety of work settings that give students hands-on experience in the field.

Through an agreement with Old Dominion University, a limited number of courses from the certificate program may be accepted in transfer towards a baccalaureate degree in special education.

---

**developmental disabilities**

**Career Studies Certificate: Developmental Disabilities Specialist (221.480.12)**

The Career Studies Certificate in Developmental Disabilities prepares students for paraprofessional positions in schools and agencies working with children and adults with disabilities. Internships are available in a variety of work settings that give students hands-on experience in the field.

Through an agreement with Old Dominion University, a limited number of courses from the certificate program may be accepted in transfer towards a baccalaureate degree in special education.
Career and Technical Education

Career Studies: Developmental Disabilities Specialist (221.480.12)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 245</td>
<td>Teaching and Training of Language Skills for the Disabled</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EDU 247</td>
<td>Adult Independent Living and Vocational Skills for the Disabled</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EDU 254</td>
<td>Teaching Basic Academic Skills to Exceptional Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EDU 250</td>
<td>Introduction to Developmental Disabilities</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EDU 255</td>
<td>Behavior Technology for use with Developmental Disabilities</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EDU 290</td>
<td>Coordinated Internship in Education</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Minimum Credits</strong></td>
<td><strong>22</strong></td>
<td></td>
</tr>
</tbody>
</table>

diagnostic medical sonography (ultrasound)

Associate of Applied Science Degree: Diagnostic Medical Sonography (Ultrasound) (109)

As a sonographer, he/she will work closely with radiologists or other physicians to ensure correct diagnosis. Graduates can become staff sonographers in a radiology department, hospital setting, private office, outpatient clinic, within the ultrasound industry, or the military.

Program applications and the general admission application to the college must be submitted to the Virginia Beach Records and Registration Office no later than May 15.

Applicants will be ranked according to the health professions admissions ranking scale. Admissions decisions will be made based on the applicant’s ranking that considers academic record and area of residence. All in-state residents are given first priority in the application process. All applicants are given points in the application process based on any non-sonography classes taken and the grades earned in those classes. Students with health professions backgrounds, including radiography, are given additional application points. An official copy of your Allied Health Program transcripts and transcripts from other colleges attended must be on file at TCC Central Records Office, P.O. Box 9000, Norfolk, Virginia, 23510, prior to the application deadline date. These transcripts must be evaluated before any transfer credit is granted. Applicants are also required to have a personal interview with the program representative. Applicants must complete placement tests in English and math and place into ENG 111 and be eligible to take MTH 126 or higher prior to being considered for admission into the DMS program. Students must submit an unofficial transcript along with their health professions application.

Once accepted, students must have current CPR-Healthcare Provider certification, a documented medical examination, and must maintain a C average or better to remain in good standing. The program faculty reserves the right to recommend, through appropriate channels, the withdrawal of any student who does not exhibit suitable demeanor/attendance, and a rigid attendance policy is in place for the clinical experience. A copy of all standards is available in the Diagnostic Medical Sonography Student Handbook. Students will be re-admitted to the program at the discretion of the director and according to availability. Students are financially responsible for their uniforms and travel.

Clinical practice allows for hands-on experience while earning academic credit. After admission to the program, clinical practice can be completed in four semesters of full-time study.

This program is accredited by the Committee on Accreditation of Allied Health Education Programs through the Joint Review Committee on Education in Diagnostic Medical Sonography.

Associate of Applied Science Degree: Diagnostic Medical Sonography (109)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 141</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HLT 105</td>
<td>Cardiopulmonary Resuscitation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>HLT 143</td>
<td>Medical Terminology I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>MTH 126</td>
<td>Mathematics for Allied Health</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHY 100</td>
<td>Elements of Physics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>
Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMS 206</td>
<td>Introduction to Sonography</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>DMS 207</td>
<td>Sectional Anatomy</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>DMS 208</td>
<td>Ultrasound Physics and Instrumentation I</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>DMS 211</td>
<td>Ultrasound Imaging I</td>
<td>4</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>DMS 231</td>
<td>Clinical Education I</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
</tbody>
</table>

Semester Total 16

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMS 209</td>
<td>Ultrasound Physics and Instrumentation II</td>
<td>3</td>
<td>DMS 206 or Instructor Permission</td>
</tr>
<tr>
<td>DMS 221</td>
<td>Ultrasound Seminar I</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>DMS 232</td>
<td>Clinical Education II</td>
<td>4</td>
<td>DMS 231 or Instructor Permission</td>
</tr>
</tbody>
</table>

Semester Total 10

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMS 212</td>
<td>Ultrasound Imaging II</td>
<td>4</td>
<td>DMS 211 or Instructor Permission</td>
</tr>
<tr>
<td>DMS 223</td>
<td>Introduction to Vascular Ultrasound</td>
<td>3</td>
<td>DMS 211 or Instructor Permission</td>
</tr>
<tr>
<td>DMS 233</td>
<td>Clinical Education III</td>
<td>5</td>
<td>DMS 232 or Instructor Permission</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 15

Semester 5

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMS 222</td>
<td>Ultrasound Seminar II</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>DMS 234</td>
<td>Clinical Education IV</td>
<td>6</td>
<td>DMS 233 or Instructor Permission</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 15

Total Minimum Credits 72

early childhood development

Associate of Applied Science Degree: Early Childhood Development (636)

- Certificate: Early Childhood Instruction (632)
- Career Studies: Administering Programs for Young Children (221.636.61)
- Career Studies: Child Development (221.636.04)
- Career Studies: Educational Support Specialist (221.629.03)
- Career Studies: School Age Care (221.636.09)

The early childcare and education program prepares students in the care, supervision, and education of young children from birth to age eight. Students can also become qualified to work with children up to the age of twelve in before and after school programs. Individuals already working in the field enroll to improve their skills and qualify for advancement.

Employment options for students with the Associate of Applied Science degree include director, manager, teacher, teacher aide, substitute teacher, recreation aide, nutrition aide, program leader, business owner/operator, and private tutor. Settings include preschools, child care centers, family child care homes, Head Start programs, pre-kindergarten schools, private schools, agency-sponsored programs, religious-based programs, public schools, and before and after school programs.
career and technical education

Under a formal articulation agreement with Norfolk State University, and with appropriate course substitutions, students may transfer coursework into a baccalaureate degree program. Students interested in transferring should see a TCC counselor or advisor early in their academic plan and consult Norfolk State’s catalog, transfer guide, and website for additional information.

Associate of Applied Science Degree: Early Childhood Development (636)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 117</td>
<td>Introduction to Reading Methods</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 120</td>
<td>Introduction to Early Childhood Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 145</td>
<td>Teaching Art, Music, and Movement to Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>PSY 235</td>
<td>Child Psychology (or PSY 231)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 118</td>
<td>Language Arts for Young Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 146</td>
<td>Math, Science, and Social Studies for Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 205</td>
<td>Guiding the Behavior of Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 210</td>
<td>Introduction to Exceptional Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>SPD 100</td>
<td>Principles of Public Speaking (or SPD 110)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 18

Total Minimum Credits 65-66

Certificate: Early Childhood Instruction (632)

The Early Childhood Instruction certificate trains students in the care, supervision, and education of children from birth through twelve years of age. Graduates earning this certification begin work in public and private child care centers, preschool programs, family child care homes, before and after school programs, and religious–sponsored programs, or as a private family nanny.

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 117</td>
<td>Introduction to Reading Methods</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 120</td>
<td>Introduction to Early Childhood Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>CHD 145</td>
<td>Teaching Art, Music and Movement to Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 205</td>
<td>Guiding the Behavior of Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PSY 235</td>
<td>Child Psychology (or PSY 231)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 118</td>
<td>Language Arts for Young Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 146</td>
<td>Math, Science, and Social Studies for Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 165</td>
<td>Observation and Participation in Early Childhood/Primary Settings</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 166</td>
<td>Infant and Toddler Programs</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 215</td>
<td>Models of Early Childhood Education Programs</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHD 216</td>
<td>Early Childhood Programs, Schools and Social Change</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td></td>
<td>Mathematics or Science with Lab</td>
<td>3-4</td>
<td>Placement</td>
</tr>
</tbody>
</table>

Semester Total 15-16

Total Minimum Credits 34
Career Studies: Administering Programs For Young Children (221.636.61)

The Administering Programs for Young Children Career Studies provides students with legal and clerical information required to manage, direct, and/or own any type of facility designated to care and educate young children.

Course No. | Course Title                        | Credits | Prerequisite
---|-------------------------------------|---------|------------
ACC 211 | Principles of Accounting I          | 3       |            
BUS 111 | Principles of Supervision           | 3       |            
CHD 120 | Introduction to Early Childhood Education | 3     |            
CHD 165 | Observations and Participation in Early Childhood /Primary Settings | 3     |            
CHD 270 | Administration of Childcare Programs | 3     |            
HLT 135 | Child Health and Nutrition          | 3       |            
ITE 115 | Introduction to Computer Applications and Concepts | 4     |            

Total Minimum Credits: 22

Career Studies: Child Development (221.636.04)

The Child Development Career Studies provides students with entry-level knowledge required to work with children. These core courses also meet the requirements for students to begin their CDA credentialing processes.

Course No. | Course Title                        | Credits | Prerequisite
---|-------------------------------------|---------|------------
CHD 120 | Introduction to Early Childhood Education | 3     |            
CHD 145 | Teaching Art, Music, and Movement   | 3       |            
CHD 205 | Guiding the Behavior of Children    | 3       |            
HLT 135 | Child Health and Nutrition          | 3       |            

Total Minimum Credits: 12

Career Studies: Educational Support Specialist (221.629.03)

The Educational Support Specialist Career Studies leads to positions as a teacher assistant in public and private schools.

Course No. | Course Title                        | Credits | Prerequisite
---|-------------------------------------|---------|------------
CHD 118 | Language Arts for Young Children   | 3       |            
CHD 120 | Introduction to Early Childhood Education | 3     |            
CHD 146 | Math, Science, and Social Studies  | 3       |            
CHD 205 | Guiding the Behavior of Children   | 3       |            
PSY 235 | Child Psychology (or PSY 231)      | 3       | Approved Program Elective

Total Minimum Credits: 18

1 Approved program electives may be chosen from CHD 145, CHD 210, or HLT 135.

Career Studies: School Age Care (221.636.09)

The School Age Care Career Studies trains students to efficiently and effectively plan, implement, and manage a high quality before and after school program using state and national guidelines and field-tested program planning.

Course No. | Course Title                        | Credits | Prerequisite
---|-------------------------------------|---------|------------
CHD 220 | Introduction School Age Child Care | 3       |            
CHD 225 | Curriculum Development For School-Age Child Care | 3 |            
CHD 230 | Behavior Management for School-Age Child Care | 3 |            
CHD 235 | Health and Recreation for School-Age Child Care | 3 |            
HLT 105 | Cardiopulmonary Resuscitation      | 1       |            
HLT 106 | First Aid and Safety               | 2       |            
PSY 235 | Child Psychology (or PSY 231)      | 3       |            

Total Minimum Credits: 18
Associate of Applied Science Degree:
Electromechanical Controls Technology (706.01)

- Certificate: Electrical Wiring (942.01)
- Career Studies: Controls (221.706.02)
- Career Studies: Electrical Wiring (221.706.01)
- Career Studies: Electrical Wiring for Technicians (221.706.03)

Controls
The career studies certificate plan in Controls prepares students to install, adjust, and troubleshoot industrial controls. With an Associate of Applied Science degree, students will be ready for a job as an industrial machine installer/repairer, electrical/electronic equipment repairer, office machine repairer, mechanical control and valve repairer, programmable controller installer and repairer, electrical and electronic equipment assembler, electromechanical systems repairer and an automated machinery maintenance mechanic.

Electrical Wiring
The career studies certificate plan in Electrical Wiring for Technicians provides the classroom training required by the state to sit for the electrician licensing exam. The career studies certificate plan in Electrical Wiring includes additional training in electrical theory and electrical power and motor controls.

The certificate in Electrical Wiring prepares students as electricians and helps those already employed to upgrade their skills and knowledge for advancement. The associate's degree graduate can work as an electrician in industrial machine installation and repair, electrical/electronic equipment repair, mechanical control and valve repair, programmable controller installation and repair, electrical/electronic equipment assembly, electromechanical systems repair, and automatic machinery maintenance.

---

### Associate of Applied Science Degree: Electromechanical Controls Technology (706.01)

#### Semester 1 (Based on a Fall semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 127</td>
<td>Residential Wiring Methods</td>
<td>3</td>
<td>(or ELE 149)</td>
</tr>
<tr>
<td>ELE 131</td>
<td>National Electrical Code I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ELE 150</td>
<td>A.C. and D.C. Circuit Fundamentals</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ELE</td>
<td>Approved ELE Elective²</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 132</td>
<td>National Electrical Code II</td>
<td>4</td>
<td>ELE 131</td>
</tr>
<tr>
<td>ELE 145</td>
<td>Transformer Connections And Circuits</td>
<td>2</td>
<td>ELE 150</td>
</tr>
<tr>
<td>MTH 103</td>
<td>Applied Technical Mathematics I</td>
<td>3</td>
<td>Placement (or MTH 115)</td>
</tr>
<tr>
<td>PHY 130</td>
<td>Survey of Applied Physics</td>
<td>3</td>
<td>Health/Physical Education¹</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Social Science Elective³</td>
</tr>
</tbody>
</table>

**Semester Total** 16

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 146</td>
<td>Electric Motor Control</td>
<td>4</td>
<td>ELE 150</td>
</tr>
<tr>
<td>ETR 203</td>
<td>Electronic Devices I</td>
<td>3</td>
<td>ELE 150</td>
</tr>
<tr>
<td>MEC 126</td>
<td>Computer Programming for Technologies</td>
<td>3</td>
<td>ELE 150</td>
</tr>
<tr>
<td>MEC 269</td>
<td>Fluid Power - Pneumatic Systems</td>
<td>3</td>
<td>Social Science Elective³</td>
</tr>
</tbody>
</table>

**Semester Total** 16

#### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 233</td>
<td>Programmable Logic Controller Systems I</td>
<td>3</td>
<td>ELE 146</td>
</tr>
<tr>
<td>ETR 281</td>
<td>Digital Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MEC 268</td>
<td>Fluid Power - Hydraulic Systems</td>
<td>3</td>
<td>Approved Technical Elective²</td>
</tr>
<tr>
<td></td>
<td>Approved Technical Elective²</td>
<td></td>
<td>Health/Physical Education¹</td>
</tr>
<tr>
<td></td>
<td>Approved Technical Elective²</td>
<td></td>
<td>Humanities Elective¹</td>
</tr>
</tbody>
</table>

**Semester Total** 16

**Total Minimum Credits** 65
### Certificate: Electrical Wiring (942.01)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 127</td>
<td>Residential Wiring Methods</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ELE 131</td>
<td>National Electrical Code I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ELE 150</td>
<td>A.C. and D.C. Circuit Fundamentals</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ELE</td>
<td>Approved ELE Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
</tbody>
</table>

**Semester Total** 16

### Career Studies: Electrical Wiring (221.706.01)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 127</td>
<td>Residential Wiring</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ELE 131</td>
<td>National Electrical Code I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ELE 150</td>
<td>A.C. and D.C. Circuit Fundamentals</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 10

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 132</td>
<td>National Electrical Code II</td>
<td>4</td>
<td>ELE 131</td>
</tr>
<tr>
<td>ELE 145</td>
<td>Transformer Connections and Circuits</td>
<td>2</td>
<td>ELE 150</td>
</tr>
<tr>
<td>ELE 146</td>
<td>Electric Motor Control</td>
<td>4</td>
<td>ELE 150</td>
</tr>
<tr>
<td>ELE 149</td>
<td>Wiring Methods in Industry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 103</td>
<td>Applied Technical Mathematics I</td>
<td>3</td>
<td>Placement</td>
</tr>
</tbody>
</table>

**Semester Total** 16

**Total Minimum Credits** 32

### Career Studies: Electrical Wiring For Technicians (221.706.03)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 131</td>
<td>National Electrical Code I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ELE</td>
<td>Approved ELE Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 7

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELE 132</td>
<td>National Electrical Code II</td>
<td>4</td>
<td>ELE 131</td>
</tr>
<tr>
<td>ELE</td>
<td>Approved ELE Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 7

**Total Minimum Credits** 14

---

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2 Consult with your academic advisor or counselor. Courses must be approved by the appropriate academic dean.
3 The ELE electives may be ELE 150, ELE 127, ELE 149, or another course approved by the appropriate academic dean.
career and technical education

electronics technology

Associate of Applied Science Degree: Electronics Technology (981.04)

- Certificate: Electronics Engineering Technology (943.01)

The certificate will train students for entry-level electronics technician positions or help students advance within the field. The Associate of Applied Science degree can qualify students to seek such positions as biomedical equipment technician, communication electronics technician, computer electronics technician, electrical/electronics technician, and electrical/electronics engineering technician.

Under a formal articulation agreement with Old Dominion University (ODU), and with appropriate course substitutions, students may transfer coursework into a related baccalaureate degree program. Students interested in transferring should see their faculty advisor early in their academic plan and consult ODU’s catalog, transfer guide, and website for additional information.

Entry into this plan requires the following high school units or their equivalent as a minimum: four units of English, three units of mathematics (two units of algebra, one unit of geometry), one unit of laboratory science, and one unit of social studies.

Associate of Applied Science Degree: Electronics Technology (981.04)

Semester 1 (Based on a Fall semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ETR 104</td>
<td>Electronic Fundamentals with Computer Applications</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 166</td>
<td>Precalculus with Trigonometry</td>
<td>5</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and Technologies</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>ETR 113</td>
<td>DC and AC Fundamentals I</td>
<td>4</td>
<td>ETR 104 &amp; (MTH 166 or MTH 164)</td>
</tr>
<tr>
<td>ETR 279</td>
<td>Digital Principles, Terminology, and Applications</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 173</td>
<td>Calculus with Analytic Geometry I</td>
<td>5</td>
<td>MTH 166</td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETR 114</td>
<td>DC and AC Fundamentals II</td>
<td>4</td>
<td>ETR 113</td>
</tr>
<tr>
<td>ETR 148</td>
<td>Amplifiers and Integrated Circuits</td>
<td>4</td>
<td>ETR 113</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETR 250</td>
<td>Solid State Circuits</td>
<td>4</td>
<td>ETR 148</td>
</tr>
<tr>
<td>ETR 261</td>
<td>Microprocessor Applications I²</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PHY 201</td>
<td>General College Physics I</td>
<td>4</td>
<td>MTH 163 or MTH 166</td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Semester 5

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETR 297</td>
<td>Cooperative Education (or Approved Elective)²</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PHY 202</td>
<td>General College Physics II</td>
<td>4</td>
<td>PHY 201</td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits 68

Certificate: Electronics Engineering Technology (943.01)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ETR 104</td>
<td>Electronic Fundamentals with Computer Applications</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 166</td>
<td>Precalculus with Trigonometry</td>
<td>5</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and Technologies</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>
Emergency Medical Services are used by ambulance providers, fire-rescue, hospitals, industry, military, voluntary services, nursing homes, sport organizations, cruise ship lines, and other recreational entities, among other possibilities.

The Emergency Medical Services field offers a vast range of opportunities in the medical profession, all starting with the Emergency Medical Technician (EMT)-Basic. The EMT-Basic course provides basic medical background in pre-hospital emergency medicine. The course is offered each semester in both day and night schedules and prepares students to test at the State level for certification. The National Registry EMT exam also is available throughout the year.

For admission into the Associate of Applied Science degree program, students must complete a second application (in addition to the general college application). Prospective students must be proficient in reading, writing, and speaking the English language. All candidates must be at least 18 years of age at the start of the training program, have a high school degree or GED, have no felony convictions for any sexual crime (and a record free of felony convictions for five years), have no prohibitive physical disability, and must consent to a criminal background investigation.

The programs of study offered by the college are all based on the standards and curriculum established by the United States Department of Transportation and the National Highway Traffic Administration. The Virginia Office of Emergency Medical Services, the National Registry of Emergency Medical Technicians, and the Committee on Accreditation of Education Programs for EMS Professions (CoAEMSP) that accredits the college’s program have incorporated the National Standard Curriculum into their standards.

Associate of Applied Science Degree: Emergency Medical Services (146)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>EMS 111</td>
<td>Emergency Medical Technician - Basic</td>
<td>6</td>
<td>Co-req: EMS 120</td>
</tr>
<tr>
<td>EMS 120</td>
<td>Emergency Medical Technician - Basic Clinical</td>
<td>1</td>
<td>Co-req: EMS 111</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science with Lab(^1)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) ETR 193 Introduction to LabVIEW can be substituted for ETR 261.
### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 151</td>
<td>Introduction to Advanced Life Support</td>
<td>4</td>
<td>EMS 111; Co-req: EMS 170</td>
</tr>
<tr>
<td>EMS 153</td>
<td>Basic ECG Recognition</td>
<td>2</td>
<td>EMS 111</td>
</tr>
<tr>
<td>EMS 155</td>
<td>ALS – Medical Care</td>
<td>4</td>
<td>EMS 151 and EMS 153</td>
</tr>
<tr>
<td>EMS 170</td>
<td>ALS Internship I</td>
<td>1</td>
<td>EMS 151</td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 15

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 131</td>
<td>Technical Report Writing I (or ENG 112)</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>EMS 157</td>
<td>ALS – Trauma Care</td>
<td>3</td>
<td>EMS 151 and Current EMT-B Certification</td>
</tr>
<tr>
<td>EMS 159</td>
<td>ALS – Special Populations</td>
<td>2</td>
<td>EMS 151, EMS 151, and EMS 155</td>
</tr>
<tr>
<td>EMS 172</td>
<td>ALS Clinical Internship II</td>
<td>1</td>
<td>EMS 170</td>
</tr>
<tr>
<td>EMS 173</td>
<td>ALS Field Internship II</td>
<td>1</td>
<td>EMS 170</td>
</tr>
<tr>
<td>EMS/FST/HLT Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 201</td>
<td>EMS Professional Development</td>
<td>2</td>
<td>Current EMT-B Certification</td>
</tr>
<tr>
<td>EMS 205</td>
<td>Advanced Pathophysiology</td>
<td>3</td>
<td>EMS 155</td>
</tr>
<tr>
<td>EMS 207</td>
<td>Advanced Patient Assessment</td>
<td>3</td>
<td>EMS 155</td>
</tr>
<tr>
<td>EMS 242</td>
<td>ALS Clinical Internship III</td>
<td>1</td>
<td>EMS 172</td>
</tr>
<tr>
<td>EMS 243</td>
<td>ALS Field Internship III</td>
<td>1</td>
<td>EMS 173</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 13

### Semester 5

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 209</td>
<td>Advanced Pharmacology</td>
<td>4</td>
<td>EMS 155</td>
</tr>
<tr>
<td>EMS 211</td>
<td>Operations</td>
<td>2</td>
<td>Current EMT-B Certification</td>
</tr>
<tr>
<td>EMS 244</td>
<td>ALS Clinical Internship IV</td>
<td>1</td>
<td>EMS 172</td>
</tr>
<tr>
<td>EMS 245</td>
<td>ALS Field Internship IV</td>
<td>1</td>
<td>EMS 173</td>
</tr>
<tr>
<td>Social Science Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 11

**Total Minimum Credits** 70

### Career Studies: Critical Care (221.146.10)

The Career Studies Certificate in Critical Care provides the knowledge and skills that qualifies students who complete the program successfully to function in critical care environments, from flight programs to critical care ground transports and critical care units within hospitals. The courses are open to registered nurses and paramedics and foster the interaction and cooperation of both professions in the care of the critically ill or injured patient. After completing this program of study, nurses are eligible, from an education standpoint, to sit for the Critical Care Nurses Exam (CCRN), while paramedics are eligible to sit for the Flight Paramedic exam.

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 205</td>
<td>Advanced Pathophysiology</td>
<td>3</td>
<td>EMS 155 or equivalent and Instructor Permission</td>
</tr>
<tr>
<td>EMS 207</td>
<td>Advanced Patient Assessment</td>
<td>3</td>
<td>EMS 155 or equivalent and Instructor Permission</td>
</tr>
<tr>
<td>EMS 256</td>
<td>12 Lead ECG Interpretation</td>
<td>2</td>
<td>EMS 153 or Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 8

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 209</td>
<td>Advanced Pharmacology</td>
<td>4</td>
<td>EMS 155 or equivalent and Instructor Permission</td>
</tr>
<tr>
<td>EMS 244</td>
<td>ALS Clinical Internship IV</td>
<td>1</td>
<td>EMS 172 or equivalent and Instructor Permission</td>
</tr>
<tr>
<td>EMS 255</td>
<td>Concepts in Critical Care</td>
<td>5</td>
<td>Current EMT-P Certification or RN</td>
</tr>
</tbody>
</table>

**Semester Total** 10

**Total Minimum Credits** 18
Career Studies: Emergency Medical Technician-Intermediate (221.146.03)

The Career Studies Certificate in Emergency Medical Technician-Intermediate provides the knowledge and skills that allows successful students who complete the program to sit for the national registry EMT-Intermediate certification exam. This is the initial advanced level of certification that may be required for employment in the fields of ambulance providers, hospital emergency medicine, military corpsmen, and fire-rescuers. In the process of completing this program, students may also be eligible to sit for the Virginia EMT-Enhanced test.

Admission to this program requires current EMT/B certification.

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 151</td>
<td>Introduction to Advanced Life Support</td>
<td>4</td>
<td>EMS 111; Co-req: EMS 170</td>
</tr>
<tr>
<td>EMS 153</td>
<td>Basic ECG Recognition</td>
<td>2</td>
<td>EMS 111</td>
</tr>
<tr>
<td>EMS 155</td>
<td>ALS – Medical Care</td>
<td>4</td>
<td>EMS 151 and EMS 153</td>
</tr>
<tr>
<td>EMS 170</td>
<td>ALS Internship I</td>
<td>1</td>
<td>Co-req: EMS 151</td>
</tr>
</tbody>
</table>

Semester Total 11

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 157</td>
<td>ALS – Trauma Care</td>
<td>3</td>
<td>EMS 151</td>
</tr>
<tr>
<td>EMS 159</td>
<td>ALS – Special Population</td>
<td>2</td>
<td>EMS 151</td>
</tr>
<tr>
<td>EMS 172</td>
<td>ALS Clinical Internship II</td>
<td>1</td>
<td>EMS 170</td>
</tr>
<tr>
<td>EMS 173</td>
<td>ALS Field Internship II</td>
<td>1</td>
<td>EMS 170</td>
</tr>
</tbody>
</table>

Semester Total 7

Total Minimum Credits 18

Career Studies: Emergency Medical Technician-Paramedic (221.146.05)

The Career Studies Certificate in Emergency Medical Technician-Paramedic provides the knowledge and skills people functioning, as advanced life support providers need to advance to the highest level within their field. After completing this program of study, students are eligible to sit for the National Registry EMT-Paramedic exam.

Students must have completed the Career Studies: Emergency Medical Technician-Intermediate or have equivalent background.

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 157</td>
<td>ALS – Trauma Care</td>
<td>3</td>
<td>EMS 151 and Current EMT-B Certification</td>
</tr>
<tr>
<td>EMS 159</td>
<td>ALS – Special Population</td>
<td>2</td>
<td>EMS 151</td>
</tr>
<tr>
<td>EMS 172</td>
<td>ALS Clinical Internship II</td>
<td>1</td>
<td>EMS 170</td>
</tr>
<tr>
<td>EMS 173</td>
<td>ALS Field Internship II</td>
<td>1</td>
<td>EMS 170</td>
</tr>
</tbody>
</table>

Semester Total 7

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 201</td>
<td>EMS Professional Development</td>
<td>2</td>
<td>Current EMT-B Certification</td>
</tr>
<tr>
<td>EMS 205</td>
<td>Advanced Pathophysiology</td>
<td>3</td>
<td>EMS 155 or equivalent and Instructor Permission</td>
</tr>
<tr>
<td>EMS 207</td>
<td>Advanced Patient Assessment</td>
<td>3</td>
<td>EMS 155 or equivalent and Instructor Permission</td>
</tr>
<tr>
<td>EMS 242</td>
<td>ALS Clinical Internship II</td>
<td>1</td>
<td>EMS 172</td>
</tr>
<tr>
<td>EMS 243</td>
<td>ALS Field Internship II</td>
<td>1</td>
<td>EMS 173</td>
</tr>
</tbody>
</table>

Semester Total 10

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 209</td>
<td>Advanced Pharmacology</td>
<td>4</td>
<td>EMS 155</td>
</tr>
<tr>
<td>EMS 211</td>
<td>Operations</td>
<td>2</td>
<td>Current EMT-B Certification</td>
</tr>
<tr>
<td>EMS 244</td>
<td>ALS Clinical Internship IV</td>
<td>1</td>
<td>EMS 172</td>
</tr>
<tr>
<td>EMS 245</td>
<td>ALS Field Internship IV</td>
<td>1</td>
<td>EMS 173</td>
</tr>
</tbody>
</table>

Semester Total 8

Total Minimum Credits 25
Career and technical education

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2 Eligible courses include any EMS, FST, or HLT courses not required in the program.

NOTES:
> BIO 141/142 Human Anatomy and Physiology I and II are recommended if the student is planning to transfer to a medically-related program.
> Program has special admission requirements. Call 822-7335 for information.

Financial services

This Career Studies Certificate program is designed to prepare the student for employment and/or positioning for promotions and increased earnings in credit unions, banks, insurance carriers, and securities dealers. Students expand their range of knowledge and skills to include products, services, interpersonal and problem-solving skills.

Career Studies: Financial Services (221.212.11)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 100</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 111</td>
<td>Principles of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>FIN 115</td>
<td>Personal Investments</td>
<td>2</td>
</tr>
<tr>
<td>MKT 260</td>
<td>Customer Service Management</td>
<td>3</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
</tr>
</tbody>
</table>

Semester Total: 12

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>BUS 117</td>
<td>Leadership Development</td>
<td>3</td>
</tr>
<tr>
<td>BUS 236</td>
<td>Communication in Management</td>
<td>3</td>
</tr>
<tr>
<td>FIN 110</td>
<td>Principles in Banking</td>
<td>3</td>
</tr>
</tbody>
</table>

Semester Total: 12

Total Minimum Credits: 24

Fire science

Associate of Applied Science Degree: Fire Science (427)

An Associate of Applied Science degree in Fire Science will qualify students to become a fire administrator, a municipal department administrator, a safety director, a fire arson investigator, a state training coordinator, a fire insurance appraiser, or a fire apparatus and equipment salesperson.

Entry into fire science requires a personal interview with a representative of the fire science program.

Associate of Applied Science Degree: Fire Science (427)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>FST 100</td>
<td>Principles of Emergency Services</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FST 110</td>
<td>Fire Behavior and Combustion</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills (or SDV 101 or SDV 108)</td>
<td>1</td>
<td>Mathematics Elective 2</td>
</tr>
<tr>
<td></td>
<td>Mathematics Elective 2</td>
<td>3</td>
<td>Science with Lab 4</td>
</tr>
</tbody>
</table>

Semester Total: 17

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 131</td>
<td>Technical Report Writing</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>FST 112</td>
<td>Hazardous Materials Chemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FST 115</td>
<td>Fire Prevention</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FST 120</td>
<td>Occupational Safety and Health for the Fire Service</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 16

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>FST 205</td>
<td>Fire Protection Hydraulics and Water Supply</td>
<td>3</td>
<td>MTH Elective</td>
</tr>
<tr>
<td>FST 210</td>
<td>Legal Aspects of Fire Service</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FST 220</td>
<td>Building Construction for Fire Protection</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FST 230</td>
<td>Fire Investigation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FST 240</td>
<td>Fire Administration</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective 3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 18
Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>FST 215</td>
<td>Fire Protection Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FST 235</td>
<td>Strategy and Tactics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FST 245</td>
<td>Fire and Risk Analysis</td>
<td>3</td>
<td>FST 240</td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17

Total Minimum Credits 68

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2 Any 100 level math or higher.

NOTES:
> It is recommended that at the time of graduation all students have a current Emergency Medical Technician’s Certificate.
> For additional information regarding the Fire Science program, see www.tcc.edu/faculty/webpages/rdienst.

funeral services

Associate of Applied Science Degree: Funeral Services (155)

The Associate of Applied Science degree in Funeral Services provides an extensive program designed to prepare students for careers in the complex field of mortuary science. A diversified curriculum addresses the changing needs and demands of contemporary funeral directing, embalming, and business management.

Upon completion of the program, graduates will be able to: (1) demonstrate proper embalming and restoration techniques with minimum supervision; (2) demonstrate an understanding of the effects of disease and the importance of sanitation in the handling of human remains; (3) apply ethical and management principles to all aspects of making funeral arrangements with minimum supervision; (4) demonstrate an understanding of how to write pre-need and at-need contracts; (5) direct a funeral with minimum supervision; (6) and set up and maintain an OSHA approved preparation room.

Aims and Objectives
- To instill in students the desire and knowledge to serve the public with the highest ethical standards.
- To encourage and provide a forum where students and industry professionals may conduct research related to funeral service.
- To promote a positive image of the profession and its practitioners.
- To serve the funeral service community by providing continuing education and life-long learning.
- To make students ever mindful of their responsibilities to the profession and the clients they serve.
- To encourage students to contribute to the community in which they serve by providing outstanding service, while cognizant of all regulatory issues pertinent to the health, public safety, and “care of the deceased”.

The funeral service program is accredited by the American Board of Funeral Service Education (ABFSE), 3432 Ashland Avenue, Suite U, St. Joseph, Missouri 64506, (816) 233-3747. Web: www.abfse.org. In order to receive a Funeral Service license in the Commonwealth of Virginia, an individual must: (1) complete an accredited program of mortuary science; (2) pass the National Board Examination; (3) complete a 3,000 hour apprenticeship; and (4) pass the State examination. Completion of the National Board Examination (NBE) is a requirement for graduation from TCC Funeral Service Program. The cost of the exam is $350. The annual passage rate for first-time takers on the National Board Examination and all American Board of Funeral Service Education accredited schools is posted on the ABFSE website www.abfse.org.

Admission Requirements and Special Conditions
- A high school diploma (or equivalent) and satisfactory scores on college placement tests in English and mathematics are required.
- All Funeral Service students must have started the Hepatitis-B series of shots upon entering the program.
- Students must apply to the program and meet with the program head to be placed in the Funeral Service curriculum.
- Prior to placement into the curriculum, students must have completed ACC 211, CHM 110, and FNS 121 with grades of C or better.
- A grade of C or better must be earned in all FNS courses and in SOC 246 and PSY 116. Students will be required to have completed twenty four credit hours in order to enroll in FNS 111, FNS 112, FNS 113, FNS 114, FNS 211, FNS 212, FNS 231, and FNS 232. In order to take the second part of a sequence course, a grade of C or better must be earned in the first part.
Transcripts from other colleges attended must be on file at TCC Central Records Office, P.O. Box 9000, Norfolk, Virginia, 23510, prior to the application deadline. These transcripts must be evaluated before any transfer credit is granted.

This program is offered at the Virginia Beach Campus.

**Associate of Applied Science Degree: Funeral Services (155)**

**Semester 1 (Based on a Fall Semester start)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CHM 110</td>
<td>Survey of Chemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>FNS 121</td>
<td>Anatomy for Funeral Service I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HLT 141</td>
<td>Introduction to Medical Terminology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>PSY 116</td>
<td>Psychology of Death and Dying</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>FNS 125</td>
<td>Microbiology for Funeral Service</td>
<td>3</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>REL</td>
<td>Religion Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SOC 246</td>
<td>Death and Society</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health, PE Elective</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

**Semester 3**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNS 110</td>
<td>Introduction to Funeral Service</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>FNS 111</td>
<td>Theory of Embalming I</td>
<td>3</td>
<td>Co-req: FNS 113, Instructor Permission</td>
</tr>
<tr>
<td>FNS 113</td>
<td>Theory of Embalming Laboratory I</td>
<td>1</td>
<td>Co-req: FNS 111, Instructor Permission</td>
</tr>
<tr>
<td>FNS 126</td>
<td>Pathology for Funeral Service</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>FNS 211</td>
<td>Restorative Art I</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>FNS 231</td>
<td>Principles of Funeral Management I</td>
<td>4</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 16

**Semester 4**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNS 112</td>
<td>Theory of Embalming II</td>
<td>3</td>
<td>FNS 111, Instructor Permission</td>
</tr>
<tr>
<td>FNS 113</td>
<td>Theory of Embalming Laboratory II</td>
<td>1</td>
<td>FNS 111, Instructor Permission</td>
</tr>
<tr>
<td>FNS 212</td>
<td>Restorative Art II</td>
<td>3</td>
<td>FNS 211</td>
</tr>
<tr>
<td>FNS 232</td>
<td>Principles of Funeral Service Management II</td>
<td>4</td>
<td>FNS 231</td>
</tr>
<tr>
<td>FNS 236</td>
<td>Funeral Service Law</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>FNS 270</td>
<td>Funeral Service Review</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 16

**Total Minimum Credits** 68
Through the Career Studies Certificate in the Gerontology program, students will gain a multi-disciplinary perspective of the aging process. The program will enhance the student’s understanding of related social and public policy issues as well. Further, whether students plan to work in health care, human services, the ministry, business, or marketing, their effectiveness as professionals will be enhanced by the study of gerontology.

The increasing number of older adults both in the United States and worldwide is creating an increased demand for professions experienced and trained in gerontology. Most importantly, students of gerontology learn to apply their knowledge of the older adult in their current careers, thereby improving programs and services of the older adult.

**Career Studies: Gerontology (221.480.08)**

**Semester 1**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HLT 270</td>
<td>Health and Well Being of the Older Adult</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HLT 271</td>
<td>Physical Care Management of the Older Adult</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMS 231</td>
<td>Gerontology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMS 238</td>
<td>Selected Topics on Aging</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total Minimum Credits** 28

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLT 130</td>
<td>Nutrition and Diet Therapy</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>HLT 272</td>
<td>Medical Management of the Older Adult</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMS 225</td>
<td>Functional Family Intervention</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMS 232</td>
<td>Gerontology II</td>
<td>3</td>
<td>HMS 231</td>
</tr>
<tr>
<td>HMS 233</td>
<td>Psycho and Socio Aspects of Older Adult Care</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total Minimum Credits** 13

**Associate of Applied Science Degree: Graphic Design**

**Specialization: Advertising Design (514.01)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 133</td>
<td>Visual Arts Foundation</td>
<td>4</td>
<td>Co-req: SDV 101</td>
</tr>
<tr>
<td>ART 201</td>
<td>History of Art I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 283</td>
<td>Computer Graphics I</td>
<td>4</td>
<td>Co-req: ART 133</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>MKT 100</td>
<td>Principles of Marketing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Visual Arts</td>
<td>1</td>
<td>Co-req: ART 133</td>
</tr>
</tbody>
</table>

**Total Minimum Credits** 18

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 121</td>
<td>Drawing I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 141</td>
<td>Typography I</td>
<td>4</td>
<td>ART 133 &amp; 283</td>
</tr>
<tr>
<td>ART 202</td>
<td>History of Art II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 284</td>
<td>Computer Graphics II</td>
<td>4</td>
<td>ART 283</td>
</tr>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
</tbody>
</table>

**Total Minimum Credits** 17
### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 209</td>
<td>Creative Concepts and Copy Writing</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>ART 251</td>
<td>Communications Design I</td>
<td>3</td>
<td>ART 141</td>
</tr>
<tr>
<td>HIS 111</td>
<td>History of World Civilization I</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>MKT 220</td>
<td>Principles of Advertising</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHT 101</td>
<td>Photography I</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Health/Physical Education**

**Semester Total**: 16

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 252</td>
<td>Communication Design II</td>
<td>3</td>
<td>ART 251</td>
</tr>
<tr>
<td>ART 287</td>
<td>Portfolio and Resume Preparation¹</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>HIS 112</td>
<td>History of World Civilization II</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
</tbody>
</table>

**Approved Graphic Design Elective²**: 3-4

**Natural Science Elective³** or **Mathematics Elective³**: 3-4

**Semester Total**: 14-15

**Total Minimum Credits**: 65-66

---

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate courses.
2. ART 287 should be taken in the final semester before graduation and is offered in the fall and spring semesters only.
3. Students may choose from any of the listed courses for which they have the prerequisite and that is not already a requirement in their specialization: ART 270 (Motion Graphics), ART 122, ART 203, ART 208, ART 250, ART 251, ART 263, ART 264, ART 264*, ART 297*, and PHT 135. * Requires permission of Visual Arts Center Director.

---

### Associate of Applied Science Degree: Graphic Design

**Specialization: Graphic Design (514.03)**

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 133</td>
<td>Visual Arts Foundation</td>
<td>4</td>
<td>Co-req: SDV 101</td>
</tr>
<tr>
<td>ART 201</td>
<td>History of Art I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 283</td>
<td>Computer Graphics I</td>
<td>4</td>
<td>Co-req: ART 133</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Visual Arts</td>
<td>1</td>
<td>Co-req: ART 133</td>
</tr>
</tbody>
</table>

**Health/Physical Education**

**Semester Total**: 16

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 121</td>
<td>Drawing I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 141</td>
<td>Typography I</td>
<td>4</td>
<td>ART 133 &amp; ART 283</td>
</tr>
<tr>
<td>ART 202</td>
<td>History of Art II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 284</td>
<td>Computer Graphics II</td>
<td>4</td>
<td>ART 283</td>
</tr>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
</tbody>
</table>

**Semester Total**: 17

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 122</td>
<td>Drawing I</td>
<td>3</td>
<td>ART 121</td>
</tr>
<tr>
<td>ART 251</td>
<td>Communication Design I</td>
<td>3</td>
<td>ART 141</td>
</tr>
<tr>
<td>ART 209</td>
<td>Creative Concepts and Copy Writing</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HIS 111</td>
<td>History of World Civilization I</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>PHT 101</td>
<td>Photography I</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Natural Science Elective³** or **Mathematics Elective³**: 3-4

**Semester Total**: 18

---

### Graphic Design

The Associate of Applied Science degree in Graphic Design with a specialization in Graphic Design is a skills-oriented program with instruction in traditional and current technology. Students will be prepared to transfer to four-year degree programs and/or to begin careers in the graphic design industry.

An Associate of Applied Science degree prepares students for employment as a computer graphic artist, a freelance graphic designer or an advertising layout specialist.
Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 252</td>
<td>Communication Design II</td>
<td>3</td>
<td>ART 251</td>
</tr>
<tr>
<td>ART 263</td>
<td>Interactive Design I</td>
<td>4</td>
<td>ART 141 &amp; ART 283</td>
</tr>
<tr>
<td>ART 287</td>
<td>Portfolio and Resume Preparation</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>HIS 112</td>
<td>History of World Civilization II</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
</tbody>
</table>

| Approved Graphic Design Elective | 3-4 |

| Semester Total | 15-16 |
| Total Minimum Credits | 66-67 |

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2. ART 287 should be taken in the final semester before graduation and is offered in the fall and spring semester only.
3. Students may choose from any of the listed courses for which they have the prerequisite and that is not already a requirement in their specialization: ART 270 (Motion Graphics), ART 122, ART 123, ART 208, ART 250, ART 252, ART 263, ART 264, ART 265*, ART 297*, and PHT 135. * Requires permission of Visual Arts Center Director.

Multimedia

The specialization in multimedia is designed to meet a growing employment need in the area of graphic design in Hampton Roads and to enhance the college's program in Graphic Design. The emphasis of the specialization is on Web design and video animation production skills. The knowledge and skills provided in this program prepare students for transfer to four-year degree programs and/or entry into the multimedia industry.

Associate of Applied Science Degree: Graphic Design

Specialization: Multimedia (514.04)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 133</td>
<td>Visual Arts Foundation</td>
<td>4</td>
<td>Co-req: SDV 101</td>
</tr>
<tr>
<td>ART 201</td>
<td>History of Art I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 283</td>
<td>Computer Graphics I</td>
<td>4</td>
<td>Co-req: ART 133</td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>PHT 101</td>
<td>Photography I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Visual Arts</td>
<td>1</td>
<td>Co-req: ART 133</td>
</tr>
</tbody>
</table>

| Semester Total | 18 |

Total Minimum Credits | 68-69 |

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2. ART 287 should be taken in the final semester before graduation and is offered in the fall and spring semester only.
3. Students may choose from any of the listed courses for which they have the prerequisite and that is not already a requirement in their specialization: ART 270 (Motion Graphics), ART 122, ART 123, ART 208, ART 250, ART 252, ART 263, ART 264, ART 265*, ART 297*, and PHT 135. * Requires permission of Visual Arts Center Director.
health information technology

Associate of Applied Science Degree: Health Information Technology (152)

Health information specialists work with health care professionals and administration to organize, analyze and preserve medical information used to evaluate patient care, diagnose and treat illnesses, and substantiate reimbursement. The profession requires extensive knowledge of medical terminology, pathology, coding for reimbursement, medical laws and standards, and manual and computerized maintenance and retrieval systems for health information.

A degree in health information technology can lead to careers in hospitals, nursing homes, insurance companies, consulting firms, and many other health-related facilities. Career opportunities include coders, supervisors, managers, tumor registrars, analysts, performance improvement specialists, and health information specialists. A Registered Health Information Technician (RHIT) may obtain positions in technical, supervisory, and management positions. Some HIT courses may be offered online.

This program has a selective admission process. Application deadline for the program is June 15 of each year for the fall semester. Transcripts from other colleges attended must be on file at TCC Central Records Office, P.O. Box 9000, Norfolk, Virginia, 23510, prior to the application deadline date. These transcripts must be evaluated before any transfer credit is granted. Prerequisites for the program include: high school graduation or GED, BIO 100, ENG 111, and successful completion of MTH 3.

Graduates of the Health Information Technology program are eligible to sit for the American Health Information Management Association’s National Accreditation examination. Successful completion of this examination will award the graduate Registered Health Information Technician (RHIT) credentials.

The program is fully accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) in collaboration with the American Health Information Management Association (AHIMA).

Associate of Applied Science Degree: Health Information Technology (152)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 100</td>
<td>Basic Human Biology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HIT 101</td>
<td>Health Information Technology I</td>
<td>4</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>HLT 143</td>
<td>Medical Terminology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total  18

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIT 110</td>
<td>Introduction to Human Pathology</td>
<td>3</td>
<td>BIO 100 and HLT 143</td>
</tr>
<tr>
<td>HIT 151</td>
<td>Reimbursement Issues in Medical Practice Management</td>
<td>2</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>HIT 215</td>
<td>Health Data Classification Systems</td>
<td>5</td>
<td>BIO 100 and HLT 143</td>
</tr>
<tr>
<td>HLT 144</td>
<td>Medical Terminology II</td>
<td>3</td>
<td>HLT 143</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective 1</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total  16

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIT 249</td>
<td>Supervision and Management Practices</td>
<td>3</td>
<td>HIT 101</td>
</tr>
<tr>
<td>HIT 253</td>
<td>Health Records Coding</td>
<td>4</td>
<td>BIO 100 and HIT 215</td>
</tr>
</tbody>
</table>

Semester Total  7

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIT 103</td>
<td>Health Information Technology II</td>
<td>2</td>
<td>HIT 101</td>
</tr>
<tr>
<td>HIT 143</td>
<td>Managing Electronic Billing in a Medical Practice</td>
<td>2</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>HIT 190</td>
<td>Coordinated Internship in HIT</td>
<td>2</td>
<td>HIT 101</td>
</tr>
<tr>
<td>HIT 226</td>
<td>Legal Aspects of Health Record Documentation</td>
<td>2</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>HIT 254</td>
<td>Advanced Coding and Reimbursement</td>
<td>4</td>
<td>HIT 253</td>
</tr>
<tr>
<td></td>
<td>HLT/PED Elective</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total  14
Semester 5

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIT 220</td>
<td>Health Statistics</td>
<td>2</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>HIT 229</td>
<td>Performance Improvement In Health Care Settings</td>
<td>2</td>
<td>HIT 101</td>
</tr>
<tr>
<td>HIT 230</td>
<td>Information Systems and Technology in Health Care</td>
<td>3</td>
<td>HIT 101</td>
</tr>
<tr>
<td>HIT 260</td>
<td>Pharmacology for Health Information Technology in Health Care</td>
<td>2</td>
<td>BIO 100 and HLT 143</td>
</tr>
<tr>
<td>HIT 290</td>
<td>Coordinated Internship in HIT</td>
<td>2</td>
<td>HIT 101</td>
</tr>
<tr>
<td>HIT 298</td>
<td>Seminar and Project in HIT</td>
<td>2</td>
<td>HIT 101</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Total Minimum Credits</td>
<td></td>
<td>71</td>
<td></td>
</tr>
</tbody>
</table>

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 142</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
<td>BIO 141</td>
</tr>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td></td>
<td>Health Science Elective 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Total Minimum Credits</td>
<td></td>
<td>33</td>
<td></td>
</tr>
</tbody>
</table>

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

Certificate: Health Sciences (190)

This certificate program is designed for students unsure of their career plans in the health professions area.

Students interested in health professions should contact a program advisor in the Health Professions division prior to enrolling in classes.

Certificate: Health Sciences (190)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 141</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>MTH 126</td>
<td>Mathematics for Allied Health</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective 2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

Associate of Applied Science Degree: Horticulture

- Specialization: Greenhouse Production and Garden Center Management (335.05)
- Specialization: Landscape Design and Management (335.03)
- Career Studies: Greenhouse Production (221.335.03)
- Career Studies: Landscape Design and Management (221.335.18)
- Career Studies: Turfgrass Management (221.308.01)

Greenhouse Production and Garden Center Management

The specialization in greenhouse production and garden center management combines the necessary technical skills with related business courses, preparing students for employment in greenhouses, flower shops, garden centers, and nurseries.

The career studies program in greenhouse production prepares students for entry-level positions or to upgrade their skills and knowledge. All courses in the career studies may be applied to the Associate of Applied Science degree in horticulture with a specialization in greenhouse production and garden center management.

The two-year degree prepares students for management positions in floral design, greenhouse garden center and nursery management or career opportunities in retail and wholesale horticultural businesses.
Associate of Applied Science Degree: Horticulture

Specialization: Greenhouse Production and Garden Center Management (335.05)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HRT 110</td>
<td>Principles of Horticulture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 125</td>
<td>Chemicals in Horticulture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 201</td>
<td>Landscape Plants I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 155</td>
<td>Plants and Society</td>
<td>3</td>
<td>HRT 110</td>
</tr>
<tr>
<td>HRT 202</td>
<td>Landscape Plants II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>Approved Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Approved HRT Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education</td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 110</td>
<td>Principles of Horticulture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 115</td>
<td>Plant Propagation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 121</td>
<td>Greenhouse Crop Production I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 207</td>
<td>Plant Pest Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 226</td>
<td>Greenhouse Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 122</td>
<td>Greenhouse Crop Production II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 225</td>
<td>Nursery and Garden Center Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 298</td>
<td>Seminar in Horticulture</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>SPA 160</td>
<td>Spanish for the Green Industry</td>
<td>3</td>
<td>Approved Elective²</td>
</tr>
<tr>
<td>Approved Elective¹</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective¹</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17

Total Minimum Credits 66

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2 Approved Elective may be chosen from BUS, HRT, ITE, or MKT and must be approved by your horticulture program advisor.
3 Consult your academic advisor.

Career Studies: Greenhouse Production (221.335.03)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 110</td>
<td>Principles of Horticulture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 115</td>
<td>Plant Propagation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 121</td>
<td>Greenhouse Crop Production I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 122</td>
<td>Greenhouse Crop Production II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 207</td>
<td>Plant Pest Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 226</td>
<td>Greenhouse Management</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
| Total Minimum Credits 18

Landscape Design and Management

The landscape design and management program prepares students for careers in the public and private sectors as landscape designers, landscape gardeners, installers, maintenance technicians, and the retail landscape business. Students who are already in the field use the program to upgrade their skills, knowledge and certifications. All courses taken for the career studies option in Landscape Design and Management may be applied to the Associate of Applied Science in Horticulture with a specialization in landscape design and management.
**Associate of Applied Science Degree: Horticulture**

Specialization: Landscape Design and Management (335.03)

**Semester 1 (Based on a Fall semester start)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HRT 110</td>
<td>Principles of Horticulture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 125</td>
<td>Chemicals in Horticulture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 201</td>
<td>Landscape Plants I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 155</td>
<td>Plants and Society</td>
<td>3</td>
<td>HRT 110</td>
</tr>
<tr>
<td>HRT 202</td>
<td>Landscape Plants II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 235</td>
<td>Landscape Drawing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td></td>
<td>Approved Elective&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

**Semester 3**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 150</td>
<td>Theory of Landscape Design</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 207</td>
<td>Plant Pest Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 227</td>
<td>Professional Landscape Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 228</td>
<td>Turfgrass Management I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

**Semester 4**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 275</td>
<td>Landscape Construction and Maintenance</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 298</td>
<td>Seminar in Horticulture</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>SPA 160</td>
<td>Spanish for the Green Industry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Elective&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved HRT Elective&lt;sup&gt;3&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

**Total Minimum Credits** 66

**Career Studies: Landscape Design and Management (221.335.18)**

**Semester 1**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 110</td>
<td>Principles of Horticulture</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 201</td>
<td>Landscape Plants I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT</td>
<td>Approved HRT Elective&lt;sup&gt;6&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 9

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 202</td>
<td>Landscape Plants II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT 235</td>
<td>Landscape Drawing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRT</td>
<td>Approved HRT Elective&lt;sup&gt;6&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 9

**Total Minimum Credits** 18

**Turfgrass Management**

The Turfgrass Management Career Studies Certificate is designed for individuals currently working in as turfgrass professionals who desire to enhance their knowledge and skills. It also provides the opportunity for individuals who desire to explore turfgrass management as a career option. The curriculum consists of courses designed to maximize student exposure to the turfgrass profession and to stress practical knowledge as students learn the principles of turfgrass management.
Career Studies: Turfgrass Management (221.308.01)

Semester 1
Course No. | Course Title         | Credits | Prerequisite
---|----------------------|---------|----------------
HRT 110 | Principles of Horticulture | 3       | 
HRT 125 | Chemicals in Horticulture | 3       | 
**Semester Total** | **6** | 

Semester 2
Course No. | Course Title | Credits | Prerequisite
---|--------------|---------|----------------
HRT 205 | Soils | 3 | 
Approved Elective | 3 | 
**Semester Total** | **6** | 

Semester 3
Course No. | Course Title | Credits | Prerequisite
---|--------------|---------|----------------
HRT 207 | Plant Pest Management | 3 | 
HRT 228 | Turfgrass Management I | 3 | 
**Semester Total** | **6** | 

Semester 4
Course No. | Course Title | Credits | Prerequisite
---|--------------|---------|----------------
HRT 229 | Turfgrass Management II | 3 | HRT 228 
HRT 297 | Cooperative Education in Horticulture | 3 | 
SPA 160 | Spanish for the Green Industry | 3 | 
**Semester Total** | **9** | 
**Total Minimum Credits** | **27** | 

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2. Approved Elective may be chosen from BUS, HRT, ITE, or MKT and must be approved by your horticulture program advisor.
3. Consult your academic advisor.

Hospitality Management

Associate of Applied Science Degree: Hospitality Management
- Specialization: Culinary Arts (775.05)
- Specialization: Food Service Management (775.02)
- Specialization: Lodging Management (775.04)
- Career Studies: Catering (221.242.01)
- Career Studies: Classical Cooking (221.242.02)
- Career Studies: Food Service Management Trainee (221.241.64)
- Career Studies: Kitchen Management (221.775.04)
- Career Studies: Lodging Management Trainee (221.775.02)

Culinary Arts
The hospitality management program is designed to provide the knowledge and skills essential to a successful career in the rapidly expanding hospitality industry. The curriculum is a blend of professional, technical, and general education courses that will enable students to enter, advance, and compete successfully in a growing industry. Computer applications are integrated into many of the courses. Faculty combine practical experience and academic perspective.

The Culinary Arts Program focuses on the technical knowledge and hands-on skills necessary for a career path in food preparation in the hospitality industry.

With the Associate of Applied Science degree, students can become an assistant kitchen manager, chef de partie, caterer, banquet chef, chef tournant, sous chef, and eventually, executive chef.

The A.A.S. degree in Hospitality Management: Specialization in Culinary Arts is accredited by the American Culinary Federation’s Accrediting Commission.

Culinary Arts classes are taught at the Norfolk and Virginia Beach campuses. However, classes which require the kitchen laboratory (HRI 106-107, 128, 145, 206, 207, and 256) are taught only at Norfolk.
### Associate of Applied Science Degree: Hospitality Management

**Specialization: Culinary Arts (775.05)**

#### Semester 1 (Based on Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIT 125</td>
<td>Current Concepts in Diet and Nutrition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 101</td>
<td>Hotel Restaurant Organization and Management I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 106</td>
<td>Principles of Culinary Arts I</td>
<td>3</td>
<td>Co-req or Prereq:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HRI 158</td>
</tr>
<tr>
<td>HRI 158</td>
<td>Sanitation and Safety</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics (or MTH 158 or MTH 163)</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HRI 102</td>
<td>Hotel Restaurant Organization and Management II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 107</td>
<td>Principles of Culinary Arts II</td>
<td>3</td>
<td>HRI 106</td>
</tr>
<tr>
<td>HRI 128</td>
<td>Principles of Baking</td>
<td>3</td>
<td>HRI 106 and/or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HRI 107</td>
</tr>
<tr>
<td>HRI 134</td>
<td>Food and Beverage Service Management</td>
<td>3</td>
<td>HRI 158</td>
</tr>
<tr>
<td>HRI 215</td>
<td>Food Purchasing</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 145</td>
<td>Garde Manger</td>
<td>3</td>
<td>HRI 106 and/or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HRI 107</td>
</tr>
<tr>
<td>HRI 206</td>
<td>International Cuisine</td>
<td>3</td>
<td>HRI 106 and/or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HRI 107</td>
</tr>
<tr>
<td>HRI 224</td>
<td>Recipe and Menu Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Application and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

#### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 207</td>
<td>American Regional Cuisine</td>
<td>3</td>
<td>HRI 106 and/or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HRI 107</td>
</tr>
<tr>
<td>HRI 297</td>
<td>Cooperative Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI</td>
<td>HRI Approved Elective²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI</td>
<td>HRI Approved Elective²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

**Total Minimum Credits** 68

---

### Career Studies: Catering (221.242.01)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 106</td>
<td>Principles of Culinary Arts I</td>
<td>3</td>
<td>Co-req or Prereq:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HRI 158</td>
</tr>
<tr>
<td>HRI 158</td>
<td>Sanitation and Safety</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 224</td>
<td>Recipe and Menu Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics I</td>
<td>3</td>
<td>Placement</td>
</tr>
</tbody>
</table>

**Semester Total** 12

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 145</td>
<td>Garde Manger</td>
<td>3</td>
<td>HRI 106 and/or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HRI 107</td>
</tr>
<tr>
<td>HRI 207</td>
<td>American Regional Cuisine</td>
<td>3</td>
<td>HRI 106 and/or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HRI 107</td>
</tr>
<tr>
<td>HRI 251</td>
<td>Food and Beverage Cost Control</td>
<td>3</td>
<td>MTH 121</td>
</tr>
<tr>
<td>HRI 256</td>
<td>Principles and Applications of Catering</td>
<td>3</td>
<td>HRI 106</td>
</tr>
</tbody>
</table>

**Semester Total** 12

**Total Minimum Credits** 24

### Career Studies: Classical Cooking (221.242.02)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 106</td>
<td>Principles of Culinary Arts I</td>
<td>3</td>
<td>Co-req or Prereq:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HRI 158</td>
</tr>
<tr>
<td>HRI 158</td>
<td>Sanitation and Safety</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 6

---

*Semester Total*
Food Service Management
In the food service management program, students will develop a practical working knowledge of the principles of hotel, motel, restaurant, and institutional management. They will learn about current trends and the latest practices such as the dynamics of guest relations.

The career studies program prepares students to become a manager trainee, member of the banquet staff, caterer, deli manager, line or prep cook.

With the Associate of Applied Science degree in food service management, students can become an assistant kitchen manager, banquet manager, restaurant general manager, cost control manager, hotel assistant food and beverage manager, catering sales manager, kitchen manager, sales manager, or purchasing manager.

Associate of Applied Science Degree: Hospitality Management
Specialization: Food Service Management
(775.02)

<table>
<thead>
<tr>
<th>Semester 1 (Based on a Fall Semester start)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course No.</td>
</tr>
<tr>
<td>DIT 125</td>
</tr>
<tr>
<td>HRI 101</td>
</tr>
<tr>
<td>HRI 106</td>
</tr>
<tr>
<td>HRI 158</td>
</tr>
<tr>
<td>MTH 121</td>
</tr>
<tr>
<td>Semester Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course No.</td>
</tr>
<tr>
<td>HRI 101</td>
</tr>
<tr>
<td>HRI 224</td>
</tr>
<tr>
<td>HRI 251</td>
</tr>
<tr>
<td>Semester Total</td>
</tr>
</tbody>
</table>

Total Minimum Credits 21

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2 Approved HRI Electives
- HRI 190 Hospitality Ownership
- HRI 235 Marketing of Hospitality Services
- HRI 251 Food and Beverage Cost Control
- HRI 256 Principles and Applications of Catering
- HRI 275 Hospitality Law
Other HRI courses subject to the approval of the Program Coordinator.
Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 206</td>
<td>International Cuisine</td>
<td>3</td>
<td>HRI 106 and/or HRI 107</td>
</tr>
<tr>
<td>HRI 224</td>
<td>Recipe and Menu Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 275</td>
<td>Hospitality Law</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Application</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Concepts</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester Total</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 297</td>
<td>Cooperative Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI ___</td>
<td>HRI Approved Elective²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI ___</td>
<td>HRI Approved Elective²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester Total</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits: 65

Career Studies: Food Service Management Trainee (221.241.64)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIT 125</td>
<td>Current Concepts in Diet and Nutrition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 101</td>
<td>Hotel Restaurant Organization and</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRI 106</td>
<td>Principles of Culinary Arts I</td>
<td>3</td>
<td>Co-req or Prereq: HRI 158</td>
</tr>
<tr>
<td>HRI 158</td>
<td>Sanitation and Safety</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester Total</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 102</td>
<td>Hotel Restaurant Organization and</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRI 134</td>
<td>Food And Beverage Service Management</td>
<td>3</td>
<td>HRI 158</td>
</tr>
<tr>
<td>HRI 215</td>
<td>Food Purchasing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 224</td>
<td>Recipe and Menu Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 255</td>
<td>Human Resource Management and Training for Hospitality and Tourism</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester Total</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits: 27

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2 Approved HRI Electives
   HRI 150 Hospitality Ownership
   HRI 235 Hospitality Marketing
   HRI 256 Principles and Applications of Catering
   Other HRI courses subject to the approval of the Program Coordinator.

Lodging Management

In the lodging management program, students will develop a practical working knowledge of the principles of hotel, motel, restaurant, and institutional management. They will learn about current trends and the latest practices such as the dynamics of guest relations.

The career studies program qualifies students as trainee in the field, ready for positions such as front desk clerk, hotel receptionist, housekeeper, or reservationist.

With the Associate of Applied Science degree in lodging management students can become a hotel restaurant manager, banquet manager, cost control manager, housekeeping manager, hotel assistant food and beverage manager, catering sales manager, front office manager, assistant hotel general manager, or purchasing manager.

Associate of Applied Science Degree: Hospitality Management

Specialization: Lodging Management (775.04)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIT 125</td>
<td>Current Concepts in Diet and Nutrition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 101</td>
<td>Hotel Restaurant Organization and</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRI 106</td>
<td>Principles of Culinary Arts I</td>
<td>3</td>
<td>Co-req or Prereq: HRI 158</td>
</tr>
<tr>
<td>HRI 158</td>
<td>Sanitation and Safety</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics</td>
<td>3</td>
<td>Placement (or MTH 158 or MTH 163)</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester Total</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>
## Career and Technical Education

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HRI 102</td>
<td>Hotel Restaurant Organization and Management II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 134</td>
<td>Food and Beverage Service Management</td>
<td>3</td>
<td>HRI 158</td>
</tr>
<tr>
<td>HRI 160</td>
<td>Executive Housekeeping</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 180</td>
<td>Convention Management and Service</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 215</td>
<td>Food Purchasing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td><strong>18</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 224</td>
<td>Recipe And Menu Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 265</td>
<td>Hotel Front Office Operations</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 275</td>
<td>Hospitality Law</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td>Social Science Elective¹</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 297</td>
<td>Cooperative Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI</td>
<td>HRI Approved Elective²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI</td>
<td>HRI Approved Elective²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td><strong>15</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Total Minimum Credits: 65**

### Career Studies: Lodging Management Trainee (221.775.02)

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRI 101</td>
<td>Hotel Restaurant Organization and Management I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 106</td>
<td>Principles of Culinary Arts I</td>
<td>3</td>
<td>Co-req or Prereq: HRI 158</td>
</tr>
<tr>
<td>HRI 158</td>
<td>Sanitation and Safety</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HRI 235</td>
<td>Marketing of Hospitality Services</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td><strong>12</strong></td>
<td></td>
</tr>
</tbody>
</table>

---

## Human Services

The A.A.S. Degree in Human Services provides a basic foundation and skill set useful in the field of social and human services. It prepares students for employment in a wide array of job titles, including human services worker, case management aide, social work assistant, community support worker, mental health aide, community outreach worker, life skills counselor, or gerontology aide. These social and human services assistants assess clients’ needs, establish their eligibility for benefits and services, and assist clients in obtaining these benefits and services. They usually work under the direction of workers from a variety of fields, such as nursing, psychiatry, psychology, rehabilitative or physical therapy, or social work.

### Associate of Applied Science Degree: Human Services (480) (Pending Approval)

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HMS 100</td>
<td>Introduction to Human Services</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PSY 201</td>
<td>Introduction to Psychology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SOC 201</td>
<td>Introduction to Sociology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td><strong>17</strong></td>
<td></td>
</tr>
</tbody>
</table>
### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>HLT 110</td>
<td>Personal and Community Health</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMS 141</td>
<td>Group Dynamics I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMS 250</td>
<td>Principles of Case Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>PBS 265</td>
<td>Interviewing</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 18

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMS 121</td>
<td>Basic Counseling Skills I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMS 258</td>
<td>Case Management and Substance Abuse</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>HMS 290</td>
<td>Coordinated Internship in HMS</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHI 226</td>
<td>Social Ethics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PSY 230</td>
<td>Developmental Psychology</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 15

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMS 290</td>
<td>Coordinated Internship in HMS</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PSY 216</td>
<td>Social Psychology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SOC 268</td>
<td>Social Problems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPD 110</td>
<td>Introduction to Speech</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Human Services Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 15

**Total Minimum Credits**: 65

¹ Approved Human Services Electives:
- ADJ 232 Domestic Violence
- CHD 210 Introduction to Exceptional Children
- HMS 226 Helping Across Cultures
- HMS 227 Helper as Change Agent
- HMS 236 Gerontology
- MTH 115 Human Services and the Law
- PSY 215 Abnormal Psychology
- PSY 256 Psychological Aspects of Criminal Behavior
- SUC 215 Sociology of the Family

---

### Industrial Maintenance Technology

**Associate of Applied Science Degree: Industrial**

- Specialization: Industrial Maintenance Technology (963.10)
- Specialization: Industrial Management (963.01)
- Specialization: Industrial Manufacturing Engineering Technology (963.06)
- Specialization: Industrial Supervision (963.04)
- Specialization: Occupational Safety (963.12)
- Specialization: Quality Assurance (963.05)
- Career Studies: Industrial Maintenance (221.990.00)
- Career Studies: Industrial Management (221.991.16)
- Career Studies: Industrial Supervision (221.991.07)
- Career Studies: Occupational Safety (221.991.50)
- Career Studies: Quality Assurance (221.991.51)

**Industrial Maintenance Technology**

This program is designed to provide training for students working in industrial maintenance, providing them with skills in managerial techniques of supervision, process management control, quality assurance, and project management.

Graduates will be prepared for the following job opportunities: plant maintenance coordinator, equipment maintenance coordinator, production-planning maintenance technician, or maintenance supervisor in a shipyard, manufacturing or assembly operation, or warehousing environment.

**Associate of Applied Science Degree: Industrial**

**Specialization: Industrial Maintenance Technology (963.10)**

**Semester 1 (Based on a Fall semester start)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SAF 120</td>
<td>Safety and Health Standards</td>
<td>3</td>
<td>Regulation and Codes</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and Technologies</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND Elective²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND Elective²</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 16
Career and Technical Education

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 115</td>
<td>Materials and Processes of Industry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IND 145</td>
<td>Introduction to Metrology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 146</td>
<td>Statistical Quality Control</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 164</td>
<td>Precalculus II</td>
<td>3</td>
<td>MTH 163</td>
</tr>
<tr>
<td>SAF 125</td>
<td>Computer Applications for Technicians</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 101</td>
<td>Quality Assurance Technology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 150</td>
<td>Industrial Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 165</td>
<td>Principles of Industrial Technology I</td>
<td>3</td>
<td>IND 165</td>
</tr>
<tr>
<td>SAF 135</td>
<td>Safety Program Organization and</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective²</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 105</td>
<td>Nondestructive Inspection (NDI) and</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND 166</td>
<td>Principles of Industrial Technology II</td>
<td>3</td>
<td>IND 165</td>
</tr>
<tr>
<td>IND 293</td>
<td>Project Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective²</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Total Minimum Credits 65

Career Studies: Industrial Maintenance (221.990.00)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRF 160</td>
<td>Machine Blueprint Reading</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF 120</td>
<td>Safety and Health Standards Regulation and Codes</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF 297</td>
<td>Cooperative Education (or Approved</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical Elective²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technologies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND Elective²</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 13

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 115</td>
<td>Materials and Processes of Industry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IND</td>
<td>Approved IND Elective²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND</td>
<td>Approved IND Elective²</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 10

Total Minimum Credits 23

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).

2 Consult with your faculty advisor or counselor. Courses must be approved by the appropriate academic dean.

Industrial Management

The Industrial Management program is designed to prepare “management-oriented technical professionals” with the practical knowledge, skills, and training to compete effectively for entry-level positions in industrial manufacturing, and engineering services companies.

Graduates will be prepared for the following job opportunities: industrial or manufacturing supervisory technician, production planning technician, methods engineering technician, materials-handling technician, wage and job evaluation technician, or plant layout technician.

Associate of Applied Science Degree: Industrial

Specialization: Industrial Management (963.01)

Semester 1 (Based on a Fall semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>IND 101</td>
<td>Quality Assurance Technology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 106</td>
<td>Industrial Engineering Technology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 121</td>
<td>Industrial Supervision I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF 125</td>
<td>Computer Applications for Technicians</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technologies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 115</td>
<td>Materials and Processes of Industry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IND 145</td>
<td>Introduction to Metrology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 146</td>
<td>Statistical Quality Control</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 237</td>
<td>Fundamentals of ISO 9000</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
</tbody>
</table>

Semester Total 16

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).

2 Consult with your faculty advisor or counselor. Courses must be approved by the appropriate academic dean.
### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 137</td>
<td>Team Concepts and Problem Solving</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 164</td>
<td>Precalculus II</td>
<td>3</td>
<td>MTH 163</td>
</tr>
<tr>
<td>SAF 120</td>
<td>Safety and Health Standards Regulation and Codes</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND/SAF Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 16

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 150</td>
<td>Industrial Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 293</td>
<td>Project Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND/SAF Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 16

Total Minimum Credits: 65

---

### Associate of Applied Science Degree: Industrial

#### Specialization: Industrial Manufacturing Engineering Technology (963.06)

### Semester 1 (Based on a Fall semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>IND 101</td>
<td>Quality Assurance Technology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 145</td>
<td>Introduction to Metrology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus II</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SAF 125</td>
<td>Computer Applications for Technicians</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and Technologies</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 17

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 115</td>
<td>Materials and Processes of Industry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IND 146</td>
<td>Statistical Quality Control</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 160</td>
<td>Introduction to Robotics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 164</td>
<td>Precalculus II</td>
<td>3</td>
<td>MTH 163</td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 15

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 105</td>
<td>Industrial Engineering Technology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 115</td>
<td>Materials and Processes of Industry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IND 160</td>
<td>Introduction to Robotics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND/SAF Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND/SAF Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND/SAF Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits: 19

---

### Career Studies: Industrial Management (221.991.16)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 106</td>
<td>Industrial Engineering Technology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 115</td>
<td>Materials and Processes of Industry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IND 160</td>
<td>Introduction to Robotics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND/SAF Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND/SAF Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved IND/SAF Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits: 19

---

### Industrial Manufacturing Engineering Technology

Graduates will be prepared for the following job opportunities: manufacturing technologist, manufacturing process engineering technologist, line supervisor, industrial/technical representative, industrial/technical sales, production technologist, production foreman, production-planning technician, or line manager in a shipyard.
career and technical education

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).

2 Consult with your faculty advisor or counselor. Courses must be approved by the appropriate academic dean.

Industrial Supervision
The Industrial Supervision program is designed to provide the practical knowledge, skills, and training to compete effectively for entry-level supervisory positions in industrial manufacturing, and engineering services companies.

Graduates will be capable of delivering operational supervision and leading workers or integrated product teams. Graduates will fill such positions as: industrial supervisory technician, production planning supervisor, materials-handling supervisor, production line supervisor, or plant operations technical supervisor.

Associate of Applied Science Degree: Industrial
Specialization: Industrial Supervision (963.04)

Semester 1 (Based on a Fall semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>IND 101</td>
<td>Quality Assurance Technology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 121</td>
<td>Industrial Supervision I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF 125</td>
<td>Computer Applications for Technicians</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and Technologies</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>17</strong></td>
<td></td>
</tr>
</tbody>
</table>

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 106</td>
<td>Industrial Engineering Technology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 115</td>
<td>Materials and Processes of Industry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SAF 120</td>
<td>Safety and Health Standards</td>
<td>3</td>
<td>Regulation and Codes</td>
</tr>
<tr>
<td></td>
<td>Approved IND Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Career Studies: Industrial Supervision (221.991.07)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 101</td>
<td>Quality Assurance Technology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 121</td>
<td>Industrial Supervision I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 216</td>
<td>Plant Layout and Materials Handling</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 245</td>
<td>Time and Motion Study</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Minimum Credits</strong></td>
<td><strong>12</strong></td>
<td></td>
</tr>
</tbody>
</table>

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).

2 Consult with your faculty advisor or counselor. Courses must be approved by the appropriate academic dean.
Occupational Safety
The Occupational Safety program is designed to provide occupational safety instruction, information, and knowledge of safety compliance in accordance with current OSHA regulations and inspection procedures.

The career studies certificate plan is designed for students to become a safety technician, a safety examiner for an insurance company, a consumer safety inspector, an industrial hygienist, an OSHA compliance/enforcement officer, a production specialist, or a fire marshal. An Associate of Applied Science degree is designed for any of a number of managerial/supervisory positions in safety including OSHA compliance, safety investigation and inspection, or environmental protection.

Associate of Applied Science Degree: Industrial
Specialization: Occupational Safety (963.12)

Semester 1 (Based on a Fall semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SAF 120</td>
<td>Safety and Health Standards</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF 125</td>
<td>Computer Applications for Technicians</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SAF 126</td>
<td>Principles of Industrial Safety</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and Technologies</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SAF/IND Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>17</strong></td>
<td></td>
</tr>
</tbody>
</table>

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SAF 135</td>
<td>Safety Program Organization and Administration</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF 205</td>
<td>Human Factors and Safety Psychology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF/IND Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF/IND Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education¹</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective¹</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 101</td>
<td>Quality Assurance Technology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 145</td>
<td>Introduction to Metrology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 146</td>
<td>Statistical Quality Control</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 164</td>
<td>Precalculus II</td>
<td>3</td>
<td>MTH 163</td>
</tr>
<tr>
<td>SAF 246</td>
<td>Hazardous Chemicals, Materials, and Waste in the Workplace</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF 135</td>
<td>Safety Program Organization and Administration</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF/IND Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 115</td>
<td>Materials and Processes of Industry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IND 150</td>
<td>Industrial Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 245</td>
<td>Time and Motion Study</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF 246</td>
<td>Hazardous Chemicals, Materials, and Waste in the Workplace</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF/IND Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Semester Total</strong></td>
<td><strong>16</strong></td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits: 65

Career Studies: Occupational Safety (221.991.50)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAF 120</td>
<td>Safety and Health Standards Regulation and Codes</td>
<td>3</td>
<td>SAF/IND Elective²</td>
</tr>
<tr>
<td>SAF 125</td>
<td>Computer Applications for Technicians</td>
<td>4</td>
<td>SAF/IND Elective²</td>
</tr>
<tr>
<td>SAF 126</td>
<td>Principles of Industrial Safety</td>
<td>3</td>
<td>SAF/IND Elective²</td>
</tr>
<tr>
<td>SAF 135</td>
<td>Safety Program Organization and Administration</td>
<td>3</td>
<td>SAF/IND Elective²</td>
</tr>
<tr>
<td>SAF 205</td>
<td>Human Factors and Safety Psychology</td>
<td>3</td>
<td>SAF/IND Elective²</td>
</tr>
<tr>
<td></td>
<td><strong>Total Minimum Credits</strong></td>
<td><strong>19</strong></td>
<td></td>
</tr>
</tbody>
</table>

¹ Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).
² Consult with your faculty advisor or counselor. Courses must be approved by the appropriate academic dean.
Quality Assurance
The Quality Assurance program is designed to produce graduates who can manage, plan, design, and maintain effective quality control programs for a variety of industries. This program prepares the student who desires certification through the American Society for Quality (ASQ).

The Quality Assurance program prepares technicians to handle quality assurance issues and monitoring for industry and/or manufacturing company production operations.

Graduates are prepared for promotion to supervisory technical positions and find jobs in: quality engineering, quality assurance, production, operations, material management, and other industrial marine engineering functions.

Associate of Applied Science Degree: Industrial
Specialization: Quality Assurance (963.05)

**Semester 1 (Based on a Fall semester start)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>IND 101</td>
<td>Quality Assurance Technology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SAF 125</td>
<td>Computer Applications for Technicians</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 106</td>
<td>Industrial Engineering Technology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 237</td>
<td>Fundamentals of ISO 9000</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Engineering and...</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 115</td>
<td>Materials and Processes of Industry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>IND 145</td>
<td>Introduction to Metrology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 146</td>
<td>Statistical Quality Control</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 163</td>
<td>Precalculus I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SAF 120</td>
<td>Safety and Health Standards</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

**Career Studies: Quality Assurance (221.991.51)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IND 101</td>
<td>Quality Assurance Technology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 102</td>
<td>Quality Assurance Technology II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 146</td>
<td>Statistical Quality Control</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 236</td>
<td>Total Quality Concepts</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 164</td>
<td>Precalculus II</td>
<td>3</td>
<td>MTH 163</td>
</tr>
<tr>
<td>SAF 120</td>
<td>Safety and Health Standards</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total Minimum Credits** 18

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your faculty advisor or counselor to choose the appropriate course(s).

2 Consult with your faculty advisor or counselor. Courses must be approved by the appropriate academic dean.
information systems technology

**Associate of Applied Science Degree: Information Systems Technology (299)**

- Certificate: Information Systems Technology (200)
- Career Studies Options:
  - Database Specialist (221.299.11)
  - Network Administration (221.732.01)
  - Network Engineer: Windows 2003 (221.732.04)
  - Network Infrastructure Specialist (221.732.07)
  - Network Security (221.732.09)
  - Programmer Trainee (221.299.06)
  - Web Development Specialist (221.352.01)

The Information Systems Technology (IST) program consists of a number of career studies options that focus on a specific career field in information technology. These programs are best suited for individuals who already hold a degree and want to change careers or who seek advancement in their current field. Each of these programs requires that the student possess a basic understanding of computers in the work place. This basic understanding is expressed through prerequisite knowledge and/or required course work.

The career studies programs fold into the certificate program that adds some general education course work along with an introduction to the business world. The certificate is best suited for individuals who have substantial work experience in a related field.

The Associate of Applied Science degree is designed for the individual who has little, if any, work experience and holds no degree. It provides a combination of technical courses, general education, and business-related content.

Internships in local businesses and cooperative education experiences help students explore the job market before graduation. In some instances, internships are an optional component of the program.

For entry into any of the college’s IST programs, students must have a strong foundation in microcomputer applications, including word processing, spreadsheets, database, the Windows desktop, Internet, and e-mail. Students may demonstrate these competencies by challenging or completing ITE 115. Additionally, students are encouraged to complete the IT core requirements of ITN 101, ITN 106, ITN 107, and ITP 100 prior to specializing in any of the career studies programs. Some career studies programs alter these requirements slightly. Be sure to check the specific program prior to enrolling in the core classes. It is important to complete or otherwise satisfy all prerequisite requirements for any course.

Areas in which a student may concentrate are: Database Specialist, Network Administration, Network Engineer-Windows 2003, Network Infrastructure Specialist (Cisco), Network Security, Programmer Trainee, and Web Development Specialist. The majority of these concentrations prepare the student to sit for either vendor-specific or vendor-neutral certifications.

The field of information technology is constantly evolving, and TCC makes every effort to keep all programs current. Please visit the following website for the most up-to-date information: www.tcc.edu/IST.

Students enrolled in many of the IT courses are eligible for free software from Microsoft Corporation as a result of TCC’s membership in the Microsoft Developers’ Network Academic Alliance (MSDNAA). See the IT website for details about MSDNAA.

### Associate of Applied Science Degree: Information Systems Technology (299)

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 100</td>
<td>Introduction to Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ITN 106</td>
<td>Microcomputer Operating Systems</td>
<td>5, 4</td>
<td>ITN 106 or ITN 171</td>
</tr>
<tr>
<td>ITN 107</td>
<td>Personal Computer Hardware and Troubleshooting</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 158</td>
<td>College Algebra</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total: 18**

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 205</td>
<td>Business Communications</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>BUS 125</td>
<td>Applied Business Mathematics</td>
<td>3</td>
<td>MTH 121</td>
</tr>
<tr>
<td>BUS 200</td>
<td>Principles of Management (or BUS 165)</td>
<td>3</td>
<td>BUS 100</td>
</tr>
<tr>
<td>ITN 101</td>
<td>Introduction to Network Concepts</td>
<td>4</td>
<td>ITN 106 or ITN 171</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>or ITN 114</td>
</tr>
<tr>
<td>ITP 100</td>
<td>Software Design</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total: 17**

---

catalog 2008-09 123
### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECO 120</td>
<td>Survey of Economics</td>
<td>3</td>
<td>(or ECO 201 or ECO 202)</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT Approved Elective</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT Approved Elective</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 212</td>
<td>Principles of Accounting II</td>
<td>3-4</td>
<td>ACC 211 (or IT Approved Elective)</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT Approved Elective</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT Approved Elective</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

### Total Minimum Credits

- Semester 3: 17
- Semester 4: 15
- Total: 32

### Certificate: Information Systems Technology (200)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td></td>
<td>IT Approved Elective</td>
<td>4-8</td>
<td></td>
</tr>
<tr>
<td>MTH 158</td>
<td>College Algebra</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>11 - 15</td>
<td></td>
</tr>
</tbody>
</table>

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 100</td>
<td>Introduction to Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT Approved Elective</td>
<td>8-12</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>11 - 15</td>
<td></td>
</tr>
</tbody>
</table>

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT Approved Elective</td>
<td>3-8</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>6 - 11</td>
<td></td>
</tr>
</tbody>
</table>

### Total Minimum Credits

- Semester 1: 11 - 15
- Semester 2: 11 - 15
- Semester 3: 6 - 11
- Total: 37 - 41

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2. Approved electives must be selected from one of the IST Career Studies Programs.
3. These courses prepare students to sit for certification exams. ITN 106/107 prepare students for the A+ certification. ITN 101 prepares students for the Network+ certification.
4. Students in the Web Development Specialist curriculum should take ITE 130 Introduction to Internet Services in place of ITN 101.
5. Students in the Database Specialist curriculum should take ITN 171 UNIX I in place of ITN 106.

### Career Studies: Database Specialist (221.299.11)

TCC is an Oracle Academic Initiative (OAI) Partner and an authorized Oracle training site. These courses prepare students for the tests leading to Oracle Certified Associate (OCA) certification and Oracle Certified Professional (OCP).

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITD 132</td>
<td>Structured Query Language</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ITD 260</td>
<td>Data Modeling and Design</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITD 250</td>
<td>Database Architecture and Administration</td>
<td>4</td>
<td>ITD 132 and ITN 171</td>
</tr>
<tr>
<td>ITD 134</td>
<td>PL/SQL Programming</td>
<td>4</td>
<td>ITD 132 or SQL knowledge</td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Electives</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Approved Electives</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

#### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Electives</td>
<td></td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>3-4</td>
<td></td>
</tr>
</tbody>
</table>

### Total Minimum Credits

- Semester 1: 8
- Semester 2: 8
- Semester 3: 8
- Semester 4: 3-4
- Total: 27-28

1. Electives may be chosen from any of the courses listed below.
   - ITD 136 Database Management Software
   - ITD 132 Oracle Forms Developer
   - ITD 251 Database System Development
   - ITD 252 Database Backup and Recovery
   - ITD 258 Database Performance and Tuning
**Career Studies: Network Administration (221.732.01)**

Depending upon the selection of electives, students may prepare for network-related certifications from Cisco, Microsoft, and CompTIA.

**Semester 1**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 114</td>
<td>Windows XP Professional</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ITN 150</td>
<td>Networking Fundamentals and Introductory Routing - Cisco</td>
<td>4</td>
<td>ITN 101</td>
</tr>
<tr>
<td>ITN 171</td>
<td>UNIX I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ITN 260</td>
<td>Network Security Basics</td>
<td>4</td>
<td>ITN 101 or substantial networking experience</td>
</tr>
</tbody>
</table>

**Semester Total**  16

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 115</td>
<td>Windows Server 2003 (SER)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ITN 170</td>
<td>Linux System Administration</td>
<td>4</td>
<td>ITN 171</td>
</tr>
</tbody>
</table>

Approved IT Elective¹

**Semester Total**  11 - 12

**Total Minimum Credits**  27 - 28

¹ Approved IT Electives:
- ITN 117 – Windows 2003 – Network Infrastructure – Planning and Maintenance (NI-PM)
- ITN 118 – Windows 2003 – Active Directory Infrastructure Planning (ADI-PM)
- ITN 151 – Introductory Routing and Switching - Cisco
- ITN 270 – Advanced Linux Network Administration
- ITN 290 or ITN 297 – Coordinated Internship in ITN or Cooperative Education in ITN

**Career Studies: Network Engineer – Windows 2003 (221.732.04)**

Graduates are prepared to study for the Microsoft Certified Professional (MCP), Microsoft Certified Systems Administrator (MCSA), and Microsoft Certified Systems Engineer (MCSE).

Tidewater Community College is a member of the Microsoft Developers’ Network Academic Alliance. Students may obtain free copies of applicable software.

**Semester 1**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 114</td>
<td>Windows XP Professional (XP)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ITN 115</td>
<td>Windows 2003 – Server (SER)</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**  8

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 116</td>
<td>Windows 2003 – Network Infrastructure – Implementation, Management, and Maintenance (NI-IMM)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ITN 117</td>
<td>Windows 2003 – Network Infrastructure – Planning and Maintenance (NI-PM)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ITN 118</td>
<td>Windows 2003 – Active Directory Infrastructure Planning (ADI-PM)</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**  12

**Semester 3**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN</td>
<td>ITN Approved MCSE 2003 Design Course¹</td>
<td>4</td>
<td>ITN 115</td>
</tr>
<tr>
<td>ITN</td>
<td>ITN Approved MCSE 2003 Elective²</td>
<td>4</td>
<td>ITN 115</td>
</tr>
</tbody>
</table>

**Semester Total**  8

**Total Minimum Credits**  28

¹ ITN approved MCSE 2003 Design Course Choices (pick one)
- ITN 240 – Windows 2003 Active Directory and Network Infrastructure Design (AD-ND)¹
- ITN 241 – Windows 2003 Security Design (SD)¹

² ITN approved MCSE 2003 Elective Choices (pick one)
- ITN 240 – Windows 2003 Active Directory and Network Infrastructure Design (AD-ND)¹
- ITN 241 – Windows 2003 Security Design (SD)¹
- ITN 242 – Windows Microsoft Exchange 2003 Server (ES03)

³ Can be used once, either as a design course or elective course.

**Career Studies: Network Infrastructure Specialist (221.732.07)**

Through a partnership with Cisco Systems and the VCCS, this program provides the student with the training to gain certification as a Cisco Certified Networking Associate (CCNA) and as a Cisco Certified Design Associate (CCDA).

TCC is recognized as a Cisco Regional Academy that provides training and support for local academies in our service area.

**Semester 1**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 150</td>
<td>Networking Fundamentals and Introductory Routing – Cisco¹</td>
<td>4</td>
<td>ITN 101</td>
</tr>
<tr>
<td>ITN 260</td>
<td>Network Security Basics</td>
<td>4</td>
<td>ITN 101 or substantial networking experience</td>
</tr>
</tbody>
</table>

**Semester Total**  8
### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 151</td>
<td>Introductory Routing and Switching – Cisco²</td>
<td>4</td>
<td>ITN 150</td>
</tr>
<tr>
<td>ITN 250</td>
<td>Advanced Routing – Cisco²</td>
<td>4</td>
<td>ITN 150, ITN 151</td>
</tr>
</tbody>
</table>

ITN 151 should be taken prior to or with ITN 250.

**Semester Total** 8

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 251</td>
<td>Remote Access Networking - Cisco²</td>
<td>4</td>
<td>ITN 151</td>
</tr>
<tr>
<td>ITN 252</td>
<td>Advanced Switching – Cisco²</td>
<td>4</td>
<td>ITN 151</td>
</tr>
</tbody>
</table>

**Semester Total** 8

**Total Minimum Credits** 28

1. These courses prepare students to sit for the CCNA (Cisco Certified Networking Associate) and CCDA (Cisco Certified Design Associate) certification exams.
2. These courses prepare students to sit for the CCNP (Cisco Certified Networking Professional) certification exams.

### Career Studies: Network Security (221.732.09)

This program has been designed for computer professionals currently working in industry or students who have successfully completed all the IST core requirements and some networking coursework.

**Semester 1**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 260</td>
<td>Network Security Basics¹</td>
<td>4</td>
<td>ITN 101 or substantial networking experience</td>
</tr>
<tr>
<td>ITN 267</td>
<td>Legal Topics in Network Security</td>
<td>3</td>
<td>ITN 260 should be taken prior to or with ITN 267</td>
</tr>
</tbody>
</table>

**Semester Total** 7

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 253</td>
<td>Network Troubleshooting - Cisco²</td>
<td>4</td>
<td>ITN 250, ITN 251, ITN 252</td>
</tr>
</tbody>
</table>

**Semester Total** 4

Career Studies: Programmer Trainee (221.299.06)

Languages currently supported include: Java, Visual Basic, .Net, C++, and C#.Net.

**Semester 1**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITP 132</td>
<td>Structured Query Language</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ITP</td>
<td>Introductory Programming Language¹</td>
<td>4</td>
<td>ITP 100</td>
</tr>
</tbody>
</table>

**Semester Total** 8

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITP 215</td>
<td>Advanced Computer Applications and Integration</td>
<td>4</td>
<td>ITP 115</td>
</tr>
<tr>
<td>ITP</td>
<td>Introductory Programming Language¹</td>
<td>4</td>
<td>ITP 100</td>
</tr>
<tr>
<td>ITP</td>
<td>Advanced Programming Language²</td>
<td>4</td>
<td>appropriate intro</td>
</tr>
</tbody>
</table>
Career Studies: Web Development Specialist (221.352.01)

Graduates from this program will be prepared to accept entry-level positions that will fill the huge demand within organizations for Web development on company Intranets and corporate e-business sites on the Internet.

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITN 109</td>
<td>Internet and Network Foundations</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT Approved Elective</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITD 110</td>
<td>Web Page Design I</td>
<td>4</td>
<td>ITD 110</td>
</tr>
<tr>
<td></td>
<td>IT Approved Elective</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITD 210</td>
<td>Web Page Design II</td>
<td>4</td>
<td>ITD 110</td>
</tr>
<tr>
<td>ITN 224</td>
<td>Web Server Management</td>
<td>4</td>
<td>ITN 109</td>
</tr>
<tr>
<td>Semester Total</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits: 24

1. Choose from courses for career specialties in either Web Design Graphics or Web Programming:
   - Web Design Graphics:
   - ITD 112 - Designing Web Page Graphics
   - ITD 212 - Interactive Web Design
   - Web Programming:
   - ITD 132 - Structured Query Language
   - ITP 120 - Java Programming I
   - ITP 240 - Server Side Programming
   - ITP 242 - ASP Server Side Scripting
2. Courses lead to Certified Internet Webmaster (CIW) Associate and Professional certifications.
career and technical education

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS 120</td>
<td>Estimation for Interior Coverings</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IDS 217</td>
<td>Advanced Rendering and Presentation</td>
<td>3</td>
<td>IDS 106</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 9

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS 116</td>
<td>Period Residential Design</td>
<td>4</td>
<td>IDS 105 and 217</td>
</tr>
<tr>
<td>IDS 215</td>
<td>Theory and Research in Commercial Design</td>
<td>3</td>
<td>IDS 105 and 217</td>
</tr>
<tr>
<td>IDS 245</td>
<td>Computer Aided Drafting for Interior Design</td>
<td>3</td>
<td>IDS 105</td>
</tr>
<tr>
<td>IDS 250</td>
<td>Green Design for Interior Designers</td>
<td>3</td>
<td>IDS 100 and 105</td>
</tr>
<tr>
<td></td>
<td>IDS Elective²</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Semester 5

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS 222</td>
<td>Designing Commercial Interiors II</td>
<td>4</td>
<td>IDS 105 and 217</td>
</tr>
<tr>
<td>IDS 225</td>
<td>Business Procedures</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IDS Elective²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 13

Total Minimum Credits 68

Career Studies: Associate Designer (221.520.17)

The Associate Designer career studies program option provides a basic foundation in visual presentation skills, spatial design, color coordination, the evolution of furniture and interior styles, and estimate. All courses count toward the associate’s degree.

This career studies program prepares the student for employment as a color consultant or sales associate of retail interior design.

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS 100</td>
<td>Theory and Techniques of Interior Design</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IDS 105</td>
<td>Architectural Drafting for Interior Design</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IDS 205</td>
<td>Materials and Sources</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IDS 109</td>
<td>Styles of Furniture and Interiors</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 12

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDS 120</td>
<td>Estimation of Interior Coverings</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IDS 106</td>
<td>Three Dimension Drawing and Rendering</td>
<td>3</td>
<td>IDS 105</td>
</tr>
<tr>
<td>IDS 206</td>
<td>Lighting and Furnishings</td>
<td>3</td>
<td>IDS 105</td>
</tr>
<tr>
<td>IDS 245</td>
<td>Computer Aided Drafting for Interior Designers</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 12

Total Minimum Credits 24

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

2 Consult with your academic advisor or counselor. Courses must be approved by the appropriate division dean.

>> management

Associate of Applied Science Degree: Management (212)

- Specialization: Maritime Logistics (212.02)
- Career Studies: Acquisition and Procurement (221.248.05)
- Career Studies: Retail Operations (221.212.23)
- Career Studies: Small Business Management (221.212.24)
- Career Studies: Supervisory Management (221.212.25)

Tomorrow’s administrative assistants, department heads, management and supervisor trainees, office managers, or supervisors will get the training and education they need to get a good start in the management program. It also helps current managers update their skills for advancement and promotion.
The Associate of Applied Science degree program takes both a theoretical and a practical approach to accounting, marketing, business law, statistics, economics, and human resource management. Graduates become supervisors, department heads, office managers, small business managers, and administrative assistants.

A cooperative education program allows students to earn academic credit and supplement their income while they gain work experience at local sites.

The courses for the A.A.S. degree in Management are available at all four campuses. The career studies certificate in Acquisition and Procurement is only available at the Virginia Beach Campus while most courses in the remaining certificates are available on most campuses.

### Associate of Applied Science Degree: Management (212)

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 100</td>
<td>Introduction to Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MKT 100</td>
<td>Principles of Marketing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 205</td>
<td>Business Communications</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>BUS 125</td>
<td>Applied Business Mathematics</td>
<td>3</td>
<td>MTH 121</td>
</tr>
<tr>
<td>BUS 200</td>
<td>Principles of Management</td>
<td>3</td>
<td>BUS 100</td>
</tr>
<tr>
<td>ECO 201</td>
<td>Principles of Economics I</td>
<td>3</td>
<td>(or ECO 120)</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 205</td>
<td>Human Resource Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 220</td>
<td>Introduction to Business Statistics</td>
<td>3</td>
<td>BUS 125</td>
</tr>
<tr>
<td>BUS 241</td>
<td>Business Law I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 297</td>
<td>Cooperative Education (or BUS prefix courses only)</td>
<td>3</td>
<td>Humanities Elective¹</td>
</tr>
</tbody>
</table>

**Semester Total** 18

#### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 212</td>
<td>Principles of Accounting II</td>
<td>3</td>
<td>ACC 211</td>
</tr>
<tr>
<td>BUS 201</td>
<td>Organizational Behavior</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 242</td>
<td>Business Law II</td>
<td>3</td>
<td>BUS 241</td>
</tr>
<tr>
<td>BUS 297</td>
<td>Cooperative Education (or BUS prefix courses only)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FIN 215</td>
<td>Financial Management</td>
<td>3</td>
<td>ACC 212</td>
</tr>
</tbody>
</table>

**Semester Total** 15

**Total Minimum Credits** 67

### Career Studies: Acquisition and Procurement (221.248.05)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACQ 121</td>
<td>Introduction to Acquisition and Procurement Fundamentals I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACQ 215</td>
<td>Contract Law</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ACQ 231</td>
<td>Principles of Contract Pricing and Negotiation I</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 9

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACQ 122</td>
<td>Introduction to Acquisition and Procurement Fundamentals II</td>
<td>3</td>
<td>ACQ 121</td>
</tr>
<tr>
<td>ACQ 221</td>
<td>Advanced Acquisition and Procurement Management I</td>
<td>3</td>
<td>ACQ 121</td>
</tr>
<tr>
<td>ACQ 232</td>
<td>Principles of Contract Pricing and Negotiation II</td>
<td>3</td>
<td>ACQ 231</td>
</tr>
</tbody>
</table>

**Semester Total** 9

**Total Minimum Credits** 18
Career and Technical Education

Career Studies: Retail Operations (221.212.23)

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 111</td>
<td>Principles of Supervision</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MKT 100</td>
<td>Principles of Marketing</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MKT 110</td>
<td>Principles of Selling</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPD 110</td>
<td>Introduction to Speech</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDV 106</td>
<td>Preparation for Employment</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Electives*</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Electives*</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT 216</td>
<td>Retail Organization and Management</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MKT 260</td>
<td>Customer Service Management</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MKT</td>
<td>Portfolio Development</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDV 106</td>
<td>Preparation for Employment</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Electives*</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Electives*</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits: 29

* Approved electives:
  - BUS 205 - Principles of Accounting
  - MKT 251 - Front End Management and Retail Service
  - MKT 271 - Consumer Behavior
  - MKT 282 - Principles of E-Commerce
  - MKT 297 - Cooperative Education

Career Studies: Supervisory Management (221.212.25)

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 211</td>
<td>Principles of Accounting</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUS 100</td>
<td>Principles of Business</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
<td></td>
</tr>
<tr>
<td>BUS 201</td>
<td>Organizational Behavior</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester Total</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 200</td>
<td>Principles of Management</td>
<td>3</td>
<td>BUS 100</td>
<td></td>
</tr>
<tr>
<td>BUS 205</td>
<td>Human Resource Management</td>
<td>3</td>
<td>ENG 111</td>
<td></td>
</tr>
<tr>
<td>ENG 131</td>
<td>Technical Report Writing I</td>
<td>3</td>
<td>ENG 111</td>
<td></td>
</tr>
<tr>
<td>SAF 126</td>
<td>Principles of Industrial Safety</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester Total</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits: 24

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

Maritime Logistics Management

Maritime Logistics Management is the part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services, and related information from the point of origin to the point of consumption in order to meet customers’ requirements in the Maritime and business environments. Supply Management has evolved from a clerical function requiring limited education to strategic supply management with a professional staff and a proactive approach with a global view.

The Associate of Applied Science degree program takes a theoretical and a practical approach to the supply chain processes of distribution and transportation, supply chain management, purchasing, inventory and warehouse management, accounting, integrated logistics, and financial management. Graduates are prepared for employment and growth in the field of logistics management in the Maritime and business environments.
### Associate of Applied Science Degree: Management

**Specialization: Maritime Logistics (212.02)**

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 100</td>
<td>Introduction to Business</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MKT 100</td>
<td>Principles of Marketing</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH 121</td>
<td>Fundamentals of Mathematics I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 17

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 205</td>
<td>Business Communications</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>BUS 125</td>
<td>Applied Business Mathematics</td>
<td>3</td>
<td>MTH 121</td>
</tr>
<tr>
<td>BUS 200</td>
<td>Principles of Management</td>
<td>3</td>
<td>BUS 100</td>
</tr>
<tr>
<td>ECO 120</td>
<td>Survey of Economics (or ECO 201)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective¹</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education¹</td>
<td></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 17

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 215</td>
<td>Purchasing and Materials Management</td>
<td>3</td>
<td>(or BUS approved elective²)</td>
</tr>
<tr>
<td>BUS 223</td>
<td>Distribution and Transportation</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 265</td>
<td>Ethical Issues in Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 297</td>
<td>Cooperative Education (or BUS prefix courses only)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities Elective¹</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total**: 18

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 212</td>
<td>Principles of Accounting II</td>
<td>3</td>
<td>ACC 211</td>
</tr>
<tr>
<td>BUS 255</td>
<td>Inventory and Warehouse Management (or BUS approved elective³)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 234</td>
<td>Supply Chain Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>BUS 297</td>
<td>Cooperative Education (or BUS prefix courses only)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FIN 215</td>
<td>Financial Management</td>
<td>3</td>
<td>ACC 211 or Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total**: 15

**Total Minimum Credits**: 67

---

### medical assisting

#### Certificate: Medical Assisting (166)

#### Career Studies Certificate: Medical Office Administration (221.285.93)

Students are trained to work in various health care settings, including physicians’ offices, urgent care facilities, and hospitals. Completion of the program enables students to progress to an associate’s degree in science and advance to other health care programs.

Upon completion of the program, students are eligible for nurse aide certification and meet all national standards to successfully complete the national certification examination.

In addition to the general college admission requirements, students must have completed three years of high school English, two years of high school math, including Algebra I, and one year of high school biology. Completion of ITE 115 (or equivalent computer competencies) must be met prior to acceptance into the program. Students must also be able to type 35 words per minute and have CPR for healthcare providers (before beginning the clinical portion of the program) and meet technical standards for the medical assistant. A physical examination is required. Transcripts from other colleges attended must be on file at TCC Central Records Office, P.O. Box 9000, Norfolk, Virginia, 23510, prior to the application deadline date. These transcripts must be evaluated before any transfer credit is granted. Application deadline is June 15.
Students must maintain a C average or better to remain in good standing. Students will be readmitted to the program at the discretion of the program director and according to space availability. A 320-hour internship in a doctor's office, nursing home, hospital and/or urgent care center is required for graduation.

Program requirements may change in accordance with federal, state, or industry standards. Call 822-7255 for the most current information.

The Tidewater Community College Virginia Beach Campus’ Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org), upon the recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE-CRB) Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, Florida 33756 727-210-2350.

Certificate: Medical Assisting (166)

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
<td></td>
</tr>
<tr>
<td>HLT 105</td>
<td>Cardiopulmonary Resuscitation</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HLT 130</td>
<td>Nutrition and Diet Therapy</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 100</td>
<td>Introduction to Medical Assisting</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 101</td>
<td>Medical Assistant Science I</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 203</td>
<td>Medical Office Procedures</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 207</td>
<td>Medical Law and Ethics</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td></td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 102</td>
<td>Medical Assistant Science II</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 104</td>
<td>Medical Assistant Science IV</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 190</td>
<td>Coordinated Internship in Medical Assisting</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 190</td>
<td>Coordinated Internship in Medical Assisting</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 208</td>
<td>Medical Office Coding</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 209</td>
<td>Medical Office Insurance</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 221</td>
<td>Diagnostic Laboratory Procedures</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td></td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 3</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 210</td>
<td>Medical Office Software Applications</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 103</td>
<td>Medical Assistant Science II</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 107</td>
<td>Pharmacology for Medical Assistants</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 190</td>
<td>Coordinated Internship in Medical Assisting</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td></td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

Total Minimum Credits 45

Medical Office Administration

This career studies certificate represents the administrative (front office) portion of the classes included in the Medical Assistant certificate program at Tidewater Community College. This program will provide valuable information for use in a doctor's office, an urgent care center, hospital, or medical coding and billing facility. The program provides courses in anatomy, physiology, medical terminology, legal and ethical issues, coding and insurance, and medical office procedures. Graduates of this program have excellent opportunities in the health care industry.

Through placement testing, students must place into ENG 111. Students must complete ITE 115 or exhibit equivalent computer competency skills prior to acceptance into the program. Students must be able to type 35 words per minutes and possess a current CPR certification for Health Care Providers before entering the clinical portion of the program. A physical exam is required. The application deadline is June 15.

Career Studies: Medical Office Administration (221-285-93)

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 101</td>
<td>Medical Assistant Science I</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 203</td>
<td>Medical Office Procedures</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 207</td>
<td>Medical Law and Ethics</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td></td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 190</td>
<td>Coordinated Internship in Medical Assisting</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 208</td>
<td>Medical Office Coding</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDA 209</td>
<td>Medical Office Insurance</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDA 210</td>
<td>Medical Office Software Applications</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 1

**Total Minimum Credits** 16

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. PSY 201 is recommended.

**music**

**Career Studies: Music (221.529.01)**

The Career Studies Certificate in Music is designed to provide students with a solid introduction to music for those interested in pursuing a degree in music or enhancing their understanding of music theory, appreciation, and history. Additionally, it provides the opportunity to improve performance skills in either choral or selected instruments.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 101</td>
<td>Basic Musicianship I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUS 102</td>
<td>Basic Musicianship II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUS 111</td>
<td>Music Theory I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MUS 112</td>
<td>Music Theory II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MUS 121</td>
<td>Music Appreciation I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MUS 122</td>
<td>Music Appreciation II</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Applied Music I**

2-4

**Approved Music Elective**

2-3-5

1 Applied Music course must be taken from the following:

- MUS 136 – Applied Music – Voice
- MUS 165 – Applied Music – Keyboard
- MUS 155 – Applied Music – Woodwinds
- MUS 165 – Applied Music – Strings
- MUS 175 – Applied Music – Brass
- MUS 185 – Applied Music – Percussion
- MUS 236 – Advanced Applied Music – Voice
- MUS 245 – Advanced Applied Music – Keyboard
- MUS 265 – Advanced Applied Music – Strings

Applied Music courses will require additional fees/studio charges for off-campus instruction to meet proficiency requirements. Contact the Music Department for details.

2 Approved Music Electives:

- MUS 137 – Chorus Ensemble
- MUS 187 – Cooperation Education
- MUS 211-212 – Advanced Music Theory I-II
- MUS 221 – History of Music I
- MUS 222 – History of Music II
- MUS 237 – Chorus Ensemble

**nursing program**

**Associate of Applied Science Degree: Nursing (156)**

The Associate of Applied Science (A.A.S.) degree in nursing is designed to prepare students who want to pursue a career as a Registered Nurse. The program provides a background for maximum transfer opportunities to baccalaureate nursing programs. Registered nurses are eligible for employment in a variety of facilities including acute care, doctors’ offices, health departments, home health services, hospices, long-term care, and mental health and rehabilitation centers. Students experience planned theory and clinical practice in a variety of nursing/community settings. The program integrates clinical laboratory practice using state-of-the-art patient care simulators and state-of-the-art laboratory equipment. The use of state-of-the-art technology better prepares students for their role in the workforce.

The A.A.S. in nursing requires five semesters of full-time study and is fully accredited by the National League for Nursing Accrediting Commission (NLNAC). The National League for Nursing Accrediting Commission [61 Broadway, New York, NY (212-363-5555)] may be used as a resource for program information. TCC’s program also is approved by the Virginia Board of Nursing. The Board of Nursing can deny licensure to any applicant who has filed false credentials, who has falsely represented facts on the application for licensure, and/or has committed a felony/misdemeanor. Some health facilities may not employ individuals who have committed certain criminal acts and may conduct criminal background checks before hiring. Background checks for criminal history and sex offender crimes against minors are required for entrance into some clinical agencies. Students who have convictions may be prohibited from clinical practice and may not complete the degree program.

Prospective nursing applicants must be accepted into TCC and attend a nursing information session. Students are admitted in cohort groups—two groups are admitted in the fall and two groups are admitted in the spring. Applications are accepted between September 1, and May 15. All submission documents must be submitted by May 15. The criteria for admission to the nursing program are outlined in the Registered Nursing Program Admissions Procedures and Information Booklet for Students. Additional information related to diagnostic testing requirements is included in this booklet. Students are selected based on a weighted point system as outlined in the Information Booklet mentioned above.
career and technical education

Students are responsible for costs related to required testing fees, liability insurance, uniforms, books, criminal history and sex offender crimes against minors checks, parking at clinical sites, and nursing skills packs.

**Progression**

Students must pass each nursing course to proceed to the next course. For clinically based nursing courses, students must pass theory as well as clinical to pass the course. Students must maintain a minimum GPA of 2.2 to continue in the program.

**LPN to RN Options**

Licensed Practical Nurses (LPNs) who desired to pursue their RN education have two options: articulation or advanced placement. Articulation awards credits based on previous learning experiences at LPN programs after students successfully complete Nursing 115 (Transition from LPN to RN Education). For more information on these options, please see the specific admission requirements as outlined in the Registered Nursing Program Admissions Procedures and Information Booklet for Students.

**Withdrawal/Re-enrollment**

Students who withdraw should have an exit interview with the nursing faculty or program head. Those who withdraw because of academic failure may not re-enroll more than once and must have a GPA cumulative of 2.4 for readmission consideration. Students seeking re-enrollment must write a letter of intent to the nursing program head. Re-enrollment must occur within two years to maintain credits. Pending space availability, students have to demonstrate certain competencies and meet health/clinical requirements to be considered for re-enrollment. Students who have failed two nursing courses will not be re-enrolled.

**Transfer**

Students transferring from other nursing programs must meet the admission requirements of this program. Letters of reference and submission of nursing course syllabi must be submitted to the nursing program head. Students who desire consideration of transferring nursing credits must have completed nursing courses within two years of beginning the nursing program. Specific details regarding transfer are found in the Registered Nursing Program Admissions Procedures and Information Booklet for Students.

See the TCC website (www.tcc.edu/academics) for the most current program information.

---

### Associate of Applied Science Degree: Nursing (156)

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIO 141</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td></td>
<td>NUR 108</td>
<td>Nursing Principles and Concepts I</td>
<td>6</td>
<td>Admission to Program</td>
</tr>
<tr>
<td></td>
<td>NUR 130</td>
<td>Nursing Assessment and Basic Pharmacology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td></td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIO 142</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
<td>BIO 141</td>
</tr>
<tr>
<td></td>
<td>NUR 170</td>
<td>Essentials of Medical/ Surgical Nursing</td>
<td>4</td>
<td>NUR 108 and NUR 130</td>
</tr>
<tr>
<td></td>
<td>NUR 180</td>
<td>Essentials of Maternal/ Newborn Nursing</td>
<td>4</td>
<td>NUR 108 and NUR 130</td>
</tr>
<tr>
<td></td>
<td>PSY 201</td>
<td>Introduction to Psychology I</td>
<td>3</td>
<td>(or PSY 200)</td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td></td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 3</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td></td>
<td>NUR 201</td>
<td>Psychiatric Nursing</td>
<td>4</td>
<td>NUR 170 and NUR 180</td>
</tr>
<tr>
<td></td>
<td>PSY 235</td>
<td>Child Psychology (or PSY 220 or PSY 231)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 4</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIO 150</td>
<td>Introductory Microbiology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NUR 270</td>
<td>Essential Nursing Concepts II</td>
<td>4</td>
<td>NUR 201</td>
</tr>
<tr>
<td></td>
<td>NUR 271</td>
<td>Essential Nursing Concepts III</td>
<td>4</td>
<td>NUR 270</td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td></td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>
Semester 5

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUR 272</td>
<td>Essential Nursing Concepts IV</td>
<td>4</td>
<td>NUR 271</td>
</tr>
<tr>
<td>NUR 273</td>
<td>Essential Nursing Concepts V</td>
<td>4</td>
<td>NUR 272; Co-req: NUR 274; Co-req: NUR 255</td>
</tr>
<tr>
<td>NUR 274</td>
<td>Nursing Civic Responsibility</td>
<td>1</td>
<td>NUR 271; Co-req: NUR 272</td>
</tr>
<tr>
<td>NUR 255</td>
<td>Nursing Organization and Management</td>
<td>3</td>
<td>NUR 271</td>
</tr>
<tr>
<td>PHI 226</td>
<td>Social Ethics (or PHI 220)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 15

Total Minimum Credits: 69

NOTE:
- Acceptable substitutes for general education courses for the Nursing Program are as follows:
  - PSY 200 Principles of Psychology may substitute for PSY 201 Introduction to Psychology I
  - PSY 230 Developmental Psychology or PSY 231 Life Span Human Development I may substitute for PSY 235 Child Psychology
  - PHI 226 Social Ethics Acceptable substitute is PHI 220

occupational therapy assistant

Associate of Applied Science Degree: Occupational Therapy Assistant (126)

Occupational Therapy Assistants are trained to provide occupational therapy treatments to assist individuals in meeting a level of independence to perform the roles necessary for productive living (occupation) within their environment. These roles include: self care tasks, work tasks, and play or leisure tasks for patients disabled by illness, accidents, developmental or psychiatric impairment.

The Occupational Therapy Assistant Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA’s phone number is (301) 652-AOTA. Graduates sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination.

Requirements for admission to the program include: high school graduation or GED, placement into ENG 111, 2.5 GPA or better, 30 hours of observation time with an occupational therapist (OTR) or an occupational therapy assistant (COTA), and a personal interview with the Program Director. A writing sample may also be required. Transcripts from all other colleges attended must be on file at TCC Central Records Office, P.O. Box 9000, Norfolk, Virginia, 23510, prior to the application deadline date. These transfer credits must be evaluated before any transfer credit is granted. Applications are accepted through March 15.

Once accepted, students must have current CPR Certification, a documented medical examination, criminal record check, and must maintain a C grade point average or better to remain in good standing. Students whose academic performance is below a C grade point average will be readmitted to the program at the discretion of the director and according to space availability.

Students are wholly responsible for all transportation to and from clinical facilities and are financially responsible for clinical uniforms and laboratory clothes, and parking fees.

The Associate of Applied Science degree in Occupational Therapy Assistant requires five full-time semesters of study. All OTA students must complete Level II Fieldwork within 18 months following completion of academic preparation. All academic and fieldwork requirements must be completed before the student will be eligible to sit for the National Certification Examination.

Associate of Applied Science Degree: Occupational Therapy Assistant (126)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 141</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HLT 143</td>
<td>Medical Terminology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>OCT 100</td>
<td>Introduction to Occupational Therapy</td>
<td>3</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>PSY 201</td>
<td>Introduction to Psychology I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 17
### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 142</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
<td>BIO 141</td>
</tr>
<tr>
<td>ITE 115</td>
<td>Introduction to Computer Applications and Concepts</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>NAS 177</td>
<td>Upper Extremity Anatomy and Kinesiology</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>OCT 201</td>
<td>Occupational Therapy with Psychosocial Dysfunction</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PSY 215</td>
<td>Abnormal Psychology</td>
<td>3</td>
<td>PSY 201</td>
</tr>
<tr>
<td>OCT 206</td>
<td>Dyadic and Group Dynamics</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 19

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 190</td>
<td>Coordinated Internship in OT (Psychosocial Dysfunction)</td>
<td>1</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>OCT 202</td>
<td>Occupational Therapy with Physical Disabilities</td>
<td>4</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>OCT 205</td>
<td>Therapeutic Media</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>OCT 220</td>
<td>Occupational Therapy for the Adult</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 9

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 190</td>
<td>Coordinated Internship in OT (Physical Dysfunction)</td>
<td>1</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>OCT 203</td>
<td>Occupational Therapy with Developmental Disabilities</td>
<td>4</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>OCT 207</td>
<td>Therapeutic Skills</td>
<td>4</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>OCT 208</td>
<td>Occupational Therapy Service Management</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>OCT 210</td>
<td>Assistive Technology in Occupational Therapy</td>
<td>2</td>
<td>OCT 202; OCT 203; Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 17

### Semester 5

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCT 290</td>
<td>Coordinated Internship in OT (Psychosocial Dysfunction)</td>
<td>4</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 8

**Total Minimum Credits** 70

---

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

2. Due to the limited number of available clinical sites in the region, students may have to travel to a distant site or stay temporarily near a facility.

---

### paralegal studies

#### Associate of Applied Science Degree: Paralegal Studies

- Specialization: General Practice Specialist (260.02)
- Specialization: Litigation (260.03)
- Certificate: Legal Assistant (261)
- Career Studies: Paralegal General Practice (221.260.02)
- Career Studies: Paralegal Litigation (221.260.03)

#### General Practice Specialist

This program prepares students to work as a paralegal in diverse settings with an emphasis in litigation.

The career studies program enables students to upgrade their skills if they are currently employed as a legal assistant in general practice law. It gives those who already have an associate or bachelor's degree the training they need to make a career change. The certificate program can lead to entry-level positions in a general practice law firm, and the Associate of Applied Science degree in Paralegal Studies qualifies students as a legal assistant with a general practice firm.

A cooperative education program allows students to earn academic credit and supplement their income while they gain work experience at local sites.

Placement test scores should indicate a readiness for ENG 111 prior to registering for any LGL course offering.
### Associate of Applied Science Degree: Paralegal Studies

**Specialization:** General Practice (260.02)

#### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ITE 109</td>
<td>Information Systems for Legal Assistants</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL 110</td>
<td>Introduction to Law and the Legal Assistant</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>LGL 115</td>
<td>Real Estate Law for Legal Assistants</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 115</td>
</tr>
<tr>
<td>LGL 117</td>
<td>Family Law</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 200</td>
</tr>
<tr>
<td>LGL 200</td>
<td>Ethics for the Legal Assistant</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total:** 17

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>LGL 125</td>
<td>Legal Research</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL 235</td>
<td>Legal Aspects of Business Organizations</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL Elective</td>
<td>Humanities Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH Elective</td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total:** 18

#### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL 126</td>
<td>Legal Writing</td>
<td>3</td>
<td>LGL 125 and ENG 111</td>
</tr>
<tr>
<td>LGL 225</td>
<td>Estate Planning and Probate</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>SPD 100</td>
<td>Principles of Public Speaking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL Elective</td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education¹</td>
<td></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total:** 17

#### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL 238</td>
<td>Bankruptcy</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 238</td>
</tr>
<tr>
<td>LGL 297</td>
<td>Cooperative Education (or Business Elective¹)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL Elective</td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total:** 15

**Total Minimum Credits:** 67

---

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

2. Business electives include courses which have the following prefix: ACC, AST, BUS, ECO, FIN, HRI, LGL, ITD, ITE, ITN, ITP, MKT, and REA.

### Certificate: Legal Assistant (261)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ITE 109</td>
<td>Information Systems for Legal Assistants</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL 110</td>
<td>Introduction to Law and the Legal Assistant</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>LGL 117</td>
<td>Family Law</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 200</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total:** 13

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL 125</td>
<td>Legal Research</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL 200</td>
<td>Ethics for the Legal Assistant</td>
<td>1</td>
<td>LGL 110 should be taken prior to or with LGL 200</td>
</tr>
<tr>
<td>LGL Elective</td>
<td>Humanities Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total:** 13

---

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

2. Business electives include courses which have the following prefix: ACC, AST, BUS, ECO, FIN, HRI, LGL, ITD, ITE, ITN, ITP, MKT, and REA.
Semester 3  
<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL 126</td>
<td>Legal Writing</td>
<td>3</td>
<td>LGL 125 and ENG 111</td>
</tr>
<tr>
<td>LGL 238</td>
<td>Bankruptcy</td>
<td>3</td>
<td>LGL 110 should be taken prior to</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>or with LGL 238</td>
</tr>
<tr>
<td>LGL Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 12

Total Minimum Credits 38

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

2 Students wishing to concentrate in general practice should take the following:
   LGL 115 – Real Estate Law and the Legal Assistant
   LGL 225 – Estate Planning and Probate
   LGL 235 – Legal Aspects of Business Organizations

Students wishing to concentrate in litigation should take the following:
   LGL 216 – Trial Preparation and Discovery Practice
   LGL 218 – Criminal Law
   LGL 230 – Legal Transactions

Career Studies: Paralegal General Practice (221.260.02)

Semester 1
<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITE 109</td>
<td>Information Systems for Legal Assistants</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL 110</td>
<td>Introduction to Law and the Legal Assistant</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>LGL 115</td>
<td>Real Estate Law for Legal Assistants</td>
<td>3</td>
<td>LGL 110 should be taken prior to</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>or with LGL 115</td>
</tr>
<tr>
<td>LGL 200</td>
<td>Ethics for the Legal Assistant</td>
<td>1</td>
<td>LGL 110 should be taken prior to</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>or with LGL 200</td>
</tr>
</tbody>
</table>

Semester Total 10

Semester 2
<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL 117</td>
<td>Family Law</td>
<td>3</td>
<td>LGL 110 should be taken prior to</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>or with LGL 117</td>
</tr>
<tr>
<td>LGL 125</td>
<td>Legal Research</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL 235</td>
<td>Legal Aspects of Business Organizations</td>
<td>3</td>
<td>LGL 110</td>
</tr>
</tbody>
</table>

Semester Total 9

Total Minimum Credits 28

Litigation

This program prepares students to work in diverse settings as a paralegal with an emphasis in litigation.

The career studies program enables students to upgrade their skills if they are currently employed as a litigation legal assistant. It gives those who already have an associate or bachelor’s degree the training they need to make a career change and become a paralegal in a litigation-focused law office, prosecutor’s office, or criminal defense firm. The certificate program can lead to an entry-level position as a legal assistant with a trial work concentration, and the Associate of Applied Science degree in paralegal studies qualifies students as a paralegal with a trial work concentration.

A cooperative education program allows students to earn academic credit and supplement their income while they gain work experience at local sites.

Placement test scores should indicate a readiness for ENG 111 prior to registering for any LGL course offerings.
## Associate of Applied Science Degree: Paralegal Studies

**Specialization: Litigation (260.03)**

### Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ITE 109</td>
<td>Information Systems for Legal Assistants</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL 110</td>
<td>Introduction to Law and the Legal Assistant</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>LGL 117</td>
<td>Family Law</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 117</td>
</tr>
<tr>
<td>LGL 200</td>
<td>Ethics for the Legal Assistant</td>
<td>1</td>
<td>LGL 110 should be taken prior to or with LGL 200</td>
</tr>
<tr>
<td>LGL 230</td>
<td>Legal Transactions</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 230</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total: 17**

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>LGL 125</td>
<td>Legal Research</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL 216</td>
<td>Trial Preparation and Discovery Practice</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Humanities Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH Elective</td>
<td></td>
<td>3</td>
<td>Placement</td>
</tr>
</tbody>
</table>

**Semester Total: 18**

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL 126</td>
<td>Legal Writing</td>
<td>3</td>
<td>LGL 125 and ENG 111</td>
</tr>
<tr>
<td>LGL 218</td>
<td>Criminal Law</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPD 100</td>
<td>Principles of Public Speaking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education</td>
<td></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total: 17**

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL 238</td>
<td>Bankruptcy</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 238</td>
</tr>
<tr>
<td>LGL 297</td>
<td>Cooperative Education (or Business Elective)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total: 15**

**Total Minimum Credits: 67**

---

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

2 Business electives include courses which have the following prefix: ACC, AST, BUS, ECO, FIN, HRI, LGL, ITD, ITE, ITN, ITP, MKT, and REA.

## Certificate: Legal Assistant (261)

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>ITE 109</td>
<td>Information Systems for Legal Assistants</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL 110</td>
<td>Introduction to Law and the Legal Assistant</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>LGL 117</td>
<td>Family Law</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 117</td>
</tr>
<tr>
<td>LGL Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MTH Elective</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total: 13**

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>LGL 125</td>
<td>Legal Research</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL 110</td>
<td>Introduction to Law and the Legal Assistant</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>LGL 117</td>
<td>Family Law</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 117</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total: 13**

---

**Total Minimum Credits: 67**

---

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

2 Business electives include courses which have the following prefix: ACC, AST, BUS, ECO, FIN, HRI, LGL, ITD, ITE, ITN, ITP, MKT, and REA.
## career and technical education

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL 126</td>
<td>Legal Writing</td>
<td>3</td>
<td>LGL 125 and ENG 111</td>
</tr>
<tr>
<td>LGL 238</td>
<td>Bankruptcy</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 238</td>
</tr>
<tr>
<td>LGL Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL Elective²</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 12

Total Minimum Credits: 38

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2. Students wishing to concentrate in general practice should take the following:
   - LGL 115 – Real Estate Law and the Legal Assistant
   - LGL 225 – Estate Planning and Probate
   - LGL 226 – Legal Aspects of Business Organizations

   Students wishing to concentrate in litigation should take the following:
   - LGL 216 – Trial Preparation and Discovery Practice
   - LGL 218 – Criminal Law
   - LGL 230 – Legal Transactions

### Career Studies: Paralegal Litigation (221.260.03)

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITE 109</td>
<td>Information Systems for Legal Assistants</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>LGL 110</td>
<td>Introduction to Law and the Legal Assistant</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>LGL 117</td>
<td>Family Law</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 117</td>
</tr>
<tr>
<td>LGL 200</td>
<td>Ethics for the Legal Assistant</td>
<td>1</td>
<td>LGL 110 should be taken prior to or with LGL 200</td>
</tr>
</tbody>
</table>

Semester Total: 10

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGL 125</td>
<td>Legal Research</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL 216</td>
<td>Trial Preparation and Discovery Practice</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL 218</td>
<td>Criminal Law</td>
<td>3</td>
<td>LGL 110</td>
</tr>
<tr>
<td>LGL 230</td>
<td>Legal Transactions</td>
<td>3</td>
<td>LGL 110 should be taken prior to or with LGL 230</td>
</tr>
</tbody>
</table>

Semester Total: 12

Total Minimum Credits: 28

### physical therapist assistant

#### Associate of Applied Science Degree: Physical Therapist Assistant (180)

Physical therapist assistants are trained to give physical therapy treatments to improve function, relieve pain, and promote healing for patients disabled by illnesses, accidents, and disabilities. Graduates choose from a wide range of employment settings including clinics, hospitals, rehabilitation centers, nursing homes, home health-care facilities, sports-medicine clinics, private industry, and schools.

Licensure is required in most states. To become licensed, program graduates must pass a national licensure examination. A physical therapist assistant must work under the supervision of a physical therapist.

This program admits 25-30 students each fall semester. Applications must be received by March 31 for students entering the technical aspect of the program in the fall semester. Transcripts from other colleges attended must be on file at the TCC Central Records Office, P.O. Box 9000, Norfolk, Virginia, 23510, and be evaluated prior to the application deadline date.

Prerequisites include: high school graduation or GED, general biology or chemistry within the past five years if taken in high school or within the past 10 years if taken in college, readiness for ENG 111 and MTH 3, minimum GPA of 2.0 in all college courses, minimum of 40 hours (20 hours in each of two different practice settings) of volunteer or paid work at a physical therapy facility, and two recommendation forms from instructors, employers or clinicians.

Once accepted, students must have current CPR certification updated annually at the professional rescuer level, a documented medical examination, including an annual TB test, and maintain a C average or better to remain in good standing. Students are readmitted to the program at the discretion of the director and according to availability.
Students are wholly responsible for all transportation to and from clinical facilities and are financially responsible for their clinical uniforms and laboratory clothes.

This program is accredited by the Commission on Accreditation in Physical Therapy Education, American Physical Therapy Association, 1111 North Fairfax Street, Alexandria, VA 22314, (703) 706-3245.

**Associate of Applied Science Degree: Physical Therapist Assistant (180)**

### Semester 1 Pre-Admission Requirements

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 141</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HLT 105</td>
<td>Cardiopulmonary Resuscitation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>PHY 100</td>
<td>Elements of Physics (or PHY 201)</td>
<td>4</td>
<td>MTH 3 or equivalent</td>
</tr>
<tr>
<td>PSY 230</td>
<td>Developmental Psychology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

### Semester 2 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 142</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
<td>BIO 141</td>
</tr>
<tr>
<td>PTH 105</td>
<td>Introduction to Physical Therapist Assisting</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PTH 121</td>
<td>Therapeutic Procedures I</td>
<td>5</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PTH 151</td>
<td>Musculoskeletal Structure and Function</td>
<td>5</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 17

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTH 110</td>
<td>Medical Reporting</td>
<td>1</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PTH 115</td>
<td>Kinesiology for the Physical Therapist Assistant</td>
<td>4</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PTH 122</td>
<td>Therapeutic Procedures II</td>
<td>5</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PTH 131</td>
<td>Clinical Education</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 12

### Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTH 210</td>
<td>Psychological Aspects of Therapy</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PTH 226</td>
<td>Therapeutic Exercise</td>
<td>4</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PTH 251</td>
<td>Clinical Practicum I</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 12

### Semester 5

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTH 225</td>
<td>Rehabilitation Procedures</td>
<td>5</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PTH 252</td>
<td>Clinical Practicum II</td>
<td>4</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>PTH 255</td>
<td>Seminar in Physical Therapy</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

**Semester Total** 14

**Total Minimum Credits** 71

1 Eligible courses are listed on page 84 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

---

**polysomnography**

- **Career Studies: Polysomnography (221.181.01)**

Employment opportunities for polysomnographers include freestanding sleep labs, physician offices, and polysomnography labs within hospitals. The demand for polysomnographers continues to rise. Salaries for registered polysomnographers are competitive with other health care professions such as nursing and respiratory therapy. More information on polysomnography may be found at http://aptweb.org/.

Applicants for this growing healthcare field may come from individuals who are currently credentialed as health care professionals such as respiratory therapists, licensed practical nurses, registered nurses, registered EEG technologists, EMT-paramedics, or physicians. Other applicants include those individuals who do not have current experience or credentials in health care.
Career and Technical Education

Career Studies: Polysomnography (221.181.01)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 141</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EMS 153</td>
<td>Basic ECG Recognition</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>HLT 105</td>
<td>Cardiopulmonary Resuscitation</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Semester 1 Total: 10

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 142</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
<td>BIO 141</td>
</tr>
<tr>
<td>PSG 101</td>
<td>Polysomnography I</td>
<td>4</td>
<td>Co-req: PSG 190</td>
</tr>
<tr>
<td>PSG 190</td>
<td>Coordinated Internship</td>
<td>4</td>
<td>Co-req: PSG 101</td>
</tr>
</tbody>
</table>

Semester 2 Total: 12

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSG 103</td>
<td>Polysomnography Record Evaluation</td>
<td>3</td>
<td>Co-req: PSG 164</td>
</tr>
<tr>
<td>PSG 164</td>
<td>Polysomnography</td>
<td>4</td>
<td>Co-req: PSG 103</td>
</tr>
</tbody>
</table>

Clinical Procedures

Semester 3 Total: 7

Total Minimum Credits: 29

Radiography

Associate of Applied Science Degree: Radiography (172)

Radiographers or Radiologic Technologists are highly skilled professionals who produce radiographs or “x-rays” to help physicians diagnose injuries and disease. As an integral member of the health-care team, the radiographer works in a fast-paced environment and must have the ability to multitask, problem solve and make critical decisions while caring for sick and injured patients. The Radiographer must possess the technical skills necessary to perform competently and care for patients in a compassionate and professional manner. Education in radiobiology and radiation protection enables the radiographer to minimize radiation exposure to themselves and the patient.

Program graduates are qualified to apply to the American Registry of Radiologic Technologists (ARRT) to take the certification exam. Students with a history of certain crimes may not be eligible to become certified by the ARRT. Pre-applications are available from www.arrt.org or (687) 651-0048.

Prospective students are hereby notified that certain medical facilities require both criminal/sex offender background checks as well as drug screens prior to being authorized to attend clinical. The cost of the background check is the responsibility of the student.

Program students are charged a one-time program fee of $50.00 to cover clinical and laboratory supplies.

Pre-Admission Semester

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 141</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MTH 126</td>
<td>Mathematics for Allied Health</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHI 226</td>
<td>Social Ethics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PSY 231</td>
<td>Life Span Human Development</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Pre-Admission Semester Total: 14
Semester 1 (Based on a Summer Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLT 105</td>
<td>Cardiopulmonary Resuscitation</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>RAD 105</td>
<td>Introduction to Radiology, Protection and Patient Care</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>RAD 120</td>
<td>Medical Care Procedures and Safety in Radiology</td>
<td>3</td>
<td>Admission to Program</td>
</tr>
</tbody>
</table>

Semester Total: 7

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 142</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
<td>BIO 141</td>
</tr>
<tr>
<td>RAD 121</td>
<td>Radiographic Procedures I</td>
<td>4</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>RAD 131</td>
<td>Elementary Clinical Procedures I</td>
<td>3</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>RAD 141</td>
<td>Principles of Radiographic Quality I</td>
<td>4</td>
<td>Admission to Program</td>
</tr>
</tbody>
</table>

Semester Total: 15

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>RAD 132</td>
<td>Elementary Clinical Procedures II</td>
<td>3</td>
<td>RAD 131</td>
</tr>
<tr>
<td>RAD 142</td>
<td>Principles of Radiographic Quality II</td>
<td>4</td>
<td>RAD 141</td>
</tr>
<tr>
<td>RAD 221</td>
<td>Radiographic Procedures II</td>
<td>4</td>
<td>RAD 121</td>
</tr>
</tbody>
</table>

Semester Total: 14

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD 190</td>
<td>Coordinated Internship</td>
<td>3</td>
<td>RAD 132</td>
</tr>
<tr>
<td>RAD 205</td>
<td>Radiation Protection and Radiobiology</td>
<td>3</td>
<td>Admission to Program</td>
</tr>
</tbody>
</table>

Semester Total: 6

Semester 5

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD 206</td>
<td>Human Disease and Radiography</td>
<td>2</td>
<td>Admission to Program</td>
</tr>
<tr>
<td>RAD 231</td>
<td>Advanced Clinical Procedures I</td>
<td>5</td>
<td>RAD 190</td>
</tr>
<tr>
<td>RAD 255</td>
<td>Radiographic Equipment</td>
<td>3</td>
<td>Admission to Program</td>
</tr>
</tbody>
</table>

Semester Total: 10

Semester 6

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAD 232</td>
<td>Advanced Clinical</td>
<td>5</td>
<td>RAD 231</td>
</tr>
<tr>
<td>RAD 280</td>
<td>Terminal Competencies in Radiography</td>
<td>1</td>
<td>Admission to Program</td>
</tr>
</tbody>
</table>

Semester Total: 6

Total Minimum Credits: 72

respiratory therapy

- Associate of Applied Science Degree: Respiratory Therapy (181)

Respiratory Care Practitioners (RCPs) literally help patients "breathe easier." They work under the direction of a physician and assist in the diagnosis, treatment, and management of patients with cardiopulmonary disorders to help them recover their lung function. They deliver medications and oxygen, operate life support machines and assure that patients have open breathing passages, among other duties.

Respiratory patients range from newborn babies to the elderly. RCPs care for patients in the hospital emergency room, in the intensive care unit, in outpatient clinics, and at home. The increasing emphasis on preventive care and home care is creating new opportunities for respiratory therapists in sub-acute skilled nursing facilities, skilled nursing facilities, out-patient clinics, rehabilitation centers, and in the patients' homes.

Students are admitted to the Respiratory Therapy Program once a year in May. Applications will be accepted at any time during the year. Transcripts from other colleges attended must be on file at TCC Central Records Office, P.O. Box 9000, Norfolk, Virginia, 23510, prior to the application deadline date. These transcripts must be evaluated before any transfer credit is granted. Positions are limited, and prospective students are considered and ranked according to the Division of Health Professions admissions priority scale and date of application.

Prerequisites include: high school graduation or GED, CHM 1 or high school chemistry, completion of BIO 141, completion of ENG 111 and (MTH 3 or MTH 126), college transcripts on file, and an interview with faculty. Students must submit two applications: the college admission form and the Division of Health Professions form.

Once accepted, students must have current CPR certification, a documented medical examination, and must maintain a C average or better to remain in good standing.
career and technical education

The Associate of Applied Science degree in Respiratory Care prepares you to take the examinations to become a Registered Respiratory Therapist.

A copy of all standards is available in the Respiratory Therapy Student Handbook. Students will be re-admitted to the program at the discretion of the director, according to availability and current readmission policy. Students are financially responsible for their uniforms.

The therapist program is fully accredited by the Commission on Accreditation of Allied Health Programs through the Committee on Accreditation for Respiratory Care.

**Associate of Applied Science Degree: Respiratory Therapy (181)**

**Semester 1 (Based on a Fall Semester start)**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 141</td>
<td>Human Anatomy and Physiology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>RTH 102</td>
<td>Integrated Sciences for Respiratory Care</td>
<td>3</td>
<td>MTH 3; Instructor</td>
</tr>
<tr>
<td>RTH 120</td>
<td>Fundamental Theory for Respiratory Care</td>
<td>2</td>
<td>Instructor</td>
</tr>
<tr>
<td>RTH 131</td>
<td>Respiratory Care Theory and Procedures I</td>
<td>4</td>
<td>Instructor</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Health Care</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 17

**Semester 2**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 142</td>
<td>Human Anatomy and Physiology II</td>
<td>4</td>
<td>BIO 141</td>
</tr>
<tr>
<td>RTH 121</td>
<td>Cardiopulmonary Science I</td>
<td>3</td>
<td>Instructor</td>
</tr>
<tr>
<td>RTH 132</td>
<td>Respiratory Care Theory and Procedures II</td>
<td>4</td>
<td>Instructor</td>
</tr>
<tr>
<td>RTH 145</td>
<td>Pharmacology for Respiratory Care I</td>
<td>1</td>
<td>Instructor</td>
</tr>
<tr>
<td>RTH 190</td>
<td>Coordinated Internship</td>
<td>3</td>
<td>Instructor</td>
</tr>
</tbody>
</table>

**Semester Total** 15

**Semester 3**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTH 217</td>
<td>Pulmonary Rehabilitation, Home Care and Health Promotion</td>
<td>2</td>
<td>Instructor</td>
</tr>
<tr>
<td>RTH 235</td>
<td>Diagnostic and Therapeutic Procedures II</td>
<td>3</td>
<td>Instructor</td>
</tr>
<tr>
<td>RTH 236</td>
<td>Critical Care Monitoring</td>
<td>3</td>
<td>Instructor</td>
</tr>
<tr>
<td>RTH 290</td>
<td>Coordinated Internship</td>
<td>3</td>
<td>Instructor</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 14

**Semester 4**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTH 222</td>
<td>Cardiopulmonary Science II</td>
<td>3</td>
<td>Instructor</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 6

**Semester 5**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121</td>
<td>Health Science Chemistry I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>RTH 225</td>
<td>Neonatal and Pediatric Respiratory Procedures</td>
<td>3</td>
<td>Instructor</td>
</tr>
<tr>
<td>RTH 290</td>
<td>Coordinated Internship</td>
<td>4</td>
<td>Instructor</td>
</tr>
</tbody>
</table>

**Semester Total** 11

**Semester 6**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLT 155</td>
<td>Current Issues in Health Care</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>RTH 290</td>
<td>Coordinated Internship</td>
<td>3</td>
<td>Instructor</td>
</tr>
<tr>
<td>RTH 298</td>
<td>Seminar and Project in Respiratory Therapy</td>
<td>1</td>
<td>Instructor</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 9

**Total Minimum Credits** 72

---

<sup>1</sup> Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate courses.
studio arts

Associate of Applied Arts Degree: Studio Arts

- Specialization: Crafts (532.01)
- Specialization: Fine Arts (532.02)
- Specialization: Photography (532.03)

The Studio Arts curriculum is designed to provide students with extensive studio experience in a variety of media, tools, and working methodologies; to establish within them a solid basis for critical thinking, discernment, and discrimination in the visual arts; to give them sufficient knowledge of art history as a foundation to visual literacy; to encourage them in the continuing investigation of contemporary trends in the studio arts as revealed through actual production and critical treatises; and to provide them with a background in general education that will complement and balance the studio concentration.

The Studio Arts curriculum is offered at the Visual Arts Center in Olde Towne Portsmouth.

Crafts

The Associate of Applied Arts degree in Studio Arts with a specialization in Crafts is a skills-oriented program with instruction in Pottery and Glass Blowing using traditional and current technology. Students will prepare portfolios to transfer to a four-year degree program and/or begin careers in the crafts industry.

Positions include practicing craftsperson, commercial framing or art supply service representative, gallery representative, instructors or assistant instructors at art centers or galleries.

Associate of Applied Arts Degree: Studio Arts

Specialization: Crafts (532.01)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 121</td>
<td>Drawing I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 133</td>
<td>Visual Arts Foundation</td>
<td>4</td>
<td>Co-req: SDV 101</td>
</tr>
<tr>
<td>ART 201</td>
<td>History of Art I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Visual Arts</td>
<td>1</td>
<td>Co-req: ART 133</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective*</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 17

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 134</td>
<td>Three Dimensional Design</td>
<td>3</td>
<td>ART 133</td>
</tr>
<tr>
<td>ART 202</td>
<td>History of Art II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CRF 105</td>
<td>Introduction to Pottery</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CRF 130</td>
<td>Glass Blowing I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
</tbody>
</table>

Semester Total: 16

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRF 102</td>
<td>Wheel Thrown Pottery</td>
<td>3</td>
<td>CRF 105</td>
</tr>
<tr>
<td>CRF 131</td>
<td>Glass Blowing II</td>
<td>4</td>
<td>CRF 130</td>
</tr>
<tr>
<td>HIS 111</td>
<td>History of World Civilization I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>PHT 101</td>
<td>Photography I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Studio Elective*</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 17

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 287</td>
<td>Portfolio and Resume Preparation</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>HIS 112</td>
<td>History of World Civilization II</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SPD 100</td>
<td>Principles of Public Speaking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mathematics Elective*</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td></td>
<td>Approved Studio Elective*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Studio Elective*</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total: 18

Total Minimum Credits: 68

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2 Students may substitute SPD 110 for SPD 100. Consult transfer institution to ensure that the substitution is appropriate for your transfer program.
3 ART 287 should be taken in the final semester before graduation and is offered in the fall and spring semester only.
4 Approved Studio Electives: Students may take any of the listed electives for which they have the prerequisites and that are not a requirement in their specialization: ART 122, ART 134, ART 208, ART 221, ART 232, ART 241, ART 243, ART 244, ART 280*, ART 297*, ART 299*, CRF 102, CRF 105, CRF 130, CRF 131, CRF 199*, CRF 230, PHT 101, PHT 120, PHT 121, PHT 222, PHT 231, PHT 232, PHT 256, PHT 270, PHT 290*, PHT 297*.
5 Requires permission of Visual Arts Director.
career and technical education

Fine Arts
The Associate of Applied Arts degree in Studio Arts with a specialization in Fine Arts is a skills-oriented program with instruction in traditional and current technology. Students will prepare portfolios which are required careers and further study in the fine arts industry.

Positions include practicing fine artists, freelance artists, commercial framing or art supply service representative, gallery representative, instructors or assistant instructors at art centers or galleries.

Associate of Applied Arts Degree: Studio Arts
Specialization: Fine Arts (532.02)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 121</td>
<td>Drawing I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ART 133</td>
<td>Visual Arts Foundation</td>
<td>4</td>
<td>Co-req: SDV 101</td>
</tr>
<tr>
<td>ART 201</td>
<td>History of Art I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Visual Arts</td>
<td>1</td>
<td>Co-req: ART 133</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 122</td>
<td>Drawing II</td>
<td>3</td>
<td>ART 121</td>
</tr>
<tr>
<td>ART 134</td>
<td>Three Dimensional Design</td>
<td>3</td>
<td>ART 133</td>
</tr>
<tr>
<td>ART 202</td>
<td>History of Art II</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 112</td>
<td>College Composition II</td>
<td>3</td>
<td>ENG 111</td>
</tr>
<tr>
<td>PHT 101</td>
<td>Photography I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 221</td>
<td>Drawing III</td>
<td>3</td>
<td>ART 122</td>
</tr>
<tr>
<td>ART 241</td>
<td>Painting I</td>
<td>3</td>
<td>ART 122 and ART 133</td>
</tr>
<tr>
<td>HIS 111</td>
<td>History of World Civilization I</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td>SPD 100</td>
<td>Principles of Public Speaking²</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health/Physical Education¹</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Studio Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 16

Semester 4

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 222</td>
<td>Drawing IV</td>
<td>3</td>
<td>ART 221</td>
</tr>
<tr>
<td>ART 287</td>
<td>Portfolio and Resume Preparation²</td>
<td>2</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>HIS 112</td>
<td>History of World Civilization II</td>
<td>3</td>
<td>Placement into ENG 111</td>
</tr>
<tr>
<td></td>
<td>Mathematics Elective¹</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td></td>
<td>Approved Studio Elective¹</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Studio Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17

Total Minimum Credits 66

¹ Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
² Students may substitute SPD 110 for SPD 100. Consult transfer institution to ensure that the substitution is appropriate for your transfer program.
³ ART 287 should be taken in the final semester before graduation and is offered in the fall and spring semester only.
⁴ Approved Studio Electives: Students may take any of the listed electives for which they have the prerequisites and that are not a requirement in their specialization: ART 122, ART 134, ART 206, ART 221, ART 222, ART 241, ART 242, ART 243, ART 244, ART 290*, ART 297*, ART 299*, CRF 102, CRF 105, CRF 130, CRF 131, CRF 199*, CRF 230, PHT 101, PHT 135, PHT 221, PHT 222, PHT 231, PHT 232, PHT 256, PHT 270, PHT 290*, PHT 297*.
⁵ Requires permission of Visual Arts Director.

Photography
The Associate of Applied Arts degree in Studio Arts with a specialization in Photography is a skills-oriented program with instruction in traditional and current technology. Students will prepare portfolios which are required for careers and further study in the photography industry.

Positions include commercial photographer, photojournalist, photo lab technician, photography sales and service representative, freelance photographer, fine arts photographer or introductory photography instructor at an arts center or museum.

Associate of Applied Arts Degree: Studio Arts
Specialization: Photography (532.03)

Semester 1 (Based on a Fall Semester start)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 133</td>
<td>Visual Arts Foundation</td>
<td>4</td>
<td>Co-req: SDV 101</td>
</tr>
<tr>
<td>ART 201</td>
<td>History of Art I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>PHT 101</td>
<td>Photography I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SDV 101</td>
<td>Orientation to Visual Arts</td>
<td>1</td>
<td>Co-req: ART 133</td>
</tr>
<tr>
<td></td>
<td>Social Science Elective¹</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 17
## Technical Studies

### Associate of Applied Science in Technical Studies

**Plan Title: Construction Trades/Air Conditioning (718.04)**

The Associate of Applied Science Degree in Technical Studies: Construction Trades/Air Conditioning was developed in conjunction with the Tidewater Builders' Association and local contractors to meet the needs of the Hampton Roads construction industry.

Many of the courses from the certificate in Air Conditioning, Heating, and Refrigeration may be applied towards this degree program.

### Associate of Applied Science: Technical Studies Plan Construction Trades/Air Conditioning

#### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR 111</td>
<td>Air Conditioning and Refrigeration Controls I</td>
<td>3</td>
<td>Co-req: AIR 121</td>
</tr>
<tr>
<td>AIR 121</td>
<td>Air Conditioning and Refrigeration II</td>
<td>3</td>
<td>Co-req: AIR 111</td>
</tr>
<tr>
<td>AIR 154</td>
<td>Heating Systems I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AIR 161</td>
<td>Heating, Air, and Refrigeration Calculations I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 16

#### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR 112</td>
<td>Air Conditioning and Refrigeration Controls II</td>
<td>3</td>
<td>AIR 111</td>
</tr>
<tr>
<td>AIR 122</td>
<td>Air Conditioning and Refrigeration II</td>
<td>3</td>
<td>AIR 121</td>
</tr>
<tr>
<td>AIR 165</td>
<td>Air Conditioning Systems I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AIR 206</td>
<td>Psychrometrics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 165</td>
<td>Principles of Technology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

---

1. Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).
2. Students may substitute SPD 110 for SPD 100. Consult transfer institution to ensure that the substitution is appropriate for your transfer program.
3. ART 287 should be taken in the fall semester before graduation and is offered in the fall and spring semester only.
4. Approved Studio Electives: Students may take any of the listed electives for which they have the prerequisites and that are not a requirement in their specialization: ART 122, ART 134, ART 208, ART 211, ART 222, ART 241, ART 242, ART 243, ART 244, ART 290, ART 291, ART 292, CRF 100, CRF 106, CRF 109, CRF 190, CRF 200, PHT 130, PHT 131, PHT 134, PHT 221, PHT 222, PHT 231, PHT 232, PHT 256, PHT 270, PHT 290, PHT 291, PHT 292, PHT 293.*
5. Requires permission of Visual Arts Director.

---

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR 112</td>
<td>Air Conditioning and Refrigeration Controls II</td>
<td>3</td>
<td>AIR 111</td>
</tr>
<tr>
<td>AIR 122</td>
<td>Air Conditioning and Refrigeration II</td>
<td>3</td>
<td>AIR 121</td>
</tr>
<tr>
<td>AIR 165</td>
<td>Air Conditioning Systems I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AIR 206</td>
<td>Psychrometrics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>IND 165</td>
<td>Principles of Technology I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Health/Physical Education</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 18

---

TOTAL MINIMUM CREDITS: 67
Plan Title: Modeling and Simulation (718.03)

The Associate of Applied Science degree in Technical Studies: Modeling and Simulation is a hands-on, skill-based curriculum which prepares the student for employment as a technician/analyst in the field.

Modeling and simulation is one of the region’s fastest growing industries. Applications run the spectrum from military simulations, homeland security and medical to serious gaming and transportation. By the year 2009, it is projected that 3,000 jobs in the field will be added just in the State of Virginia. Jobs require problem-solving and technical skills as well as the ability to work independently and with other experts.

Cooperative education experiences help students explore the job market before graduation and gain further skill and understanding of the field.
career and technical education

1 Eligible courses are listed on page 64 in the 2008-2009 catalog. See your academic advisor or counselor to choose the appropriate course(s).

2 Approved electives:
   GIS 200 – Geographical Information Systems
   ITE 150 – Desktop Database Software
   ITP 112 – Visual Basic.Net I
   ITP 132 – C++ Programming I
   PHY 201 – General College Physics

theatre arts

Career Studies: Performance Theatre (221.529.03)

Career Studies: Technical Theatre (221.529.04)

Career Studies: Theatre Arts (221.529.02)

The Career Studies Certificate options in Technical Theatre, Theatre Performance, and Theatre Arts provide students with an introduction to the theatre arts and hands-on production experience in a variety of theatre spaces including the Chesapeake Studio Theatre, the outdoor Shakespeare in the Grove theatre, and the TCC Roper Performing Arts Center in Norfolk.

The Theatre Performance option provides training for those students primarily interested in acting and directing. The Technical Theatre option provides training in the technical aspects of theatre production. The Theatre Arts option provides a broad introduction to both acting and technical aspects of theatre production.

Note: Students planning to transfer to a four-year college or university in theatre should enroll in the Associate of Arts degree in Liberal Arts and consult with a TCC counselor or program advisor to select courses appropriate for transfer.

Career Studies: Performance Theatre (221.529.03)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 111</td>
<td>Voice and Diction I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPD 131</td>
<td>Acting I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPD 141</td>
<td>Theatre Appreciation I</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 9

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 132</td>
<td>Acting II</td>
<td>3</td>
<td>SPD 131 or Instructor Permission</td>
</tr>
<tr>
<td>SPD 233</td>
<td>Rehearsal and Performance I</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
</tbody>
</table>

Approved Theatre Elective 3

Semester Total 9

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 234</td>
<td>Rehearsal and Performance II</td>
<td>3</td>
<td>SPD 233</td>
</tr>
<tr>
<td>SPD 241</td>
<td>Introduction to Directing I</td>
<td>3</td>
<td>SPD 131; SPD 132; SPD 141</td>
</tr>
</tbody>
</table>

Approved Theatre Elective 3

Semester Total 9

Total Minimum Credits 27

Career Studies: Technical Theatre (221.529.04)

Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 141</td>
<td>Theatre Appreciation I</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPD 251</td>
<td>Stage Lighting and Sound</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Semester Total 6

Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 233</td>
<td>Rehearsal and Performance I</td>
<td>3</td>
<td>Instructor Permission</td>
</tr>
<tr>
<td>SPD 145</td>
<td>Stagecraft (or SPD 136)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Approved Theatre Elective 3

Semester Total 9

Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 234</td>
<td>Rehearsal and Performance II</td>
<td>3</td>
<td>SPD 233</td>
</tr>
</tbody>
</table>

Approved Theatre Elective 3

Semester Total 6

Total Minimum Credits 24
## Career Studies: Theatre Arts (221.529.02)

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 111</td>
<td>Voice and Diction Speaking</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPD 130</td>
<td>Introduction to the Theatre</td>
<td>3</td>
<td>(or SPD 141)</td>
</tr>
<tr>
<td>SPD 131</td>
<td>Acting I</td>
<td>3</td>
<td>Approved Theatre Elective</td>
</tr>
</tbody>
</table>

**Semester Total** 12

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD 132</td>
<td>Acting II</td>
<td>3</td>
<td>Approved Theatre Elective</td>
</tr>
<tr>
<td></td>
<td>Approved Theatre Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Approved Theatre Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 12

**Total Minimum Credits** 21

---

1. Electives must be chosen from the following courses:
   - SPD 136 - Theatre Workshop
   - SPD 141-142 - Theatre Appreciation I-II
   - SPD 145 - Stagecraft
   - SPD 233-234 - Rehearsal and Performance I-II
   - SPD 241 - Introduction to Directing I
   - SPD 290 - Coordinated Internship in Theatre Arts

## Career Studies: Truck Driving (221.279.02)

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDV 101</td>
<td>Orientation to Truck Driving</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TRK 101</td>
<td>DOT Safety Rules and Regulations</td>
<td>2 Co-req: TRK 102 &amp; TRK 103</td>
<td></td>
</tr>
<tr>
<td>TRK 102</td>
<td>Preventive Maintenance for Truck Drivers</td>
<td>1 Co-req: TRK 101 &amp; TRK 103</td>
<td></td>
</tr>
<tr>
<td>TRK 103</td>
<td>Tractor Trailer Driving</td>
<td>9 Co-req: TRK 101 &amp; TRK 102</td>
<td></td>
</tr>
<tr>
<td>TRK 110</td>
<td>Survey of the Trucking Industry</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total Minimum Credits** 16

## Welding

### Certificate: Welding (995)

**Career Studies: Welding (221.995.01)**

The welding program prepares students for immediate employment in a number of industrial environments: shipyards, utilities, manufacturing firms, and oil refineries.

The welding program will introduce students to various types of equipment and materials used in welding and will qualify students as a welder’s helper.

A moderate level of manual dexterity and an average mechanical aptitude are helpful. It would be helpful for prospective welding students to contact the division office at 822-2301 for prior approval before enrolling.

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>College Composition I</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>WEL 117</td>
<td>Oxyfuel Welding and Cutting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WEL 123</td>
<td>Shielded Metal ARC Welding (Basic)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WEL 141</td>
<td>Welder Qualification Test I</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 12
### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 103</td>
<td>Applied Technical Mathematics</td>
<td>3</td>
<td>Placement</td>
</tr>
<tr>
<td>WEL 124</td>
<td>Shielded Metal ARC Welding (Advanced)</td>
<td>3</td>
<td>WEL 123</td>
</tr>
<tr>
<td>WEL 136</td>
<td>Welding III (Inert Gas)</td>
<td>2</td>
<td>WEL 117</td>
</tr>
<tr>
<td>WEL 142</td>
<td>Welder Qualification Test II</td>
<td>3</td>
<td>WEL 141</td>
</tr>
<tr>
<td>SDV 100</td>
<td>College Success Skills</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 12

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL 126</td>
<td>Pipe Welding I (ARC)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WEL 135</td>
<td>Inert Gas Welding</td>
<td>2</td>
<td>WEL 117</td>
</tr>
<tr>
<td>WEL 138</td>
<td>Pipe and Tube Welding (TIG)</td>
<td>2</td>
<td>WEL 136</td>
</tr>
<tr>
<td>WEL 150</td>
<td>Welding Drawing and Interpretation</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 9

**Total Minimum Credits** 33

### Career Studies: Welding (221.995.01)

### Semester 1

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL 117</td>
<td>Oxyfuel Welding and Cutting</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WEL 123</td>
<td>Shielded Metal Arc Welding (Basic)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WEL 141</td>
<td>Welder Qualification Test I</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 9

### Semester 2

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL 124</td>
<td>Shielded Metal ARC Welding (Advanced)</td>
<td>3</td>
<td>WEL 123</td>
</tr>
<tr>
<td>WEL 136</td>
<td>Welding III (Inert Gas)</td>
<td>2</td>
<td>WEL 117</td>
</tr>
<tr>
<td>WEL 142</td>
<td>Welder Qualification Test II</td>
<td>3</td>
<td>WEL 141</td>
</tr>
</tbody>
</table>

**Semester Total** 8

### Semester 3

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL 126</td>
<td>Pipe Welding I (ARC)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WEL 135</td>
<td>Inert Gas Welding</td>
<td>2</td>
<td>WEL 117</td>
</tr>
<tr>
<td>WEL 138</td>
<td>Pipe and Tube Welding (TIG)</td>
<td>2</td>
<td>WEL 136</td>
</tr>
<tr>
<td>WEL 150</td>
<td>Welding Drawing and Interpretation</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Semester Total** 9

**Total Minimum Credits** 26
general usage courses

These courses are used in all disciplines by using the appropriate course prefix with a specific discipline or course content title.

90-190-290  
Coordinated Internship In _______  
1-5 credits  
Includes supervised practice in selected business, industrial, and service firms coordinated by the college. Credit/practice ratio maximum 1:5 hours. Variable hours per week.

93-193-293  
Studies In _______  
1-5 credits  
Covers new content not covered in existing courses in the discipline. Allows instructor to explore content and instructional methods to assess the course's viability as a permanent offering. Variable hours per week.

95-195-295  
Topics In _______  
1-5 credits  
Provides an opportunity to explore topic areas of an evolving nature or of short-term importance in the discipline. Variable hours per week.

96-196-296  
On-Site Training In _______  
1-5 credits  
Offers opportunities for career orientation and training without pay in selected businesses and industry. Supervised and coordinated by the college. Credit/work ratio not to exceed 1:5 hours. Variable hours per week.

97-197-297  
Cooperative Education In _______  
1-5 credits  
Provides on-the-job training for pay in approved business, industrial, and service firms. Applies to all occupational-technical curricula at the discretion of the college. Credit/work ratio not to exceed 1:5 hours. Variable hours per week.

98-198-298  
Seminar and Project In _______  
1-5 credits  
Requires completion of a project or research report related to the student's occupational objective and a study of approaches to the selection and pursuit of career opportunities in the field. Variable hours per week.

99-199-299  
Supervised Study In _______  
1-5 credits  
Assigns problems for independent study outside the normal classroom setting under the guidance and direction of an instructor. Incorporates prior experience and instruction in the discipline. Variable hours per week.

accounting

ACC 100  
Introduction to Bookkeeping  
5 credits  
Presents the accounting cycle, focusing on the routine recording of data in journals and ledgers. Includes payroll preparation and practical procedures. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

ACC 124  
Payroll Accounting  
3 credits  
Presents accounting systems and methods used in computing and recording payroll to include payroll taxes and compliance with federal and state legislation. Lecture 3 hours per week.

ACC 211  
Principles of Accounting I  
3 credits  
Presents accounting principles/application to various businesses. Covers the accounting cycle, income determination, and financial reporting. Lecture 3 hours per week.

ACC 212  
Principles of Accounting II  
3 credits  
Emphasizes partnerships, corporations and the study of financial analysis. Includes and introduces cost/managerial accounting concepts. Prerequisite: ACC 211. Lecture 3 hours per week.

ACC 215  
Computerized Accounting  
3 credits  
Introduces the computer in solving accounting problems. Focuses on operation of computers. Presents the accounting cycle and financial statement preparation in a computerized system and other applications for financial and managerial accounting. Prerequisite or co-requisite: ACC 211 or equivalent. Lecture 3 hours per week.

ACC 217  
Analyzing Financial Statements  
3 credits  
Explains the generation and limitations of data, techniques for analyzing the flow of a business's funds, and the methods of selecting and interpreting financial ratios. Offers analytical techniques through the use of comprehensive case studies. Prerequisite: ACC 211. Lecture 3 hours per week.

ACC 219  
Government and Non-Profit Accounting  
3 credits  
Introduces fund accounting as used by governmental and nonprofit entities. Stresses differences between accounting principles of for-profit and not-for-profit organizations. Prerequisite: ACC 212 or equivalent. Lecture 3 hours per week.

ACC 220  
Accounting for Small Business  
3 credits  
Presents practical accounting procedures for small business operations including service occupations, retail stores, and manufacturing operations. Covers the
course descriptions

accounting cycle, journals, ledgers, preparation of financial statements and payroll, and checking account management. Includes regulations applicable to payroll, self-employment, social security and other taxes. Lecture 3 hours per week.

**ACC 221**  
Intermediate Accounting I  
4 credits  
Covers accounting principles and theory, including a review of the accounting cycle and accounting for current assets, current liabilities and investments. Introduces various accounting approaches and demonstrates the effect of these approaches on the financial statement users. Prerequisite: ACC 212 or equivalent. Lecture 4 hours per week.

**ACC 222**  
Intermediate Accounting II  
4 credits  
Continues accounting principles and theory with emphasis on accounting for fixed assets, intangibles, corporate capital structure, long-term liabilities, and investments. Prerequisite: ACC 221 or equivalent. Lecture 4 hours per week.

**ACC 231**  
Cost Accounting I  
3 credits  
Studies cost accounting methods and reporting as applied to job order, process, and standard cost accounting systems. Includes cost control and other topics. Prerequisite: ACC 212 or equivalent. Lecture 4 hours per week.

**ACQ 121**  
Introduction to Acquisition and Procurement Fundamentals I  
3 credits  
Introduces technical and fundamental procedures of government acquisition and procurement. Focuses on appropriations and funding, competition requirements, types of specifications, small business and labor surplus areas, pre-solicitation considerations, solicitations, and contractor qualifications. Lecture 3 hours per week.

**ACQ 122**  
Introduction to Acquisition and Procurement Fundamentals II  
3 credits  
Continues the environment in which cost and price analysis takes place. Includes individual and group negotiation activities, which address the fundamentals of the negotiation process, essential techniques, strategies, and tactics. Prerequisite: ACQ 121. Lecture 3 hours per week.

**ACQ 215**  
Contract Law  
3 credits  
Studies government contract law. Applies basic legal aspects and principles of law associated with contracting and the administration of contracts. Emphasizes the dispute process, including administrative and judicial methods of resolution of contract disputes. Focuses on modifications, award law, government property, defective pricing data, patent and data law, and labor law. Lecture 3 hours per week.

**ACQ 221**  
Advanced Acquisition and Procurement Management I  
3 credits  
Studies advanced areas of acquisition planning, government provided property, sealed bidding, funding, and acquisition of information resources. Emphasizes interactions with service contracts, value engineering, commercial activities, technical requirements, construction requirements, and socio-economic programs. Prerequisite: ACQ 121. Lecture 3 hours per week.

**ACQ 231**  
Principles of Contract Pricing and Negotiations I  
3 credits  
Covers the environment in which cost and price analysis takes place, sources of data for cost and price analysis, methods for analyzing direct and indirect costs, methods for performing profit analysis, and a selection of current pricing topics. Lecture 3 hours per week.

**ACQ 232**  
Principles of Contract Pricing and Negotiations II  
3 credits  
Continues the environment in which cost and price analysis takes place. Includes individual and group negotiation activities, which address the fundamentals of the negotiation process, essential techniques, strategies, and tactics. Prerequisite: ACQ 231. Lecture 3 hours per week.
administration of justice

ADJ 105
The Juvenile Justice System
3 credits
Presents the evolution, philosophy, structures and processes of the American juvenile delinquency system; surveys the rights of juveniles, dispositional alternatives, rehabilitation methods and current trends. Lecture 3 hours per week.

ADJ 110
Introduction to Law Enforcement
3 credits
Studies the philosophy and history of law enforcement, presenting an overview of the crime problem and policy response issues. Surveys the jurisdictions and organizations of local, state, and federal law enforcement agencies. Examines the qualification requirements and career opportunities in the law enforcement profession. Lecture 3 hours per week.

ADJ 111
Law Enforcement Organization and Administration I
3 credits
Teaches the principles of organization and administration of law enforcement agencies. Studies the management of line operations, staff and auxiliary services, investigative and juvenile units. Introduces the concept of data processing; examines policies, procedures, rules, and regulations pertaining to crime prevention. Surveys concepts of protection of life and property, detection of offenses, and apprehension of offenders. Lecture 3 hours per week.

ADJ 140
Introduction to Corrections
3 credits
Focuses on societal responses to the offender. Traces the evolution of practices based on philosophies of retribution, deterrence, and rehabilitation. Reviews contemporary correctional activities and their relationships to other aspects of the criminal justice system. Lecture 3 hours per week.

ADJ 201
Criminology
3 credits
Studies current and historical data pertaining to criminal and other deviant behavior. Examines theories that explain crime and criminal behavior in human society. Lecture 3 hours per week.

ADJ 211-212
Criminal Law, Evidence and Procedures I-II
3 credits each
Teaches the elements of proof for major and common crimes and the legal classification of offenses. Studies the kinds, degrees and admissibility of evidence and its presentation in criminal proceedings with emphasis on legal guidelines for methods and techniques of evidence acquisition. Surveys the procedural requirements from arrest to final disposition in the various American court systems with focus on the Virginia jurisdiction. Lecture 3 hours per week.

ADJ 231
Community Policing
3 credits
Examines the history of police-community relations and the role of both the community and the police in establishing a crime fighting partnership for success. Emphasizes building relationships between police officers and the community they serve. Includes case studies from various cities that have undertaken the philosophy of community policing. Lecture 3 hours per week.

ADJ 232
Domestic Violence
3 credits
Surveys historical issues that have affected family violence. Examines current trends in the context of the criminal justice system. Lecture 3 hours per week.

ADJ 234
Terrorism and Counter-Terrorism
3 credits
Surveys the historical and current practices of terrorism that are national, transnational, or domestic in origin. Includes biological, chemical, nuclear, and cyber-terrorism. Teaches the identification and classification of terrorist organizations, violent political groups and issue-oriented militant movements. Examines investigative methods and procedures utilized in counter terrorist efforts domestically and internationally. Lecture 3 hours per week.

ADJ 236
Principles of Criminal Investigation
3 credits
Surveys the fundamentals of criminal investigation procedures and techniques. Examines crime scene search, collecting, handling and preserving of evidence. Lecture 3 hours per week.

ADJ 247
Criminal Behavior
3 credits
Introduces and evaluates the concepts of normal and abnormal behavior. Focuses on the psychological and sociological aspects of criminal and other deviant behavior patterns. Lecture 3 hours per week.
# Air Conditioning and Refrigeration

## AIR 111-112
### Air Conditioning and Refrigeration Controls I-II
3 credits each
- Presents electron theory, magnetism, Ohm’s Law, resistance, current flow, instruments for electrical measurement, AC motors, power distribution controls and their application. **Co-requisite:** AIR 111. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

## AIR 116
### Duct Construction and Maintenance
2 credits
- Presents duct materials including sheet metal, aluminum, and fiber glass. Explains development of duct systems, layout methods, safety hand tools, cutting and shaping machines, fasteners and fabrication practices. Includes duct fittings, dampers and regulators, diffusers, heater and air washers, fans, insulation, and ventilating hoods. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

## AIR 121-122
### Air Conditioning and Refrigeration I-II
3 credits each
- Studies refrigeration theory, characteristics of refrigerants, temperature, and pressure, tools and equipment, soldering, brazing, refrigeration systems, system components, compressors, evaporators, metering devices. Presents charging and evaluation of systems and leak detection. Explores servicing the basic system. Explains use and care of oils and additives and troubleshooting of small commercial systems. **Co-requisite for AIR 121: AIR 111. Prerequisite for AIR 122: AIR 121. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

## AIR 154
### Heating Systems I
3 credits
- Introduces types of fuels and their characteristics of combustion; types, components and characteristics of burners, and burner efficiency analyzers. Studies forced air heating systems including troubleshooting, preventive maintenance and servicing. **Co-requisite:** AIR 111. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

## AIR 161
### Heating, Air, and Refrigeration Calculations I
3 credits
- Introduces fractions, decimals, sign of operations, equations, Ohm’s law, subtraction, multiplication and division of signed numbers. Teaches fundamentals of algebra, expression of stated problems in mathematical form, and solutions of equations. **Lecture 3 hours per week.**

## AIR 165
### Air Conditioning Systems I
3 credits
- Introduces comfort survey, house construction, load calculations, types of distribution systems, and equipment selection. Introduces designing, layout, installing and adjusting of duct systems, job costs, and bidding of job. **Prerequisite:** AIR 161. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

## AIR 181
### Planning and Estimating I
2 credits
- Presents fundamentals of blueprint reading as applied to the building trades. Emphasizes air conditioning distribution, designing and drawing residential and commercial systems, take-off of materials and estimating the cost of the systems. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

## AIR 200
### Hydronics
2 credits
- Presents design and installation of hydronic systems for heating and cooling. Includes steam heated and chilled water systems. Primarily concerns systems using water under forced circulation. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

## AIR 206
### Psychrometrics
3 credits
- Studies air and its properties, characteristics and measurements as they apply to human comfort. Considers control of temperature, humidity and distribution of air and air mixtures. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

## AIR 235
### Heat Pumps
3 credits
- Studies theory and operation of reverse cycle refrigeration, including supplementary heat as applied to heat pump systems, service, installation and maintenance. **Prerequisites:** AIR 112 and AIR 122. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

## AIR 238
### Advanced Troubleshooting and Service
3 credits
- Presents advanced service techniques on a wide variety of equipment used in refrigeration, air conditioning, and phases of heating and ventilation and controls. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**
architecture

ARC 100
Introduction to Architecture
3 credits
Outlines history and impact of architecture. Emphasizes dynamics and social aspects of architecture and society; focuses on 19th and 20th century architectural forms. Lecture 3 hours per week.

ARC 121–122
Architectural Drafting I-II
3 credits each
Introduces techniques of architectural drafting, including lettering, dimensioning, and symbols. Requires production of plans, sections, and elevations of a simple building. Studies use of common reference material and the organization of architectural working drawings. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ARC 133
Construction Methodology and Procedures I
3 credits
Studies materials used in construction of buildings, covering foundations to structural framing systems. Includes appropriate use of materials for various construction types. Includes specification of materials and installation procedures, types of specifications and writing procedures, bidding procedures, and contract documents. Lecture 3 hours per week.

ARC 220
Introduction to Landscape Architecture and Site Planning
3 credits
Introduces the basics of landscape design and development concepts through architectural construction and plantings. Shows relationship between design and environment, including objectives of design elements and materials, and facilities. Lecture 3 hours per week.

ARC 221
Architectural CAD Applications Software I
3 credits
Teaches the principles and techniques of architectural drawing practices through the use of architecture specific CAD software. Utilizes the commands and features of the software to generate drawings that emphasize architectural design and structural systems. Prerequisite: DRF 201. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

ARC 258
Building Codes, Contract Documents and Professional Office Practices
3 credits
Covers professional role of the architectural technician with regard to the construction industry. Includes building codes and their effect on specifications and drawings. Teaches purpose and writing of specifications with their legal and practical application to working drawings. Analyzes contract documents for client-architect-contractor responsibilities and duties. Lecture 3 hours per week.

art

ART 121-122
Drawing I-II
3 credits each
Develops basic drawing skills and understanding of visual language through studio instruction/lecture. Introduces concepts such as proportion, space, perspective, tone and composition as applied to still life, landscape and the figure. Uses drawing media such as pencil, charcoal, ink wash and color media. Includes field trips and gallery assignments as appropriate. Must be taken in sequence. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

ART 133
Visual Arts Foundation
4 credits
Covers tools and techniques, design concepts and principles, color theory and an introduction to the computer for graphic use. Applies to all fields of visual art. Co-requisite: SDV 101 Orientation to Visual Arts. Lecture 2 hours. Studio instruction 4 hours. Total 6 hours per week.

ART 134
Three-Dimensional Design
3 credits
Explores the concepts of three-dimensional design applicable to all fields of visual art. Covers tools and techniques. Uses computers as appropriate for research. Prerequisite: ART 133. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

ART 141
Typography I
4 credits
Studies the history of letter forms and typefaces and examines their uses in contemporary communications media. Emphasizes applications to specific design problems. Includes identification and specification of type, copy fitting and hands-on typesetting problems. Prerequisite: ART 133 and ART 283. Must be taken in sequence. Lecture 2 hours. Studio instruction 4 hours. Total 6 hours per week.

ART 201-202
History of Art I-II
3 credits each
Studies the historical context of art of the ancient, medieval, Renaissance and modern worlds. Includes research project. Lecture 3 hours per week.

ART 203
Animation I
4 credits
Introduces the student to the basic techniques of animation, both traditional and computer generated. Teaches theoretical elements of the aesthetics
ART 208
**Video Techniques**
4 credits
Addresses the fundamentals of video technology as applied to the creation of multimedia projects. Focuses on the aesthetics of editing. Extends the capabilities of graphic designers and artists and allows them to transfer art work and animation from the computer to video, and to capture video frames for use in multimedia design on the computer. Instructs a student in the development of sophisticated typographic design. **Prerequisite:** ART 283 or PHT 101. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

ART 221-222
**Drawing III-IV**
3 credits each
Introduces advanced concepts and techniques of drawing as applied to the figure, still life and landscape. Gives additional instruction in composition, modeling, space and perspective. Encourages individual approaches to drawing. Must be taken in sequence. **Prerequisite:** ART 122. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

ART 241-242
**Painting I-II**
3 credits each
Introduces abstract and representational painting in acrylic and/or oil with emphasis on color composition and value. Must be taken in sequence. **Prerequisites:** ART 122 and ART 133 or divisional approval. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

ART 243-244
**Watercolor I-II**
3 credits each
Presents abstract and representational painting in watercolor with emphasis on design, color, composition, technique and value. **Prerequisites:** ART 122 and ART 133 or divisional approval. Must be taken in sequence. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.

ART 251-252
**Communication Design I-II**
3 credits each
Studies the principles of visual communications as applied to advertising in newspapers, magazines, direct mail advertising, house organs, etc. Analyzes the influence of contemporary art on design. **Must be taken in sequence. Prerequisite:** ART 141. Lecture 2 hours. Studio instruction 2 hours. Total 4 hours per week.

ART 263-264
**Interactive Design I-II**
4 credits each
Focuses on creative concepts of design problem solving for interactive design: techniques specific to web, multimedia for the web, and other interactive design products. Advanced interactive design functions such as animation, rollovers, and audio are covered in ART 264. **Prerequisites for ART 263:** ART 141 and ART 283. **Prerequisites for ART 264:** ART 263. Lecture 2 hours. Studio instruction 2 hours. Total 4 hours per week.

ART 283-284
**Computer Graphics I-II**
4 credits each
Introduces microcomputers and software used to produce computer graphics. Employs techniques learned to solve studio projects which reinforce instruction and are appropriate for portfolio use. Must be taken in sequence. **Co-requisite:** ART 133. Lecture 2 hours. Studio instruction 4 hours. Total 6 hours per week.

ART 287
**Portfolio and Resume Preparation**
2 credits
Focuses on portfolio preparation, resume writing, and job interviewing for students. Recommended for final semester program students. **Requires instructor's approval. Lecture 1 hour. Studio instruction 2 hours. Total 3 hours per week.**

**American Sign Language**

ASL 101-102
**American Sign Language I-II**
3 credits each
Introduces the fundamentals of American Sign Language (ASL) used by the Deaf Community, including basic vocabulary, syntax, finger spelling, and grammatical non-manual signals. Focuses on communicative competence. Develops gestural skills as a foundation for ASL enhancement. Introduces cultural knowledge and increases understanding of the Deaf Community. **Lecture 3 hours per week.**

ASL 115
**Finger Spelling and Number Use in ASL**
2 credits
Provides intensive practice in comprehension and production of finger-spelled words and numbers with emphasis on clarity and accuracy. Focuses on lexicalized finger spelling and numeral incorporation as used by native users of American Sign Language. **Prerequisite:** ASL 101 or permission of instructor. Lecture 2 hours per week.

ASL 125
**History & Culture of the Deaf Community I**
3 credits
Presents an overview of various aspects of Deaf Culture, including educational and legal issues. **Prerequisite:** ASL 101. Lecture 3 hours per week.
### ASL 150  
**Working with Deaf and Hard-of-Hearing People**  
2 credits  
Explores career options for serving Deaf/hard-of-hearing people and/or for using American Sign Language skills in a career. Examines interests, skills, and educational assessments. Investigates job market viability via the Internet and professional periodicals. Develops opportunities for students to network with professionals in the field of deafness. **Lecture 2 hours per week.**

### ASL 201-202  
**American Sign Language III-IV**  
3 credits each  
Develops vocabulary, conversational competence, and grammatical knowledge with a total immersion approach. Introduces increasingly complex grammatical aspects including those unique to ASL. Discusses culture and literature. Contact with the Deaf Community is encouraged to enhance linguistic and cultural knowledge. **Prerequisite: ASL 102. Lecture 3 hours per week.**

### ASL 220  
**Comparative Linguistics: ASL & English**  
3 credits  
Describes spoken English and ASL (American Sign Language) on five levels: phonological, morphological, lexical, syntactic, and discourse. Compares and contrasts the two languages on all five levels using real-world examples. Documents similarities between signed languages and spoken languages in general. Describes the major linguistic components and processes of English and ASL. Introduces basic theories regarding ASL structure. Emphasizes ASL's status as a natural language by comparing and contrasting similarities and unique differences between the two languages. **Prerequisite: ASL 201. Lecture 3 hours per week.**

### ASL 261-262  
**American Sign Language V-VI**  
3 credits each  
Develops advanced American Sign Language comprehension and production skills. Emphasizes advanced linguistic aspects of ASL. Presents ASL literary forms. Encourages contact with the Deaf Community. **Prerequisite: ASL 202. Lecture 3 hours per week.**

### administrative support technology

### AST 55  
**Certification Preparation**  
1 credit  
Serves as a review of objectives for a specific Certification. Uses certification test preparation software, when available, in conjunction with a faculty resource person. May be repeated for credit. **Lecture 1 hour per week.**

### AST 101  
**Keyboarding I**  
3 credits  
Teaches the alpha/numeric keyboard with emphasis on correct techniques, speed, and accuracy. Teaches formatting of basic personal and business correspondence, reports, and tabulation. **Lecture 3 hours per week.**

### AST 102  
**Keyboarding II**  
3 credits  
Develops keyboarding and document production skills with emphasis on preparation of specialized business documents. Continues skill building for speed and accuracy. **Prerequisite: AST 101. Lecture 3 hours per week.**

### AST 107  
**Editing/Proofreading Skills**  
3 credits  
Develops skills essential to creating and editing business documents. Covers grammar, spelling, diction, punctuation, capitalization, and other usage problems. **Lecture 3 hours per week.**

### AST 114  
**Keyboarding for Information Processing**  
2 credits  
Teaches the alphabetic and numeric keys: develops correct techniques and competency in the use of computer keyboards. May include basic correspondence and report formats. **Lecture 2 hours per week.**

### AST 117  
**Keyboarding for Computer Usage**  
1 credit  
Teaches the alphabetic keyboard and 10-key pad. Develops correct keying techniques. **Lecture 1 hour per week.**

### AST 132  
**Word Processing I (Microsoft Office Word)**  
1 credit  
Introduces students to a word processing program to create, edit, save and print documents. **Lecture 1 hour per week.**

### AST 141  
**Word Processing (Microsoft Office Word)**  
4 credits  
Teaches creating and editing documents, including line and page layouts, columns, fonts, search/replace, cut/paste, spell/thesaurus, and advanced editing and formatting features of word processing software. **Prerequisite: AST 101 or equivalent. Lecture 4 hours per week.**

### AST 147  
**Introduction to Presentation Software (Microsoft Office PowerPoint)**  
1 credit  
Introduces presentation options including slides, transparencies, and other forms of presentations. **Lecture 1 hour per week.**
course descriptions

AST 150
Desktop Publishing I
(Microsoft Office Word)
1 credit
Presents desktop publishing features including page layout and design, font selection, and use of graphic images. Lecture 1 hour per week.

AST 154
Introduction to Voice Recognition Software
1 credit
Teaches the computer user to use the voice as an input device to compose documents and to give commands directly to the computer. Lecture 1 hour per week.

AST 201
Keyboarding III
3 credits
Develops decision-making skills, speed, and accuracy in production keying. Applies word processing skills in creating specialized business documents. Prerequisite: AST 102 or equivalent. Lecture 3 hours per week.

AST 205
Business Communications
3 credits
Teaches techniques of oral and written communications. Emphasizes writing and presenting business-related material. Prerequisite: ENG 111. Lecture 3 hours per week.

AST 234
Records and Database Management
3 credits
Teaches filing and records management procedures using microcomputer database software. Incorporates both manual and electronic methods for managing information. Lecture 3 hours per week.

AST 236
Specialized Software Applications
4 credits
Teaches specialized integrated software applications on the microcomputer. Emphasizes document production to meet business and industry standards. Prerequisite: AST 101 or equivalent. Lecture 4 hours per week.

AST 243
Office Administration I
3 credits
Develops an understanding of the administrative support role and the skills necessary to provide organizational and technical support in a contemporary office setting. Emphasizes the development of critical thinking, problem-solving, and job performance skills in a business office environment. Prerequisite: AST 101 or equivalent. Lecture 3 hours per week.

AST 244
Office Administration II
3 credits
Enhances skills necessary to provide organizational and technical support in a contemporary office setting. Emphasizes administrative and supervisory role of the office professional. Includes travel and meeting planning, office budgeting and financial procedures, international issues, and career development. Prerequisite: AST 243 or equivalent. Lecture 3 hours per week.

AST 245
Medical Machine Transcription
3 credits
Develops machine transcription skills, integrating operation of transcribing equipment with understanding of medical terminology. Emphasizes dictation techniques and accurate transcription of medical documents in prescribing formats. Prerequisite: AST 102 or equivalent and HLT 143. Lecture 3 hours per week.

AST 257
WP Desktop Publishing
(Microsoft Office Word)
4 credits
Uses word processing software to teach advanced document preparation. Prerequisite: AST 101 or equivalent and experience in using Microsoft Word 2003. Lecture 4 hours per week.

AST 271
Medical Office Procedures I
3 credits
Covers medical office procedures, records management, preparation of medical reports, and other medical documents. Co-requisite: AST 102 should be taken prior to or with AST 271. Lecture 3 hours per week.

AUT 101
Introduction to Automotive Systems
3 credits
Introduces fundamental systems of the automobile: the engine, fuel, exhaust, electric, ignition, lubrication, cooling, transmission, steering, brake and suspension systems. Teaches theory and function of each system. Demonstrates operation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

AUT 156
Small Gasoline Engines
2 credits
Studies small gasoline engine operating principles, construction, design, variety, and their many purposes. Gives instruction on two-cycle and four-cycle small gas engines, their construction, design, fuel system, ignition system, and lubricating systems. Demonstrates disassembly, reconditioning, overhaul and reassembly in the lab. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.
AUT 165
Automotive Diagnosis and Tune-Up
2 credits
Presents the techniques for diagnosis of malfunctions in systems of the automobile. Uses dynamometers, oscilloscopes and other specialized diagnostic and testing equipment. Demonstrates tune-up of conventional and rotary engines. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

AUT 166-167
Automotive Diagnostics I-II
5 credits each
Presents the application and operating theory and diagnostic procedures on general engine mechanical and electrical systems. Emphasizes diagnostic procedures using the latest diagnostic equipment. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

AUT 168-169
Automotive Diagnostics III-IV
5 credits each
Presents the application and operating theory and diagnostic procedures on engine performance systems, emissions analysis, computer controlled systems, body electronics, and climate control systems. Emphasizes diagnostic procedures using the latest diagnostic equipment. Includes preparation for Refrigerant Certification Test and ASE Tests A6, A7, A8. Prerequisite: AUT 166. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

AUT 220-221
Automotive Diagnostics V-VI
5 credits each
Presents the application and operation of diagnostic test equipment to test and inspect steering, suspension, and braking systems. Includes preparation for Virginia State Inspection Exam and ASE Tests A4, A5. Prerequisite: AUT 166. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

AUT 247-248
Automotive Diagnostics VII-VIII
5 credits each
Presents the application and operation of diagnostic test equipment to test and inspect power train systems. Includes preparation for ASE Tests A1, A2, and A3. Prerequisite: AUT 166. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

BIO 1
Foundations of Biology
3 credits
Develops a basic understanding of plant and animal form, function and relationships. Prepares students who have a deficiency in high school biology. May be repeated for credit. Lecture 3 hours per week.

BIO 100
Basic Human Biology
3 credits
Presents basic principles of human anatomy and physiology. Discusses cells, tissues, and selected human systems. Lecture 3 hours per week.

BIO 101-102
General Biology I-II
4 credits each
Explores fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on general biological principles. Introduces the diversity of living organisms, their structure, function and evolution. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

BIO 141-142
Human Anatomy and Physiology I-II
4 credits each
Integrates anatomy and physiology of cells, tissues, organs, and systems of the human body. Integrates concepts of chemistry, physics, and pathology.

BIO 150
Introductory Microbiology
4 credits
Studies the general characteristics of microorganisms. Emphasizes their relationships to individual and community health. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

BIO 275
Marine Ecology
4 credits
Applies ecosystem concepts to marine habitats. Includes laboratory and field work. Prerequisite: BIO 101-102 or divisional approval. Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

BIO 278
Coastal Ecology
3 credits
Investigates beach, salt marsh, and estuarine ecosystems, including the effects of chemical, geological, and physical factors upon the distribution of organisms. Discusses the effects of pollution and human manipulation of the coastline. Includes observation and identification of coastal plants and animals, and analysis of the dynamics of coastal community structure and function in a field-based setting. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

BUS 100
Introduction to Business
3 credits
Presents a broad introduction to the functioning of business enterprise within the U.S. economic framework. Introduces economic systems, essential
elements of business organization, production, human resource management, marketing, finance, and risk management. Develops business vocabulary. Lecture 3 hours per week.

**BUS 111**
Principles of Supervision I
3 credits
Teaches the fundamentals of supervision, including the primary responsibilities of the supervisor. Introduces factors relating to the work of supervisor and subordinates. Covers aspects of leadership, job management, work improvement, training and orientation, performance evaluation, and effective employee/supervisor relationships. Lecture 3 hours per week.

**BUS 117**
Leadership Development
3 credits
Covers interpersonal relations in hierarchical structures. Examines the dynamics of teamwork, motivation, handling change and conflict and how to achieve positive results through others. Lecture 3 hours per week.

**BUS 125**
Applied Business Mathematics
3 credits
Applies mathematical operations to business processes and problems such as wages and payroll, sales and property taxes, checkbook records and bank reconciliation, depreciation, overhead, distribution of profit and loss in partnerships, distribution of corporate dividends, commercial discounts, markup, markdown, simple interest, present values, bank discount notes, multiple payment plans, compound interest annuities, sinking funds, and amortization. Prerequisite: MTH 121. Lecture 3 hours per week.

**BUS 130**
Maritime Logistics Afloat
3 credits
Examines the technician and mid-level management responsibilities required to perform all tasks relative to maritime logistics operations afloat using current occupational standards for Logisticians. Discusses the three major topic areas in the Naval Supply System of Inventory, logistics, and financial management. Lecture 3 hours per week.

**BUS 131**
Maritime Logistics Ashore
3 credits
Examines the technician and mid-level management responsibilities required to perform all tasks relative to ashore maritime logistics. Focuses on current occupational standards for Logisticians. Discusses the three major topic areas in the Naval Supply System of Inventory, logistics, and financial management. Lecture 3 hours per week.

**BUS 160**
Legal Aspects of Small Business Operations
1 credit
Covers the functional areas of business law, specifically as it applies to small business. Provides the students with a working knowledge of business contracts, agency relationships, and product liability. Provides a knowledge base for small business owners to overcome problems that are individually within their abilities. Covers selection of professional assistance for problems of a more serious nature. Lecture 1 hour per week.

**BUS 165**
Small Business Management
3 credits
Identifies management concerns unique to small businesses. Introduces the requirements necessary to initiate a small business, and identifies the elements comprising a business plan. Presents information establishing financial and administrative controls, developing a marketing strategy, managing business operations, and the legal and government relationships specific to small businesses. Lecture 3 hours per week.

**BUS 200**
Principles of Management
3 credits
Teaches management and the management functions of planning, organizing, leading and controlling. Focuses on application of management principles to realistic situations managers encounter as they attempt to achieve organizational objectives. Prerequisite: BUS 100. Lecture 3 hours per week.

**BUS 201**
Organizational Behavior
3 credits
Presents a behaviorally oriented course combining the functions of management with the psychology of leading and managing people. Focuses on the effective use of human resources through understanding human motivation and behavior patterns, conflict management and resolution, group functioning and process, the psychology of decision-making, and the importance of recognizing and managing change. Lecture 3 hours per week.

**BUS 202**
Applied Management Principles
3 credits
Focuses on management practices and issues. May use case studies and/or management decision models to analyze problems in developing and implementing a business strategy while creating and maintaining competitive advantage. Prerequisite: BUS 200. Lecture 3 hours per week.

**BUS 205**
Human Resource Management
3 credits
Introduces employment, selection, and placement of personnel, forecasting, job analysis, job descriptions, training methods and programs, employee evaluation systems, compensation, benefits, and labor relations. Lecture 3 hours per week.
BUS 215
Purchasing and Materials Management
3 credits
Teaches the principles of effective purchasing and management of materials and equipment. Includes determination of requirements, source selection, pricing, value analysis, contracting, inventory management, and equipment requisition decisions. Lecture 3 hours per week.

BUS 216
Probability and Statistics for Business and Economics
3 credits
Introduces methods of probability assessment and statistical inference. Includes data collection and presentation; descriptive statistics; basic probability concepts; discrete and continuous probability distributions; decision theory; sampling and estimation; and hypothesis testing. Emphasizes business and economic applications. Utilizes computer software as a tool for problem solving. Prerequisites: ITE 115 and MTH 163. Lecture 3 hours per week.

BUS 220
Introduction to Business Statistics
3 credits
Introduces statistics as a tool in decision-making. Emphasizes ability to collect, present, and analyze data. Employs measures of central tendency and dispersion, statistical inference, index numbers, probability theory, and time series analysis. Prerequisite: MTH 121. Lecture 3 hours per week.

BUS 223
Distribution and Transportation
3 credits
Examines the background and history of transportation, emphasizing the fundamental role and importance the industry plays in companies, society, and the environment in which transportation service is provided. Provides an overview of carrier operations, management, technology, and strategies including transportation regulations and public policy. Lecture 3 hours per week.

BUS 234
Supply Chain Management
3 credits
Examines the process of planning, organizing, and controlling the flow of materials and services from supplier to end users/customers. Focuses on coordinating supply management, operations and integrated logistics into a seamless pipeline to maintain a continual flow of products and services. Lecture 3 hours per week.

BUS 236
Communication in Management
3 credits
Introduces the functions of communication in management with emphasis on gathering, organizing, and transmitting facts and ideas. Teaches the basic techniques of effective oral and written communication. Lecture 3 hours per week.

BUS 241
Business Law I
3 credits
Develops a basic understanding of the US business legal environment. Introduces property and contract law, agency and partnership liability, and government regulatory law. Students will be able to apply these legal principles to landlord/tenant disputes, consumer rights issues, employment relationships, and other business transactions. Lecture 3 hours per week.

BUS 242
Business Law II
3 credits
Focuses on business organization and dissolution, bankruptcy and Uniform Commercial Code. Introduces international law and the emerging fields of E-Commerce and Internet Law. Prerequisite: BUS 241. Lecture 3 hours per week.

BUS 255
Inventory and Warehouse Management
3 credits
Emphasizes the relationships of inventory and warehouse management to customer service and profitability of the wholesale distributor. Focuses on the role of computerized systems and resulting information for effective management of inventory and the warehouse under various conditions. Lecture 3 hours per week.

BUS 260
Planning for Small Business
2 credits
Provides knowledge of the development of a business plan, which can be used to acquire capital and serve as a management guide. Combines knowledge that has been acquired in the areas of planning, management, and finance using proforma statements and marketing. Covers Internet searching techniques. Recommended as a capstone course. Prerequisites: BUS 160, BUS 165, and ACC 220. Lecture 2 hours per week.

BUS 265
Ethical Issues in Management
3 credits
Examines the legal, ethical, and social responsibilities of management. May use cases to develop the ability to think and act responsibly. Lecture 3 hours per week.

BUS 280
Introduction to International Business
3 credits
Studies the problems, challenges, and opportunities, which arise when business operations or organizations transcend national boundaries. Examines the functions of international business in the economy, international and transnational marketing, production, and financial operations. Lecture 3 hours per week.
course descriptions

childhood development

CHD 117  
Introduction To Reading Methods  
3 credits
Introduces current practices of teaching reading in the elementary school. Familiarizes students with materials currently in use, emphasizes observation of various reading techniques and trends in the classroom. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 118  
Language Arts for Young Children  
3 credits
Presents techniques and methods for encouraging the development of language and perceptual skills in young children. Stresses improvement of vocabulary, speech, and methods to stimulate discussion. Surveys children’s literature, examines elements of quality story telling and story reading, and stresses the use of audio-visual materials. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 120  
Introduction to Early Childhood Education  
3 credits
Introduces early childhood development through activities and experiences in nursery, pre-kindergarten, kindergarten, and primary programs. Investigates classroom organization and procedures, and use of classroom time and materials, approaches to education for young children, professionalism, and curricular procedures. Lecture 3 hours per week.

CHD 145  
Teaching Art, Music, and Movement to Children  
3 credits
Provides experiences in developing the content, methods, and materials for directing children in art, music, and movement activities. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 146  
Math, Science, and Social Studies for Children  
3 credits
Provides experiences in developing the content, methods, and materials for directing children in math, science, and social studies activities. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

CHD 165  
Observation and Participation In Early Childhood/Primary Settings  
3 credits
Observes and participates in early childhood settings such as child care centers, pre-schools, Montessori schools or public schools in Kindergarten through 3rd grade levels. Students spend one hour each week in a seminar session in addition to 60 clock hours in the field. May be taken again for credit. Lecture 1 hour. Laboratory 6 hours. Total 7 hours per week.

CHD 166  
Infant and Toddler Programs  
3 credits
Examines the fundamentals of infant and toddler development, including planning and implementing programs in group care. Emphasizes meeting physical, social, emotional, and cognitive needs: scheduling, preparing age-appropriate activities, health and safety policies, record keeping, and reporting to parents. Lecture 3 hours per week.

CHD 205  
Guiding the Behavior of Children  
3 credits
Explores positive ways to build self-esteem in children and help them develop self-control. Presents practical ideas for encouraging pro-social behavior in children and emphasizes basic skills and techniques in classroom management. Lecture 3 hours per week.

CHD 210  
Introduction to Exceptional Children  
3 credits
Reviews the history of education for exceptional children. Studies the characteristics associated with exceptional children. Explores positive techniques for managing behavior and adapting materials for classroom use. Lecture 3 hours per week.

CHD 215  
Models of Early Childhood Education Programs  
3 credits
Studies and discusses the various models and theories of early childhood education programs including current trends and issues. Presents state licensing and staff requirements. Lecture 3 hours per week.

CHD 216  
Early Childhood Programs, School, and Social Change  
3 credits
Explores methods of developing positive, effective relations between staff and parents to enhance the developmental goals of home and school. Reviews current trends and issues in education, describes symptoms of homes in need of support, investigates non-traditional family and cultural patterns, and lists community resources. Lecture 3 hours per week.

CHD 220  
Introduction to School-Age Child Care  
3 credits
Examines the purposes of school-age child care in today’s society, the role of adults within school-age child care, and the state of the profession of school-age child care. Lecture 3 hours per week.

CHD 225  
Curriculum Development for School-Age Child Care  
3 credits
Examines the creative activities, techniques, interactions, and program
development that promote positive social and emotional growth in school-age children. Emphasizes positive development through everyday programming and experiences. Lecture 3 hours per week.

**CHD 230**  
**Behavior Management for School-Age Child Care**  
3 credits  
Discusses the development of social skills that school-age children need for self-management, including self-discipline, self-esteem, and coping with stress and anger. Explores ways to effectively guide and discipline school-age children, focusing on how adults can facilitate positive pro-social and self-management skills. Lecture 3 hours per week.

**CHD 235**  
**Health and Recreation for School-Age Child Care**  
3 credits  
Examines the physical growth of school-age children and the role of health and recreation in school-age child development. Explores the use of medication, misuse of drugs, health issues of children, and the availability of community resources. Lecture 3 hours per week.

**CHD 265**  
**Advanced Observation and Participation in Early Childhood/Primary Settings**  
3 credits  
Observes and participates in early childhood settings such as child care centers, pre-school, Montessori schools, or public school settings (kindergarten through third grade). Emphasizes planning and implementation of appropriate activities and materials for children. Students will spend one hour each week in a seminar session in addition to 60 clock hours in the field. May be taken again for credit. Lecture 1 hour. Laboratory 6 hours. Total 7 hours per week.

**CHD 270**  
**Administration of Childcare Programs**  
3 credits  
Examines the skills needed for establishing and managing early childhood programs. Emphasizes professionalism and interpersonal skills, program planning, staff selection and development, creating policies, budgeting, and developing forms for record keeping. Lecture 3 hours per week.

**CHM 1**  
**Chemistry**  
4 credits  
Presents basic inorganic and organic principles to students with little or no chemistry background. Can be taken in subsequent semesters as necessary until course objectives are completed. Lecture 4 hours per week.

**CHM 110**  
**Survey of Chemistry**  
3 credits  
Introduces the basic concepts of general, organic, and biochemistry with emphasis on their applications to other disciplines. No previous chemistry background required. Lecture 4 hours per week.

**CHM 111-112**  
**College Chemistry I-II**  
4 credits each  
Explores the fundamental laws, theories, and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**CHM 121-122**  
**Health Science Chemistry I-II**  
4 credits each  
Introduces the health science student to concepts of inorganic, organic, and biological chemistry as applicable to the allied health profession. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**CHM 241-242**  
**Organic Chemistry I-II**  
3 credits each  
Designed for chemistry and chemical engineering majors. Introduces fundamental chemistry of carbon compounds, including structures, physical properties, syntheses, and typical reactions. Emphasizes reaction mechanism. Co-requisites: CHM 245-246. Lecture 3 hours per week.

**CHM 245-246**  
**Organic Chemistry Laboratory I-II**  
2 credits each  
Includes qualitative organic analysis. Shall be taken concurrently with CHM 241 and CHM 242. Laboratory 6 hours per week.

**CIV 110**  
**Introduction to Civil Engineering Technology**  
2 credits  
Introduces basic skills required for a career in civil engineering technology, focusing on the roles and responsibilities of the engineering team, professional ethics, problem solving with hand calculator and computer applications. Introduces civil engineering materials and analysis, standard laboratory procedures and reporting, and engineering graphics, including instruction in Computer Aided Drafting. Instructs students in oral presentation preparations and delivery. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.
### CIV 115
**Civil Engineering Drafting**
3 credits
Introduces terminology and drafting procedures related to civil engineering. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### CIV 116
**Topographic Drafting**
3 credits
Focuses on the development of techniques for topographic data computation, topographic map preparation and interpretation. Includes preparation of maps from survey field data, satellite and aerial photography, and techniques for the use of color in topographic presentations. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### CIV 120
**Masonry Technology**
3 credits
Introduces the ASTM standards and the methodology of concrete masonry technology emphasizing mortar mix designs, field and laboratory testing, and typical field applications. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

### CIV 135
**Construction Management and Estimating**
3 credits
Teaches the equipment and methods used in construction. Includes principles and economics of construction, planning and management, and principles of estimating primarily using highway and building project examples. Lecture 3 hours per week.

### CIV 171
**Surveying I**
3 credits
Introduces surveying equipment, procedures and computations including adjustment of instruments, distance measurement, leveling, angle measurement, traversing, traverse adjustments, area computations and introduction to topography. Prerequisite: MTH 115. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### CIV 172
**Surveying II**
3 credits
Introduces surveys for transportation systems, including the preparation and analysis of topographic maps, horizontal and vertical curves, earthwork and other topics related to transportation construction. Prerequisite: CIV 171. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

### CIV 225
**Soil Mechanics**
2 credits
Focuses on soil in its relationship to engineering construction. Includes soil composition and structure, weight-volume relationships, sampling procedures, classification systems, water in soil, stresses, strains, bearing capacity, settlement and expansion, compaction, stabilization, and introduction to foundations and retaining walls. Co-requisite CIV 226. Lecture 2 hours per week.

### CIV 226
**Soil Mechanics Laboratory**
1 credit
Focuses on practical soil sampling; classification of unified, ASTM and ASSHTO specifications; laboratory testing of soils to predict engineering performance. Co-requisite: CIV 225. Laboratory 2 hours per week.

### CIV 229
**Concrete Laboratory**
1 credit
Focuses on mixing, curing, testing and quality control of concrete. Co-requisite: CIV 228. Laboratory 2 hours per week.

### CIV 235
**Asphalt Technology**
2 credits
Introduces properties of bituminous materials with emphasis on asphalt cements used in construction, methods of asphalt cement concrete mix design, transportation, placement and curing. Co-requisite: CIV 236. Lecture 2 hours per week.

### CIV 236
**Asphalt Laboratory**
1 credit
Focuses on testing and quality control of bituminous materials, mixing, testing and quality control of asphalt cements. Co-requisite: CIV 235. Laboratory 2 hours per week.

### CIV 240
**Fluid Mechanics and Hydraulics**
3 credits
Introduces the principles of fluid flow and development of practical hydraulics resulting from study of fluid statics, flow of real fluid in pipes, multiple pipe lines, liquid flow in open channels, and fluid measurement techniques. Prerequisite: MEC 131. Lecture 3 hours per week.

### CIV 256
**Global Positioning Systems for Land Surveying**
3 credits
Introduces principles of satellite-based surveying and presents Global Positioning System (GPS) as it is utilized in land surveying and the various components of the GPS technology and the techniques through which the GPS technology may be used in land surveys. Utilizes field surveys using the GPS equipment as part of the laboratory activities. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.
CIV 257  
**Mapping Standards, VA Rules and Statutes, and Surveying Law**  
3 credits  
Introduces both theory and practical mapping experience in the preparation of subdivision maps, records of surveys, topographic maps, route and rights-of-way maps. Covers the requirements of the Subdivision Map Act and the Land Surveyors Act. Prepares students for areas of the Land Surveyors-in-Training and the State Land Surveyors examinations. **Lecture 3 hours per week.**

CIV 258  
**Photogrammetry and Remote Sensing**  
1 credit  
Introduces principles of photogrammetry, geometry of photographs, flight planning, ground control, single and double image photogrammetry, stereoscopic plot, orthophoto, photogrammetric mapping, applications, and economic factors. Provides the student with the required background preparation for areas of the State Land Surveyors Examination and the Land Surveyors-in-Training Examination devoted to this topic. **Lecture 1 hour per week.**

CIV 259  
**Virginia Coordinate Systems**  
1 credit  
Provides an introduction to the theory of the Virginia Coordinate System and its application to modern surveying practices; conversion of geographical coordinates, zone conversion, and transversing of the grid. Provides the student with the required background and preparation for areas of the State Land Surveyors Examination and the Land Surveyors-in-Training Examination devoted to this topic. **Lecture 1 hour per week.**

CIV 280  
**Introduction to Environmental Engineering**  
3 credits  
Introduces the engineering elements of water and wastewater treatment, water distribution and wastewater collection systems, solid and hazardous waste, erosion control, and storm water management. **Lecture 3 hours per week.**

crafts  
CRF 101  
**Hand Built Pottery**  
3 credits  
Introduces fundamental concepts and skills related to hand-crafted hand-built pottery. **Prerequisite: CRF 105. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.**

CRF 102  
**Wheel-Thrown Pottery**  
3 credits  
Introduces fundamental concepts and skills related to hand-crafted wheel-thrown pottery. **Prerequisite: CRF 105. Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.**

CRF 105  
**Introduction to Pottery**  
3 credits  
Introduces art and design related to pottery. Teaches techniques of hand-building, throwing on the potter’s wheel, glaze techniques and experimental firing. **Lecture 1 hour. Studio instruction 4 hours. Total 5 hours per week.**

CRF 130  
**Glass Blowing I**  
4 credits  
Introduces a variety of techniques for manipulating molten “hot glass” into vessel or sculptural forms. Teaches studio safety, equipment operation, techniques of forming molten glass, annealing and cold-working techniques. **Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.**

CRF 131  
**Glass Blowing II**  
4 credits  
Introduces intermediate glass blowing techniques using progressively more complex forms. Emphasis on design and working from prepared drawings. **Prerequisite: CRF 130. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.**

CRF 132  
**Glass Blowing III**  
4 credits  
Introduces advanced techniques of producing blown glass pieces with multiple blown forms. Explores advanced design problems and the development of individual styles. **Prerequisite: CRF 131. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.**

CSC 110  
**Introduction to Computing**  
3 credits  
Introduces problem solving through computer applications and a programming language. Examines development of computers, social and ethical implications of computers, and properties of programming languages. Covers input, storage, data manipulation, software and hardware. **Lecture 3 hours per week.**

CSC 201  
**Computer Science I**  
4 credits  
Introduces algorithm and problem solving methods. Emphasizes structured programming concepts, elementary data structures and the study and use of a high level programming language. **Prerequisites: CSC 110 or equivalent and MTH 173 or equivalent or divisional approval. Lecture 4 hours per week.**
CSC 205  
**Computer Organization**  
3 credits  
Examines the hierarchical structure of computer architecture. Focuses on multi-level machine organization. Uses a simple assembler language to complete programming projects. Includes processors, instruction, execution, addressing techniques, data representation and digital logic. **Prerequisite:** CSC 110. **Lecture 3 hours per week.**

CSC 210  
**Programming with C++**  
4 credits  
Includes language syntax, problem-solving techniques, top-down refinement, procedure definition, loop invariance, theory of numerical errors and debugging. Covers the syntax of the C++ language. **Prerequisite:** CSC 201, or EGR 125 or permission of the instructor. **Lecture 4 hours per week.**

CSC 215  
**Advanced Computer Organization**  
3 credits  
Examines advanced topics in Computer Science such as I/O methods, virtual memory, disk management and operating systems. Introduces example of modern machine architecture. **Prerequisite:** CSC 205. **Lecture 3 hours per week.**

dance  

DAN 160  
**Modern Dance**  
2 credits  
Teaches the basic techniques of creative dance. Skills include self-expression, contemporary routines, dance forms, and basic choreography. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

DAN 161-162  
**Dance Production I-II**  
2 credits each  
Focuses on creating a dance performance. Teaches the basic skills in creating and producing a dance. Includes lighting, costumes, music, and choreography. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

DAN 163-164  
**Jazz I-II**  
2 credits each  
Introduces dance through contemporary jazz movements. Includes floor stretches, isolations, dance patterns and locomotor movements. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

DAN 165  
**Tap Dance**  
2 credits  
Teaches the basic footwork, patterns, and coinciding body movements to various rhythms. Includes development of choreographic routines. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

DAN 166  
**Ballet**  
2 credits  
Teaches ballet as a discipline with correct alignment and ballet form. Expresses movement through traditional dance form with choreographic emphasis. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

DAN 167  
**Dance Improvisation**  
2 credits  
Explores the creation of spontaneous movement experiences with emphasis on self-expression and creature awareness. Includes improvisational techniques utilizing body awareness, use of the environment, and group dynamics. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

DAN 168  
**Folk Dance**  
2 credits  
Introduces the basic step patterns, rhythmic patterns, position, and formations of traditional and ethnic group dances. **Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.**

dietetics  

DIT 121  
**Nutrition I**  
3 credits  
Studies food composition, dietary guidelines, and nutrients essential to healthy human life. Analyzes nutrient function and metabolism. **Lecture 3 hours per week.**

DIT 125  
**Current Concepts in Diet and Nutrition**  
3 credits  
Studies the importance of diet to health and well-being in daily life. Addresses current controversies over food practices and information, food facts and fiction, fad diets, vegetarianism, diet and heart disease, and sound guidelines for maintaining good health with wise food choices. Applies computer technology for nutritional analysis. Intended especially for the non-dietetic major. **Lecture 3 hours per week.**

DIT 130  
**Food Management Systems**  
3 credits  
Studies the principles of food service delivery systems in institutional and other health care facilities. Includes fundamentals of menu planning, recipe standardization, food preparation, equipment, sanitation and safety, role of computers in food service, and concepts of food service management. **Lecture 3 hours per week.**
diagnostic medical sonography

DMS 206
Introduction to Sonography
2 credits
Introduces the diagnostic foundations of diagnostic medical sonography, including terminology, scan plane orientations, anatomical relationships, departmental administrative operations, hospital organization and basic patient care principles. Prerequisite: Instructor permission. Lecture 2 hours per week.

DMS 207
Sectional Anatomy
2 credits
Teaches normal sectional anatomy in the transverse, longitudinal and coronal planes, with correlated sonographic images. Emphasis will be placed on abdominopelvic organs and vasculature. Prerequisite: Instructor permission. Lecture 2 hours per week.

DMS 208
Ultrasound Physics and Instrumentation I
3 credits
Discusses and solves mathematical problems associated with human tissue, basic instrumentation and scanning technology. Prerequisite: Instructor permission. Lecture 3 hours per week.

DMS 209
Ultrasound Physics and Instrumentation II
3 credits
Focuses on the areas of ultrasonic, instrumentation, image artifacts, biologic effects, quality control, as well as Doppler principles and applications and basic types of equipment through lecture and laboratory exercises. Prerequisite: DMS 208 or instructor permission. Lecture 3 hours per week.

DMS 211
Ultrasound Imaging I
4 credits
Examines the clinical applications within the specialty of abdominal sonography including interpretation of normal and abnormal sonographic patterns, pathology, related clinical signs and symptoms, normal variants and clinical laboratory tests. Includes laboratory sessions on basic scanning techniques and protocols. Prerequisite: Instructor permission. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

DMS 212
Ultrasound Imaging II
4 credits
Presents the clinical applications within the sonographic specialties of obstetrics and gynecology. Includes topics of discussion on normal and abnormal sonographic patterns, related clinical symptoms and associated laboratory tests. Includes laboratory sessions on basic scanning techniques. Prerequisite: DMS 211 or instructor permission. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

DMS 213
Introduction to Vascular Ultrasound
3 credits
Discusses the principles of vascular ultrasound, the related anatomy and more common pathologies detected as well as the physiology and hemodynamics detected and evaluated with ultrasound. Prerequisite: DMS 211 or instructor permission. Lecture 3 hours per week.

DMS 214
Clinical Education I
2 credits
Develops the student’s ultrasonic skills in a diagnostic environment; may include on-campus laboratories, private office settings, as well as hospital rotations. Includes experience in abdominal, pelvic and obstetrical and small parts scanning. Prerequisite: Instructor permission. Lecture 3 hours per week.

DMS 215
Clinical Education II
4 credits
Reviews material covered throughout the sonography program to prepare the student for the ultrasound registry examination. Prerequisite: DMS 211 or instructor permission. Laboratory 10 hours per week.

DMS 216
Clinical Education III
5 credits
Develops the student’s ultrasonic skills in a diagnostic environment; may include on-campus laboratories, private office settings, as well as hospital rotations. Includes experience in abdominal, pelvic and obstetrical and small parts scanning. Prerequisite: DMS 213 or instructor permission. Laboratory 25 hours per week.

DMS 216
Clinical Education III
5 credits
Develops the student’s ultrasonic skills in a diagnostic environment; may include on-campus laboratories, private office settings, as well as hospital rotations. Includes experience in abdominal, pelvic and obstetrical and small parts scanning. Prerequisite: DMS 213 or instructor permission. Laboratory 25 hours per week.
course descriptions

DMS 234
Clinical Education IV
6 credits
Develops the student’s ultrasonic skills in a diagnostic environment; may include on-campus laboratories, private office settings, as well as hospital rotations. Includes experience in abdominal, pelvic and obstetrical and small parts scanning. Prerequisite: DMS 233 or instructor permission. Laboratory 30 hours per week.

drafting

DRF 111-112
Technical Drafting I-II
3 credits each
Introduces technical drafting from the fundamentals through advanced drafting practices. Teaches lettering, metric construction, technical sketching, orthographic projection, sections, intersections, development, fasteners, theory and applications of dimensioning and tolerances. Includes pictorial drawing, and preparation of working and detailed drawings. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

DRF 151-152
Engineering Drawing Fundamentals I-II
3 credits each
Introduces technical drafting from the fundamentals through advanced drafting practices. Includes lettering, geometric construction, technical sketching, orthographic projection, sections, intersections, development, and fasteners. Teaches theory and application of dimensioning and tolerances, pictorial drawing, and preparation of drawings. Lecture 1 hour. Laboratory 6 hours. Total 7 hours per week.

DRF 160
Machine Blueprint Reading
3 credits
Introduces interpretation of various blueprints and working drawings.

DRF 161
Blueprint Reading I
2 credits
Teaches the application of basic principles, visualization, orthographic projection, details of drafting shop processes and terminology, assembly drawings and exploded views. Considers dimensioning, changes and corrections, classes of fits, tolerances and allowances, sections and convention in blueprint reading. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

DRF 162
Blueprint Reading II
2 credits
Emphasizes industrial prints, auxiliary views, pictorial drawings, simplified drafting procedures, production drawing, operation sheets, tool drawing, assembly drawings, and detailed prints. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

DRF 165
Architectural Blueprint Reading
3 credits
Emphasizes reading, understanding and interpreting standard types of architectural drawings including plans, elevation, sections, and details. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

DRF 201
Computer-Aided Drafting and Design I
4 credits
Teaches computer-aided drafting concepts and equipment designed to develop a general understanding of components of a typical CAD system and its operation. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

DRF 202
Computer-Aided Drafting and Design II
4 credits
Teaches production drawings and advanced operations in computer aided drafting. Prerequisite: DRF 201. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

DRF 211
Advanced Technical Drafting I
3 credits
Teaches use of drafting equipment and applications, emphasizing knowledge and skill required for industrial drawing. Includes piping, gearing, geometric and positional tolerances and 2D/3D drawing layout. Prerequisite: DRF 152. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

DRF 212
Advanced Technical Drafting II
3 credits
Teaches concepts of sheet metal fabrication including radii, fillets and tolerances, electrical and electronics symbols and drawing, and advanced design drafting techniques. Prerequisites: DRF 201 and DRF 202. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

DRF 238-239
Computer-Aided Modeling and Rendering I-II
3 credits each
Focuses on training students in the contemporary techniques of 3-D modeling, rendering, and animation on the personal computer. Introduces the principles of visualization, sometimes known as photo-realism, which enables the student to create presentation drawings for both architectural and industrial product design. Uses computer animation to produce walk-throughs that will bring the third dimension to architectural designs. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.
**course descriptions**

**DRF 241-242**  
Parametric Solid Modeling I-II  
3 credits each

Focuses on teaching students the design of parts by parametric solid modeling. Topics covered will include, but not limited to, sketch profiles; geometric and dimensional constraints; 3-D features; model generation by extrusion, revolution and sweep; and the creation of 2-D drawing views that include sections, details and auxiliary.  
Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**DRF 247**  
Ship Design Drafting  
3 credits

Introduces the shipbuilding industry, shop structure design components, and ship drafting to develop skills required in drawing the "lines" of a ship. Prerequisite: DRF 201. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**DRF 280**  
Design Capstone Project  
3 credits

Focuses on design projects developed independently and in consultation with the instructor. Topics covered, but not limited to: parametric modeling, civil, mechanical piping, architectural applications, structural, electro-mechanical, 3-D solids, exploration of application software, and the integration of CAD/CAM. Prerequisites: (ARC 122 and ARC 221) or (DRF 201 and DRF 211). Lecture 3 hours per week.

**DSL 122**  
Diesel Engines II  
5 credits

Continues DSL 121 with emphasis on engine overhaul and repair, including such jobs as grinding valves, gauging cylinder wear, removing and replacing cylinder liners, boring cylinders, replacing and adjusting bearings, gauging proper measuring instruments and tools for these tasks. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

**DSL 133**  
Diesel Fuel and Injection Systems  
6 credits

Studies the design, operation, care, and repair of fuel injection systems used on a variety of diesel engines. Includes testing and reconditioning fuel injectors, nozzles, fuel pumps, and transfer pumps. Teaches use of calibrating and reconditioning in equipment. Emphasizes care and cleanliness in troubleshooting the fuel system. Lecture 3 hours. Laboratory 6 hours. Total 9 hours per week.

**DSL 143**  
Diesel Truck Electrical Systems  
4 credits

Studies the theory and operation of various truck and tractor electrical systems. Covers preheating, starting, generating, and lighting systems. Uses modern test equipment for measurement, adjustment, and troubleshooting. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

**DSL 152**  
Diesel Power Trains, Chassis, and Suspension  
4 credits

Studies the chassis, suspension, steering and brake systems found on medium and heavy-duty diesel trucks. Covers construction features, operating principles and service procedures for such power train components as clutches, multi-speed transmissions, propeller shafts, and rear axles. Teaches operations of modern equipment to correct and adjust abnormalities. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

**DSL 161**  
Air Brake Systems I  
2 credits

Studies the basic operational theory of pneumatic and air brake systems used in public transportation vehicles. Covers various air control valves, air and test system components, and advanced air system schematics. Lecture 2 hours per week.

**ECO 120**  
Survey of Economics  
3 credits

Presents a broad overview of economic theory, history, development, and application. Introduces terms, definitions, policies, and philosophies of market economies. Provides some comparison with other economic systems. Includes some degree of exposure to microeconomic and macroeconomic concepts. Lecture 3 hours per week.

**ECO 201**  
Principles of Macroeconomics  
3 credits

Introduces macroeconomics including the study of Keynesian, classical, and monetarist principles and theories, the study of national economic growth, inflation, recession, unemployment, financial markets, money and banking, the role of government spending and taxation, along with international trade and investments. Lecture 3 hours per week.

**ECO 202**  
Principles of Microeconomics  
3 credits

Introduces the basic concepts of microeconomics. Explores the free market concepts with coverage of...
economic models and graphs, scarcity and choices, supply and demand, elasticities, marginal benefits and costs, profits, and production and distribution. Lecture 3 hours per week.

education

EDU 100
Introduction to Education
1 credit
Provides an overview of teaching as a career with orientation to theories, practices, responsibilities, guidelines, current trends and issues in education. Lecture 1 hour per week.

EDU 160
Observation and Assessment in Early Care
3 credits
Introduces formal and informal methods of gathering data on children. Emphasis on understanding developmental patterns and implications for diagnostic teaching. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

EDU 200
Introduction to Teaching as a Profession
3 credits
Provides an orientation to the teaching profession in Virginia, including historical perspectives, current issues, and future trends in education on the national and state levels. Emphasizes information about teacher licensure examinations, steps to certification, teacher preparation and induction programs, and attention to critical shortage areas in Virginia. Includes supervised field placement (recommended: 40 clock hours) in a K-12 school. Prerequisite: Successful completion of 24 credits of transfer courses. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

EDU 245
Teaching and Training of Language Skills for Disabled
3 credits
Covers the normal development of language, the identification of deficiencies in language development, and strategies for teaching language skills to individuals with a variety of developmental disabilities. Lecture 3 hours per week.

EDU 247
Adult Independent Living and Vocational Skills for Disabled
4 credits
Emphasizes skills required to develop competencies in teaching developmentally disabled individuals ages 16 and older in vocational training settings. Develops competencies related to teaching independent living and mobility skills, occupational behavior skills, and job task performance skills. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EDU 250
Introduction to Developmental Disabilities
4 credits
Presents an overview, history, and current philosophy of the developmental disabilities program. Provides descriptions and examines causes of developmental disabilities, identifies intervention strategies, promotes social and legal advocacy, explores employment and career opportunities. Laboratory experiences include a minimum of ten hours of observation of work settings. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EDU 254
Teaching Basic Academic Skills to Exceptional Children
3 credits
Develops competencies required to teach readiness and basic skills to children with special needs in private or public school settings. Includes the preparation of lesson plans, instructional units, and Individualized Education Programs (IEP’s). Includes child abuse recognition and intervention training. Emphasizes exceptionalities for students ages 2 – 21 under the reauthorization of Individuals with Disabilities Act. Familiarizes students with the indicators of effective teaching. Lecture 3 hours per week.

EDU 255
Behavior Technology for Use with Developmental Disabilities
4 credits
Presents basic principles of behavior modification and behavioral learning theory. Promotes skills in pinpointing, observing, and recording human behavior. Learning objectives include addressing attitude, knowledge, and mental and physical skill competencies needed for implementing behavioral programs. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

engineering

EGR 110
Engineering Graphics
3 credits
Presents theories and principles of orthographic projection. Studies multi-view, pictorial drawings and sketches, geometric construction, sectioning, lettering, tolerancing, dimensioning and auxiliary projections. Studies the analysis and graphic presentation of space relationships of fundamental geometric elements; points, lines, planes and solids. Includes instruction in Computer-Aided Drafting. Prerequisite: MTH 164 or MTH 166 or placement into MTH 173. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

EGR 120
Introduction to Engineering
2 credits
Introduces the engineering profession, professional concepts, ethics, and responsibility. Reviews hand calculators, number systems, and unit conversions. Introduces the personal computer and operating systems. Includes engineering
EGR 125  
Introduction to Engineering Methods  
4 credits  
Applies problem-solving techniques to engineering problems utilizing computer programming and algorithms in a higher level computer language such as FORTRAN, PASCAL, or C++. Prerequisite: EGR 110. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EGR 140  
Engineering Mechanics - Statics  
3 credits  
Introduces mechanics of vector forces and space, scalar mass and time, including S.I. and U.S. customary units. Teaches equilibrium, free-body diagrams, moments, couples, distributed forces, centroids, moments of inertia analysis of two-force and multi-force members and friction and internal forces. Prerequisite: EGR 120. Co-requisite: MTH 174. Lecture 3 hours per week.

EGR 245  
Engineering Mechanics - Dynamics  
3 credits  
Presents approach to kinematics of particles in linear and curvilinear motion. Includes kinematics of rigid bodies in plane motion. Teaches Newton's second law, work-energy and power, impulse and momentum, and problem solving using computers. Prerequisite: EGR 140. Lecture 3 hours per week.

EGR 260  
Circuit Analysis  
3 credits  
Covers topics in linear circuit analysis, including basic electrical properties, resistive circuits, network equations, operational amplifiers, network reduction techniques, network theorems, two-port parameters and networks, inductors, capacitors, first-order circuits, second-order circuits and phasor analysis. Co-requisite: MTH 179. Lecture 3 hours per week.

EGR 261  
Signals and Systems  
3 credits  
Covers topics including Laplace transforms and Laplace transform analysis of circuits, time and frequency domain representation of linear systems, methods of linear systems analysis including convolution and Laplace transforms, frequency domain representation of signals including frequency response, filters, Fourier series, and Fourier transforms. Prerequisite: EGR 260. Lecture 3 hours per week.

EGR 262  
Fundamental Circuits Laboratory  
2 credits  
Covers topics including microprocessor hardware and programming, lab test equipment, lab safety, technical report writing, and using a microprocessor, such as the MicroStamp 11, to control basic electric circuits. Experiments include topics such as resistive circuits, analog-to-digital and digital-to-analog conversion, pulse width modulation, and the design of power supplies. Prerequisite: EGR 125 and EGR 260. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

EGR 270  
Fundamentals of Computer Engineering  
4 credits  
Covers the design and organization of digital systems, including number systems, Boolean algebra, logic gates, Karnaugh maps, combinational and sequential logic circuits, timing diagrams, and synchronous and asynchronous controllers. Introduces hardware description language (HDL) and assembly language programming. Prerequisite: EGR 260 and EGR 125. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EGR 277  
Digital Logic  
3 credits  
Presents an introduction to digital logic, including such topics as number systems, Boolean algebra, minimization techniques, implementation of digital functions, sequential machines, state diagrams, state tables, and programmable logic devices. Prerequisite: EGR 262. Lecture 3 hours per week.

EGR 278  
Digital Logic Laboratory  
2 credits  
Constructs digital logic circuits to verify analysis and design methods. Covers logic gates, combinational and sequential logic circuits, programmable logic devices, measurement techniques, and report writing. Co-requisite: EGR 277. Laboratory 4 hours per week.
electrical technology

ELE 127
Residential Wiring Methods
3 credits
Studies wiring methods and standards used for residential dwellings. Provides practical experience in design, layout, construction, and testing of residential wiring systems by use of scaled mock-ups. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ELE 131–132
National Electrical Code I-II
4 credits each
Provides comprehensive study of the purpose and interpretations of the National Electrical Code as well as familiarization and implementation of various charts, code rulings and wiring methods including state and local regulations. Lecture 4 hours per week.

ELE 145
Transformer Connections and Circuits
2 credits
Studies transformer theory, symbols, diagrams, connections, terminology and troubleshooting techniques. Prerequisite: ELE 150. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

ELE 146
Electric Motor Control
4 credits
Studies solid state devices with application and emphasis toward control of power. Includes diodes, SCR’s, photoelectric controls, timing, circuits, voltage regulation and three phase rectifiers. Prerequisite: ELE 150. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ELE 149
Wiring Methods in Industry
3 credits
Studies the fundamentals of industrial power distribution, circuits, switches, enclosures, panels, fuses, circuit breakers, transformers, and wiring methods using various charts and tables of the National Electrical Code. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ELE 150
A.C. and D.C. Circuit Fundamentals
3 credits
Provides an intensive study of the fundamentals of direct and alternating current, resistance, magnetism, inductance and capacitance, with emphasis on practical applications. Focuses on electrical/machine applications. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

ELE 160
Power Controls
3 credits
Introduces basic electrical and other controls used in home and industry. Includes application of panels, fuse boxes, breakers, and transformers, experiments to develop testing and troubleshooting techniques. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ELE 233-234
Programmable Logic Controller Systems I-II
3 credits each
Teaches operating and programming of programmable logic controllers. Covers analog and digital interfacing and communication schemes as they apply to system. Prerequisite: ELE 146 or divisional approval. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

emergency medical services

EMS 111
Emergency Medical Technician - Basic
6 credits
Prepares student for certification as a Virginia and National Registry EMT-Basic. Includes all aspects of pre-hospital basic life support as defined by the Virginia Office of Emergency Medical Services curriculum for Emergency Medicine Technician Basic. Prerequisite: CPR certification at the Health Care Provider level. Co-requisite: EMS 120. Lecture 4 hours. Laboratory 4 hours. Total 8 hours per week.

EMS 120
Emergency Medical Technician – Basic Clinical
1 credit
Observes in a program approved clinical/field setting. Includes topics for both EMS 111 and EMS 113, dependant upon the program in which the student is participating and is a co-requisite to both EMS 111 and EMS 113. Lecture 1 hour per week.

EMS 151
Introduction to Advanced Life Support
4 credits
Prepares the student for Virginia enhanced certification eligibility and begins the sequence for National Registry Intermediate and/or Paramedic certification. Includes the theory and application of the following: foundations, human systems, pharmacology, overview of shock, venous access, airway management, patient assessment, respiratory emergencies, allergic reaction, and assessment based management. Conforms at a minimum to the Virginia Office of Emergency Medical Services curriculum. Prerequisite: EMS 111. Co-requisite: EMS 170. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.
### EMS 153
**Basic ECG Recognition**  
2 credits  
Focuses on the interpretation of basic electrocardiograms (ECG) and their significance. Includes an overview of anatomy and physiology of the cardiovascular system including structure, function and electrical conduction in the heart. Covers advanced concepts that build on the knowledge and skills of basic dysrhythmia determination and introduction to 12 lead ECG.  
**Prerequisite:** EMS 111. Lecture 2 hours per week.

### EMS 155
**ALS - Medical Care**  
4 credits  
Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Includes ALS pharmacology, drug and fluid administration with emphasis on patient assessment, differential diagnosis and management of multiple medical complaints. Includes, but is not limited to, conditions relating to cardiac, diabetic, neurological, non-traumatic abdominal pain, environmental, behavioral, gynecology, and toxicological disease conditions.  
**Prerequisites:** Current EMT-B certification, EMS 151 and EMS 153. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

### EMS 157
**ALS - Trauma Care**  
3 credits  
Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Utilizes techniques which will allow the student to utilize the assessment findings to formulate a field impression and implement the treatment plan for the trauma patient.  
**Prerequisites:** Current EMT-B certification and EMS 151. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

### EMS 159
**ALS - Special Populations**  
2 credits  
Continues the Virginia office of Emergency Medical Services Intermediate and/or Paramedic curricula. Focuses on the assessment and management of specialty patients including obstetrical, neonates, pediatric, and geriatrics.  
**Prerequisites:** EMS 151 and EMS 153. Pre or co-requisite: EMS 155. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

### EMS 170
**ALS Internship I**  
1 credit  
Begins the first in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes, but not limited to, patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma centers and various advanced life support units.  
**Prerequisite:** EMS 151. Laboratory 3 hours per week.

### EMS 172
**ALS Clinical Internship II**  
1 credit  
Continues with the second in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes, but not limited to, patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room and Trauma Centers.  
**Prerequisite:** EMS 170. Laboratory 3 hours per week.

### EMS 173
**ALS Field Internship II**  
1 credit  
Continues with the second in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units.  
**Prerequisite:** EMS 170. Laboratory 3 hours per week.

### EMS 175
**ALS - Special Populations**  
2 credits  
Continues the Virginia office of Emergency Medical Services Intermediate and/or Paramedic curricula. Focuses on the assessment and management of specialty patients including obstetrical, neonates, pediatric, and geriatrics.  
**Prerequisites:** EMS 151 and EMS 153. Pre or co-requisite: EMS 155. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

### EMS 201
**EMS Professional Development**  
2 credits  
Prepares students for Paramedic certification at the National Registry Level by fulfilling community activism, personal wellness, resource management, ethical considerations in leadership and research objectives in the Virginia Office of Emergency Medical Services Paramedic curriculum.  
**Prerequisite:** Current EMT-B Certification. Lecture 2 hours per week.

### EMS 205
**Advanced Pathophysiology**  
3 credits  
Focuses on the pathological processes of disease with emphasis on the anatomical and physiological alterations of the human body by systems. Includes diagnosis and management appropriate to the advanced health care provider in and out of the hospital environment.  
**Prerequisite:** EMS 155. Lecture 3 hours per week.

### EMS 207
**Advanced Patient Assessment**  
3 credits  
Focuses on the principles of normal and abnormal physical exam. Emphasizes the analysis and interpretation of physiological data to assist in patient assessment and management. Applies principles during the assessment and management of trauma, medical, and specialty patients in laboratory environment.  
**Prerequisite:** EMS 155. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

### EMS 209
**Advanced Pharmacology**  
4 credits  
Focuses on the principles of pharmacokinetics, pharmacodynamics and drug administration. Includes drug legislation, techniques of medication administration, and principles of math calculations. Emphasizes drugs used to manage respiratory, cardiac, neurological, gastrointestinal, fluid and electrolyte and endocrine disorders and includes classification, mechanism of
course descriptions

action, indications, contraindications, precautions, and patient education. Incorporates principles related to substance abuse and hazardous materials. Applies principles during the assessment and management of trauma, medical, and specialty patients in a laboratory environment. Prerequisite: EMS 155. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

EMS 211
Operations
2 credits
Prepares the student in the theory and application of the following: medical incident command, rescue awareness and operations, hazardous materials incidents, and crime scene awareness. (Conforms to the current Virginia Office of Emergency Medical Services curriculum for EMT-Paramedics.) Prerequisite: Current EMT-B Certification. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

EMS 242
ALS Clinical Internship III
1 credit
Continues with the third in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in-and-out of hospitals. Includes, but not limited to, patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room and Trauma Centers. May be repeated as necessary. Prerequisite: EMS 172. Laboratory 3 hours per week.

EMS 244
ALS Clinical Internship IV
1 credit
The fourth in a series of clinical experiences providing direct patient contact in appropriate patient care facilities in-and-out of hospitals. Includes, but not limited to, patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room and Trauma Centers. May be repeated as necessary. Prerequisite: EMS 172. Laboratory 3 hours per week.

EMS 245
ALS Field Internship IV
1 credit
Continues with the fourth in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. May be repeated as necessary. Prerequisite: EMS 173. Laboratory 3 hours per week.

EMS 246
12 Lead ECG Interpretation
2 credits
Prepares student to interpret 12 lead electrocardiograms and recognize acute myocardial injury as well as infarct imitators. Includes lead placement, collection of the 12 lead ECG, review of cardiac anatomy and physiology, electrical conduction through the heart, common dysrhythmias, pathophysiology of AMI and infarct imitators. Includes field treatment of the acute coronary syndrome. Prerequisite: EMS 153 or instructor permission. Lecture 2 hours per week.

english

ENG 1
Preparing for College Writing I
4 credits
Helps students discover and develop writing processes needed to bring their proficiency to the level necessary for entrance into their respective curricula. Guides students through the process of starting, composing, revising, and editing. Prerequisite: Placement Test. Lecture 4 hours per week.

ENG 2
Preparing for College Writing II
4 credits
Emphasizes strategies within the writing process to help students with specific writing situations. Develops techniques to improve clarity of writing and raise proficiency to the level necessary for entrance into particular curricula. Prerequisite: Placement Test or ENG 1. Lecture 4 hours per week.

ENG 3
Reading Improvement I
4 credits
Helps students improve their reading processes to increase their understanding of reading materials. Includes word forms and meanings, comprehension techniques, and ways to control reading pace. Prerequisite: Placement Test. Lecture 4 hours per week.
ENG 5  
Reading Improvement II  
4 credits  
Helps students read critically and increase appreciation of reading. Guides students in making inferences, drawing conclusions, detecting relationships between generalizations and supporting details. Includes interpreting graphic aids and basic library skills. **Prerequisite:** Placement Test or ENG 4. Lecture 4 hours per week.

ENG 7  
Writing and Reading Improvement I  
6 credits  
Provides an integrated approach to developing students' writing and reading processes. Prepares students to complete assignments successfully by providing them with reading and writing strategies. **Prerequisite:** Placement Test. Lecture 6 hours per week.

ENG 8  
Writing and Reading Improvement II  
6 credits  
Emphasizes strategies within the writing and critical reading processes to help students with specific writing and reading assignments. Encourages an appreciation for clear writing and practical reading applications. Lecture 6 hours per week.

ENG 108  
Critical Reading and Study Skills  
3 credits  
Helps students improve their reading and learning processes. Includes advanced comprehension strategies and study skills such as time management, note-taking, studying from textbooks and other reading materials, taking examinations, and using the library. Lecture 3 hours per week.

ENG 111  
College Composition I  
3 credits  
Introduces students to critical thinking and the fundamentals of academic writing. Through the writing process, students refine topics; develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one researched essay. **Prerequisite:** Placement Test. Lecture 3 hours per week.

ENG 112  
College Composition II  
3 credits  
Continues to develop college writing with increased emphasis on critical essays, argumentation, and research, developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. **Prerequisite:** ENG 111 or equivalent and ability to use word processing software. Lecture 3 hours per week.

ENG 115  
Technical Writing  
3 credits  
Develops ability in technical writing through extensive practice in composing technical reports and other documents. Guides students in achieving voice, tone, style, and content in formatting, editing, and graphics. Introduces students to technical discourse through selected reading. Lecture 3 hours per week.

ENG 119  
College Grammar  
3 credits  
Studies formal English grammar and effective expression with attention to recognizing and employing appropriately the various levels of English usage, thinking logically, speaking and writing effectively, editing, evaluating content and intent of both spoken and written English, and punctuating correctly. Lecture 3 hours per week.

ENG 210  
Advanced Composition  
3 credits  
Helps students refine skills in writing non-fiction prose. Guides development of individual voice and style. Introduces procedures for publication. **Prerequisite:** ENG 112 or divisional approval. Lecture 3 hours per week.

ENG 211-212  
Creative Writing I-II  
3 credits each  
Introduces the student to the fundamentals of writing imaginatively. Students write in forms to be selected from poetry, fiction, drama, and essays. **Prerequisite:** ENG 112 or divisional approval. Lecture 3 hours per week.
**course descriptions**

**ENG 236**  
Introduction to the Short Story  
3 credits  
Examines selected short stories emphasizing the history of the genre. Involves critical reading and writing.  
**Prerequisite:** ENG 112 or divisional approval. Lecture 3 hours per week.

**ENG 241-242**  
Survey of American Literature I-II  
3 credits each  
Examines American literary works from colonial times to the present, emphasizing the ideas and characteristics of our national literature. Involves critical reading and writing.  
**Prerequisite:** ENG 112 or divisional approval. Lecture 3 hours per week.

**ENG 243-244**  
Survey of English Literature I-II  
3 credits each  
Studies major English works from the Anglo-Saxon period to the present, emphasizing ideas and characteristics of the British literary tradition. Involves critical reading and writing.  
**Prerequisite:** ENG 112 or divisional approval. Lecture 3 hours per week.

**ENG 246**  
Major American Writers  
3 credits  
Examines major writers of American literary history. Involves critical reading and writing.  
**Prerequisite:** ENG 112 or divisional approval. Lecture 3 hours per week.

**ENG 251-252**  
Survey of World Literature I-II  
3 credits each  
Examines major works of world literature. Involves critical reading and writing.  
**Prerequisite** ENG 112 or divisional approval. Lecture 3 hours per week.

**ENG 253-254**  
Survey of African-American Literature I-II  
3 credits each  
Examines selected works by Black American writers from the colonial period to the present. Involves critical reading and writing.  
**Prerequisite:** ENG 112 or divisional approval. Lecture 3 hours per week.

**ENG 261-262**  
Advanced Creative Writing I-II  
3 credits each  
Guides the student in imaginative writing in selected genres on an advanced level.  
**Prerequisite:** ENG 112 or divisional approval. Lecture 3 hours per week.

**ENG 263**  
Southern Literature  
3 credits  
Examines the themes and techniques of selected writers dealing with the American South as a distinctive cultural entity. Involves critical reading and writing.  
**Prerequisite:** ENG 112 or divisional approval. Lecture 3 hours per week.

**ENG 276**  
Film and Literature  
3 credits  
Examines the translation of literature into film viewing and writing.  
**Prerequisite** ENG 112 or divisional approval. Lecture 3 hours per week.

**ENG 279**  
Film and Literature  
3 credits  
Examines the translation of literature into film viewing and writing.  
**Prerequisite** ENG 112 or divisional approval. Lecture 3 hours per week.

**ESL 2**  
English as a Second Language I  
12 credits  
Provides intensive instruction and practice at the low intermediate level. Provides an introduction to the sound system, stress, intonational and rhythmic patterns of English through listening and speaking exercises. Includes individualized instruction to improve basic reading comprehension. Requires practice in writing with emphasis on building basic sentence structures, grammar and sentence-level writing.  
**Prerequisite:** ESL Placement Test. Lecture 12 hours per week.

**ESL 5**  
English as a Second Language: Reading I  
4 credits  
Helps students to improve their reading comprehension and vocabulary. Improves students’ reading proficiency to a level which would allow the student to function adequately in ESL 06 or other college classes.  
**Prerequisite:** ESL 2 or ESL Placement Test. Lecture 4 hours per week.

**ESL 6**  
English as a Second Language: Reading II  
4 credits  
Helps students improve their reading comprehension and vocabulary. Improves students’ reading proficiency to a level which would allow the student to function adequately in the ESL 17 reading class or other college classes.  
**Prerequisite:** ESL 5 or ESL Placement Test. Lecture 4 hours per week.

**ESL 7**  
Oral Communication I  
4 credits  
Helps students practice and improve listening and speaking skills as needed for functioning successfully in academic, professional, and personal settings. Assesses students’ oral skills and includes, as needed, practice with pronunciation, rhythm, stress and intonation. Provides exercises, practices, small and large group activities, and oral presentations to help students overcome problems in oral communication.  
**Prerequisite:** ESL 2 or ESL Placement Test. Lecture 4 hours per week.
ESL 8
Oral Communication II
4 credits
Provides further instruction and practice in helping students to improve listening and speaking skills. Assesses students’ oral skills and includes, as needed, practice with pronunciation, rhythm, stress and intonation. Emphasizes the development of fluency through exercises, practices, small and large group activities, and formal and informal presentations. Prerequisite: ESL 7 or ESL Placement Test. Lecture 4 hours per week.

ESL 9
Accent Reduction
3 credits
Provides contextualized practice at the high intermediate/advanced level to improve the speech intelligibility of non-native speakers of English. Focuses on problems of American English sound/spelling patterns, word endings, syllables, stress, rhythm and intonation common to speakers of different language backgrounds. May include individualized practice in consonant and vowel production. Lecture 3 hours per week.

ESL 11
English as a Second Language: Composition I
4 credits
Provides instruction and practice in the writing process, emphasizing development of fluency writing and competence in structural and grammatical patterns of written English. Prerequisite: ESL 2 or ESL Placement Test. Lecture 4 hours per week.

ESL 12
English as a Second Language: Composition II
4 credits
Provides further instruction and practice in the writing process, and introduces advanced language patterns. Includes practice in developing and improving writing strategies. Prerequisite: ESL 11 or ESL Placement Test. Lecture 4 hours per week.

ESL 13
English as a Second Language: Composition III
4 credits
Prepares for college-level writing by practice in the writing process, emphasizing development of thought in essays of greater length and complexity, and use of appropriate syntax and diction. Prerequisite: ESL 12 or ESL Placement Test. Lecture 4 hours per week.

ESL 17
English as a Second Language: Reading III
4 credits
Helps students improve their reading comprehension and vocabulary development. Improves students’ reading proficiency to a level which would allow students to succeed in certificate and degree programs. Emphasizes applying and synthesizing ideas. Includes ways to detect organization, summarize, make inferences, draw conclusions, evaluate generalizations, recognize differences between facts and opinions, and other advanced comprehension strategies. May also include comprehensive library skills. Prerequisite: ESL 6 or ESL Placement Test. Lecture 4 hours per week.

ETR 104
Electronic Fundamentals with Computer Applications
4 credits
Provides an introduction to the fundamentals of DC and AC circuit analysis and computer applications. Includes the study of electrical units and components, series, parallels, series-parallel DC and AC circuits, inductive and capacitative reactance, impedance and use of circuit analysis software. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 111
Electronic Mathematics
3 credits
Studies electronic logic or computer technology. Includes a basic numbering system and Boolean algebra with applications to logic diagrams and circuits. May additionally cover mathematics by reviewing algebra and trigonometry fundamentals and applying those topics to practical electronics problems. Lecture 3 hours per week.

ETR 113-114
DC and AC Fundamentals I-II
4 credits each
Studies DC and AC circuits, basic electrical components, instruments, network theorems, and techniques used to predict, analyze and measure electrical quantities. Prerequisite for ETR 113: ETR 104 and MTH 164 or MTH 166. Prerequisite for ETR 114: ETR 113. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 116
DC and AC Circuit Analysis
4 credits
Covers background information required by the Electronics Engineering Technology program but not covered in military electronic schools. Includes DC and AC circuit analysis techniques such as Thevenin, Norton, Mesh, Nodal, branch current, three phase power, two port parameters, etc. Co-requisite: MTH 166. Lecture 4 hours per week.

ETR 141
Electronics I
3 credits
Introduces electronic devices as applied to basic electronic circuits and systems. Lecture 3 hours per week.

ETR 148
Amplifiers and Integrated Circuits
4 credits
Studies devices and amplifiers with emphasis on analysis and design. May include summing and integrating amplifiers, choppers, modulators and
ETR 168
Digital Circuit Fundamentals
3 credits
Covers the fundamentals of digital logic and the study of digital circuits and their applications. Lecture 3 hours per week.

ETR 203
Electronic Devices I
3 credits
Studies active devices and circuits such as diodes, power supplies, transistors, amplifiers, and others. Prerequisite: ELE 150. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

ETR 241
Electronic Communications I
4 credits
Studies noise, information and bandwidth, modulation and demodulation, transmitters and receivers, wave propagation, antennas and transmission lines. Includes broad band communication systems, microwave, both terrestrial and satellite, fiber optics, multiplexing and associated hardware. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 250
Solid State Circuits
4 credits
Teaches theory and application of amplifiers and oscillators. Includes amplifier circuit configurations, amplifier classes, operational amplifiers, power amplifiers, band-width distortion, and principles of feedback. Prerequisite: ETR 148. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 261
Microprocessor Applications I
4 credits
Teaches the fundamentals of microprocessors, including architecture, internal operations, memory, I/O devices, machine level programming and interfacing. Emphasizes instrumentation and microprocessor. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 266
Microprocessor Applications
3 credits
Teaches fundamentals of microprocessors including architecture, internal operations, memory, I/O devices, machine level programming and interfacing. Lecture 3 hours per week.

ETR 279
Digital Principles, Terminology and Applications
4 credits
Studies digital principles, terminology and applications covering number systems, arithmetic, Boolean algebra, Karnaugh maps and advanced logic circuits. Includes the study of registers, encoding and decoding, and multiplexing; A/D, D/A, displays and others. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

ETR 281
Digital Systems
3 credits
Includes basic numbering systems, Boolean algebra, logic circuits and systems, pulse circuits and pulse logic systems as applied to computer and microprocessor technology. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

FIN 107
Personal Finance
3 credits
Presents a framework of personal money management concepts, including establishing values and goals, determining sources of income, managing income, preparing a budget, developing consumer buying ability, using credit, understanding savings and insurance, providing for adequate retirement, and estate planning. Lecture 3 hours per week.

FIN 110
Principles of Banking
3 credits
Presents nearly every aspect of banking, providing a comprehensive introduction to the diversified services and operations of the banking industry. Focuses on new trends gaining attention in banking circles. Recommended for all banking students. (AIB Approved). Lecture 3 hours per week.

FIN 115
Personal Investments
2 credits
Examines personal financial investments, money management and risk reward strategies. Covers most widely employed investment instruments, including current information on stocks, bonds, mutuals, real estate, limited partnerships and tax sheltering devices. Lecture 2 hours per week.

FIN 215
Financial Management
3 credits
Introduces basic financial management topics including statement analysis, working capital, capital budgeting, and long-term financing. Focuses on Net Present Value and Internal Rate of Return techniques, lease vs. buy analysis, and Cost of Capital computations. Uses problems and cases to enhance skills in financial planning and decision making. Prerequisite: ACC 212. Lecture 3 hours per week.

FIN 248
International Finance
3 credits
Exposes the student to the international financial environment. Focuses on the financial management of businesses operating in international markets. Examines topics such as importance of international finance, monetary systems, foreign exchange risk, short-term,
FIN 260
Financial Management for Small Business
2 credits
Provides the tools of financial planning for the small business owner. Includes areas such as financial statements, ratio analysis, forecasting profit, cash flow, pricing, and obtaining capital. Prerequisite: ACC 220 (or ACC 211) and BUS 165. Lecture 2 hours per week.

FNS 110
Introduction to Funeral Service
2 credits
Presents a comprehensive study of the history of funeral service, commencing with the practices of the Egyptians, early Christians, Romans, and Hebrews. Traces funeral practice from its early pagan origins to the modern practices of today. May include the study of the sociology of funeral service. Prerequisite: Instructor permission. Lecture 2 hours per week.

FNS 111
Theory of Embalming I
3 credits
Introduces the purpose and historical background of embalming. Teaches the ethics and sanitary consideration in the handling of human remains, signs and tests of deaths, and postmortem changes in the body. Prerequisite: Instructor permission. Lecture 3 hours per week.

FNS 112
Theory of Embalming II
3 credits
Presents pre-embalming diagnosis, positioning the body and posing the features, linear and anatomical guides for selected blood vessels, and factors that influence fluid distribution and blood drainage. Prerequisite: FNS 111 and FNS 113. Co-requisite: FNS 114. Lecture 3 hours per week.

FNS 113
Theory of Embalming Laboratory I
1 credit
Teaches the basic procedures of embalming. Presents instruments, equipment, and the types of preservatives and disinfectant chemicals used in embalming. Prerequisite: Instructor Permission. Co-requisite: FNS 111. Laboratory 3 hours per week.

FNS 114
Theory of Embalming Laboratory II
1 credit
Teaches through practice and demonstration of various embalming techniques. May include clinical experiences in area funeral homes. Prerequisites: FNS 111 and FNS 113. Co-requisite: FNS 112. Laboratory 3 hours per week.

FNS 121
Anatomy for Funeral Service I
3 credits
Introduces anatomy and physiology and basic terminology. Presents information about wills, tissues, and organs. Discusses the reproductive, urinary, and endocrine body system. Lecture 3 hours per week.

FNS 125
Pathology for Funeral Service
3 credits
Introduces the general processes of disease, stressing their importance to the scientific embalmer and funeral director as health guardians. Studies diseases of specific organs and organ systems with emphasis on the significant structural changes involved and the embalming problems they present. Prerequisite: Instructor permission. Lecture 3 hours per week.

FNS 211
Restorative Art I
3 credits
Presents surface contour; the influence of the bone structure on facial form; and the effect of the facial muscles on the wrinkles, grooves, and folds of the face. Teaches the treatments and techniques for restorations. Introduces wax and non-wax treatments such as swellings, feature corrections, and hair restoration. Studies lip-waxing techniques and the modeling of various forms of the mouth and eyes. Teaches the rudiments of cosmetic knowledge and techniques through lectures, demonstrations, and student participation. Prerequisite: Instructor permission. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

FNS 212
Restorative Art II
3 credits
Studies color principles and their application to funeral work and the funeral establishment. Teaches the basic principles employed in recreating the personalized form and dimensions of each facial feature when restoration is necessary. Focuses on problem cases which require illusory corrections, matching wax color skin, and the masking of small and extensive discolorations. Teaches feature construction with restorative wax through demonstrations and laboratory practice. Prerequisite: FNS 211. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.
course descriptions

FNS 231
Principles of Funeral Management I
4 credits
Introduces the basic social, religious, ethical, and psychological factors that influence funeral service. Teaches telephone techniques and etiquette and acceptable funeral terminology. Studies the various types of religious, fraternal, and military funeral services. Prerequisite: Instructor permission. Lecture 4 hours per week.

FNS 232
Principles of Funeral Management II
4 credits
Teaches merchandising, the principles of buying and selling and the techniques of making funeral arrangements. Studies the construction and proper selection of casket, room arrangement, and Social Security and veterans' benefits. Focuses on modern funeral establishment management techniques and procedures. Prerequisite: FNS 231. Lecture 4 hours per week.

FNS 236
Funeral Service Law
2 credits
Focuses on the duties, rights, responsibilities, and liabilities of the funeral director and embalmer. Teaches building and zoning ordinances relating to the funeral establishment, tort liability, cemetery law, wills, and the administration of estates. May include the study of state laws as they pertain to funeral services. Prerequisite: Instructor permission. Lecture 2 hours per week.

FNS 270
Funeral Service Review
3 credits
Prepares the student for national and state licensing examination in funeral service. Reviews all materials that will be covered by funeral service licensing examinations. Teaches modern test-taking techniques. Requires the writing of a detailed outline of one funeral service subject which determines the final grade. This is a capstone course designed to prepare students for the National Board Examination (NBE). Completion of the NBE is a requirement for successful completion of this course. FEE: $350 for NBE Exam. Prerequisite: Instructor permission. Lecture 3 hours per week.

FRE 101-102
Beginning French I-II
4 credits each
Introduces understanding, speaking, reading, and writing skills and emphasizes basic French sentence structure. Lecture 4 hours per week. May include one additional hour of oral practice per week.

FRE 203-204
Intermediate French I-II
3 credits each
Continues to develop understanding, speaking, reading, and writing skills. Prerequisite: FRE 102 or equivalent. Lecture 3 hours per week.

FST 100
Principles of Emergency Services
3 credits
Provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics. Lecture 3 hours per week.

FST 110
Fire Behavior and Combustion
3 credits
Explores the theories and fundamentals of how and why fires start and spread, and how they are controlled. Lecture 3 hours per week.

FST 112
Hazardous Materials Chemistry
3 credits
Provides basic fire chemistry relating to the categories of hazardous materials including problems of recognition, reactivity, and health encountered by firefighters. Lecture 3 hours per week.

FST 115
Fire Prevention
3 credits
Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education. Lecture 3 hours per week.

FST 120
Occupational Safety and Health for the Fire Service
3 credits
Introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Includes risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, and technical rescue. Upon completion of this course, students should be able to establish and manage a safety program in an emergency service organization. Lecture 3 hours per week.

FST 205
Fire Protection Hydraulics and Water Supply
3 credits
Provides a foundation of theoretical
knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems. **Lecture 3 hours per week.**

**FST 210**
Legal Aspects of Fire Service
3 credits
Introduces the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. **Lecture 3 hours per week.**

**FST 215**
Fire Protection Systems
3 credits
Provides information relating to the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers. **Lecture 3 hours per week.**

**FST 220**
Building Construction for Fire Protection
3 credits
Provides the components of building construction that relate to fire and life safety. Focuses on firefighter safety. Covers the elements of construction and design of structures and how they are key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. **Lecture 3 hours per week.**

**FST 230**
Fire Investigation
3 credits
Provides the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the firesetter, and types of fire causes. **Lecture 3 hours per week.**

**FST 235**
Strategy and Tactics
3 credits
Provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground. **Lecture 3 hours per week.**

**FST 237**
Emergency Service Supervision
3 credits
Teaches the history of modern management theories, including scientific management and behavioral scientist approach. Introduces concepts of group dynamics, leadership, communication, stress and time management, and personnel evaluation techniques. Discusses the legal and ethical considerations of personnel management in the emergency service. **Lecture 3 hours per week.**

**FST 240**
Fire Administration
3 credits
Introduces the student to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasizes fire service leadership from the perspective of the company officer. **Lecture 3 hours per week.**

**FST 245**
Fire and Risk Analysis
3 credits
Presents a study of current urban fire problems with emphasis on solutions based upon current available technology. Includes master planning, as well as methods of identifying, analyzing and measuring accompanying risk and loss possibilities. **Prerequisite: FST 240. Lecture 3 hours per week.**

**GEO 200**
Introduction to Physical Geography
3 credits
Studies major elements of the natural environment including earth/sun relationship, land forms, weather and climate, natural vegetation and soils. Introduces the student to types and uses of maps. **Lecture 3 hours per week.**

**GEO 210**
People and the Land: Introduction to Cultural Geography
3 credits
Focuses on the relationship between culture and geography. Presents a survey of modern demographics, landscape modification, material and non-material culture, language, race and ethnicity, religion, politics, and economic activities. Introduces the student to types and uses of maps. **Lecture 3 hours per week.**

**GEO 220**
World Regional Geography
3 credits
Studies physical and cultural characteristics of selected geographical regions of the world. Focuses upon significant problems within each of the regions, and examines the geographical background of those problems. Introduces the student to types and uses of maps. **Lecture 3 hours per week.**

**GEO 221 - 222**
Regions of the World I-II
3 credits each
Provides an overview of physical and cultural characteristics of selected geographical regions of the world. Focuses upon significant problems within each of the regions. Studies the European cultural sphere including Europe, Soviet Union, the Americas and Australia and the emerging nations in Africa, Southwest Asia and the
course descriptions

Orient. Introduces the student to types and uses of maps. Lecture 3 hours per week.

**GEO 225**
Economic Geography
3 credits
Familiarizes the student with the various economic, geographic, political and demographic factors that affect international target markets and trade activity. Lecture 3 hours per week.

**GEO 230**
Political Geography
3 credits
Emphasizes the influence of geography on political systems and nation states. Discusses historic and current events including campaigns, wars, and treaties as functions of land, resources and energy requirements. Introduces the student to types and uses of maps. Lecture 3 hours per week.

**German**

**GER 101-102**
Beginning German I-II
4 credits each
Introduces understanding, speaking, reading, and writing skills and emphasizes basic German sentence structure. Lecture 4 hours per week. May include one additional hour oral practice per week.

**GER 201-202**
Intermediate German I-II
3 credits each
Continues to develop understanding, speaking, reading, and writing skills. German is used in the classroom. Prerequisite: GER 102 or equivalent. Lecture 3 hours per week. May include one additional hour oral practice per week.

**Geographical Information Systems**

**GIS 200**
Geographical Information Systems I
4 credits
Provides hands-on introduction to a dynamic desktop GIS (Geographic Information System). Introduces the components of a desktop GIS and their functionality. Emphasizes manipulation of data for the purpose of analysis, presentation, and decision-making. Prerequisite: ITE 115 or instructor approval. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

**GIS 201**
Geographical Information Systems II
4 credits
Provides a continuation of GIS 200, with emphasis on advanced topics in problem-solving, decision-making, modeling, programming, and data management. Covers map projections and data formats, and methods for solving the problems they create. Prerequisite: GIS 200. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

**Geophysical Sciences**

**GOL 105**
Physical Geology
4 credits
Introduces the composition and structure of the earth and modifying agents and processes. Investigates the formation of minerals and rocks, weathering, erosion, earthquakes, and crustal deformation. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**GOL 106**
Historical Geology
4 credits
Traces the evolution of the earth and life through time. Presents scientific theories of the origin of the earth and life and interprets rock and fossil records. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**GOL 110**
Earth Science
4 credits
For non-science majors. Examines the dynamics of the earth and its relation to the solar system. Applies the principles of geology, oceanography, meteorology and astronomy in a multi-disciplinary science environment. Stresses the effects of geologic processes on the environment. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**GOL 111-112**
Oceanography I-II
4 credits each
Examines the dynamics of the oceans and ocean basins. Applies the principles of physical, chemical, biological, and geologic oceanography. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**GOL 135**
Field Studies in Geology
2 credits
Investigates geologic phenomena. Includes activities such as observation of regional geology and landforms, collection of samples, and measurement and interpretation of geologic structures. Field studies 6 hours per week.

**GOL 225**
Environmental Geology
4 credits
Explores the interaction between man and his physical environment. Stresses geologic hazards and environmental pollution utilizing case histories. Prerequisite: GOL 105. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.
history

HIS 101-102  
History of Western Civilization I-II  
3 credits each  
Examines the development of western civilization from ancient times to the present. HIS 101 ends with the seventeenth century; HIS 102 continues through modern times. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

HIS 111-112  
History of World Civilization I-II  
3 credits each  
Surveys Asian, African, Latin American, and European civilizations from the ancient period to the present. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

HIS 121-122  
United States History I-II  
3 credits each  
Surveys United States history from its beginning to the present. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

HIS 141-142  
African-American History I-II  
3 credits each  
Surveys the history of black Americans from their African origins to the present. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

HIS 155  
Life in Colonial Virginia  
3 credits  
Studies life in Virginia before the American Revolution, including politics, economics, customs, culture, and the slave plantation system. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

HIS 262  
United States History in Film  
3 credits  
Examines selected topics in the United States history which shaped the American experience, presented in film. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

HIS 265  
History of the Old South  
3 credits  
Examines the unique society that existed in the southern United States between 1815 and 1860. Emphasizes political, economic, social, and cultural characteristics that developed in the South before the Civil War. Prerequisite: HIS 121-122. Lecture 3 hours per week.

HIS 266  
Military History of the Civil War  
3 credits  
Analyzes military campaigns of the Civil War, including factors contributing to the defeat of the Confederacy and problems created by the war. May include field trips to Civil War sites in the region. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

HIS 269  
Civil War and Reconstruction  
3 credits  
Studies factors that led to the division between the states. Examines the war, the home fronts, and the era of Reconstruction. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

HIS 280  
American Foreign Policy Since 1890  
3 credits  
Examines American foreign policy since 1890 with an emphasis on current events and diverse points of view. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

HIS 281-282  
History of Virginia I-II  
3 credits each  
Examines the cultural, political, and economic history of the Commonwealth from its beginning to the present. Prerequisite: Placement into ENG 111. Lecture 3 hours per week.

health information technology

HIT 101  
Health Information Technology I  
4 credits  
Introduces values, uses and content of the medical record. Defines numbering, filing and retention policies and practices. Prerequisite: Admission into the Health Information Technology program. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

HIT 103  
Health Information Technology II  
2 credits  
Introduces principles of data quality and validation types and uses of health databases. Prerequisite: HIT 101. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

HIT 110  
Introduction to Human Pathology  
3 credits  
Introduces the basic concepts, terminology, etiology, and characteristics of pathological processes. Prerequisite: BIO 100 and HLT 143. Lecture 3 hours per week.

HIT 143  
Managing Electronic Billing in a Medical Practice  
2 credits  
Introduces major reimbursement systems in the United States. Focuses on prospective payment systems, managed care, and
HIT 215
Health Data Classification Systems
5 credits
Focuses on disease and procedure classification systems currently utilized for collecting health data for the purposes of statistical research and financial reporting. Prerequisite: BIO 100 or HLT 143. Lecture 4 hours. Laboratory 2 hours. Total 6 hours per week.

HIT 220
Health Statistics
2 credits
Introduces the students to basic statistical principles and calculations as applied in the health care environment, procedures for collection and reporting vital statistics, and quality control basics. Prerequisite: Admission to program. Lecture 2 hours per week.

HIT 226
Legal Aspects of Health Record Documentation
2 credits
Presents the legal requirements associated with health record documentation. Emphasizes the policies and procedures concerning the protection of the confidentiality of the patient's health record. Prerequisite: Admission to program. Lecture 2 hours per week.

HIT 229
Performance Improvement in Health Care Settings
2 credits
Focuses on concepts of facility-wide performance improvement, resource management, and risk management. Applies tools for data collection and analysis. Prerequisite: HIT 101. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

HIT 230
Information Systems and Technology in Health Care
3 credits
Explores computer technology and system application in health care. Introduces the information systems life cycle. Prerequisite: HIT 101. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

HIT 249
Supervision and Management Practices
3 credits
Introduces supervision and management principles with emphasis on the application of these principles in the health information setting. Prerequisite: HIT 101. Lecture 3 hours per week.

HIT 253
Health Records Coding
4 credits
Examines the development of coding classification systems. Introduces ICD-9-CM coding classification system, its format and conventions. Stresses basic coding steps and guidelines according to body systems. Provides actual coding exercises in relation to each system covered. Prerequisites: BIO 100 and HIT 215. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

HIT 254
Advanced Coding and Reimbursement
4 credits
Stresses advanced coding skills through practical exercises using actual medical records. Introduces CPT-4 coding system and guidelines for outpatient/ambulatory surgery coding. Introduces prospective payment system and its integration with ICD-9-CM coding. Prerequisite: HIT 253. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

HIT 260
Pharmacology for Health Information Technology
2 credits
Introduces the general study of drug classifications, uses, and effects as required to perform health data collection and retrieval tasks. Prerequisite: BIO 100 and HLT 143. Lecture 2 hours per week.

HLT 100
First Aid and Cardiopulmonary Resuscitation
3 credits
Focuses on the principles and techniques of safety, first aid, and cardiopulmonary resuscitation. Lecture 3 hours per week.

HLT 105
Cardiopulmonary Resuscitation
1 credit
Provides training in coordinated mouth-to-mouth artificial ventilation and chest compression, choking, life-threatening emergencies, and sudden illness. Lecture 1 hour per week.

HLT 106
First Aid and Safety
2 credits
Focuses on the principles and techniques of safety and first aid. Lecture 2 hours per week.

HLT 110
Concepts of Personal and Community Health
3 credits
Studies the concepts related to the maintenance of health, safety, and the prevention of illness at the personal and community level. Lecture 3 hours per week.
HLT 116
Introduction to Personal Wellness Concepts
3 credits
Introduces students to the dimensions of wellness including the physical, emotional, environmental, spiritual, occupational, and social components. Lecture 3 hours per week.

HLT 121
Introduction to Drug Use and Abuse
3 credits
Explores the use and abuse of drugs in contemporary society with emphasis upon sociological, physiological and psychological effects of drugs. Lecture 3 hours per week.

HLT 122
Introduction to Alcohol Abuse and Control
1 credit
Explores the physiological, psychological, and sociological effects of alcohol. Studies why people drink, disease concepts, alcohol tolerance curves, and alcohol's effect on the operation of a motor vehicle. Lecture 1 hour per week.

HLT 130
Nutrition and Diet Therapy
1 credit
Studies nutrients, sources, functions, and requirements with an introduction to diet therapy. Lecture 1 hour per week.

HLT 135
Child Health and Nutrition
3 credits
Focuses on the physical needs of the preschool child and the methods by which these are met. Emphasizes health routines, hygiene, nutrition, feeding and clothing habits, childhood diseases, and safety as related to health, growth and development. Lecture 3 hours per week.

HLT 138
Principles of Nutrition
2 credits
Studies nutrient components of food, including carbohydrates, fats, proteins, vitamins, minerals and water. Provides a behavioral approach to nutrient guidelines for the development and maintenance of optimum wellness. Lecture 2 hours per week.

HLT 143-144
Medical Terminology I-II
3 credits each
Provides an understanding of medical abbreviations and terms. Includes the study of prefixes, suffixes, word stems, and technical terms with emphasis on proper spelling, pronunciation, and usage. Emphasizes more complex skills and techniques in understanding medical terminology. Lecture 3 hours per week.

HLT 155
Current Issues in Health Care
2 credits
Focuses on current issues in the health care industry. Lecture 2 hours per week.

HLT 156
Health Care for Athletic Injuries
3 credits
Teaches prevention and care of athletic injuries, recognition and management of head and spinal injuries, fractures, strains, sprains, as well as cardiac emergencies. Discusses taping, protective equipment, and medical referral. Lecture 3 hours per week.

HLT 200
Human Sexuality
3 credits
Provides a basic understanding of human sexuality. Includes anatomy, physiology, pregnancy, family planning, venereal diseases, and sexual variations. Lecture 3 hours per week.

HLT 204
Women's Health
3 credits
Explores current issues related to women's health and wellness with an emphasis upon prevention of disease and optimum well being. Takes a multi-ethnic approach to exploring the most up-to-date findings, diagnostic tools, and treatments for breast cancer, reproductive tract illness, heart, and other common diseases faced by women from puberty through menopause. Lecture 3 hours per week.

HLT 215
Personal Stress and Stress Management
3 credits
Provides a basic understanding of stress and its physical, psychological, and social effects. Includes the relationships between stress and change, self-evaluation, sources of stress, and current coping skills for handling stress. Lecture 3 hours per week.

HLT 226
AIDS Awareness
2 credits
Provides basic understanding of Acquired Immune Deficiency Syndrome (AIDS), AIDS-Related Complex (ARC), and Human Immunodeficiency Virus (HIV) Infection. Includes information on the etiology of AIDS, historical perspectives, signs and symptoms, HIV antibody testing, safer sex guidelines, AIDS in the workplace (including health care settings), psychosocial issues, death and dying issues, homophobia, and HIV transmission and prevention. Lecture 2 hours per week.

HLT 270
Health and Well-Being of the Older Adult
3 credits
Focuses on the health of the older adult. Teaches health promotion, preventive health techniques and accident prevention. Lecture 3 hours per week.
course descriptions

HLT 271
Physical Care Management of the Older Adult
3 credits
Introduces physiology of aging. Integrates caretaker guidelines. Demonstrates skills to care for aging at a variety of functional levels. Lecture 3 hours per week.

HLT 272
Medical Management of the Older Adult
3 credits
Introduces common medical problems associated with the aging. Examines preventive and restorative care associated with common illnesses. Focuses on assessments, evaluation, and safe administration of medications. Includes emergency care and CPR. Prerequisite: Admission to the program. Lecture 3 hours per week.

human services

HMS 100
Introduction to Human Services
3 credits
Introduces human service agencies, roles and careers. Presents an historical perspective of the field as it relates to human services today. Additional topics include values clarification and needs of target populations. Lecture 3 hours per week.

HMS 121
Basic Counseling Skills I
3 credits
Develops skills needed to function in a helping relationship. Emphasizes skills in attending, listening and responding. Clarifies personal skill strengths, deficits and goals for skill improvement. Lecture 3 hours per week.

HMS 141
Group Dynamics I
3 credits
Examines the stages of group development, group dynamics, the role of the leader in a group, and recognition of the various types of group processes. Discusses models of group dynamics that occur as a result of group membership dynamics. Lecture 3 hours per week.

HMS 225
Functional Family Intervention
3 credits
Provides an understanding of functions and dysfunctions within the family. Emphasizes the development of effective skills through an interpersonal/interactional approach to family intervention. Lecture 3 hours per week.

HMS 226
Helping Across Cultures
3 credits
Provides an historical overview of selected cultural and racial groups. Promotes understanding of group differences and the impact on counseling services. Lecture 3 hours per week.

HMS 227
The Helper as a Change Agent
3 credits
Teaches the following skills for implementing alternative models of change and influence: action research, problem-solving, consultation, workshop development, and outreach and advocacy for diverse client populations. Lecture 3 hours per week.

HMS 231-232
Gerontology I-II
3 credits each
Examines characteristics of the aging process and problems for the elderly. Considers both theoretical and applied perspectives on the following issues: biological, psychological, sociological, economic and political. Lecture 3 hours per week.

HMS 233
Psycho and Socio Aspects of Older Adult Care
3 credits
Provides psychological and sociological perspectives on aging. Examines changes in social roles and relationships, social aspects of individual aging, economics, and the politics of aging. Lecture 3 hours per week.

HMS 236
Gerontology
3 credits
Examines the process of aging; its implications in relation to health, recreation, education, transportation, meaningful work or activity, and to community resources. Emphasizes experiencing the aging process, facilitating retirement, and application of the helping relationship to work with older adults. Lecture 3 hours per week.

HMS 238
Selected Topics in Aging
3 credits
Provides students with an opportunity to explore a variety of major current issues in aging. Topics may include care giving and the elderly, elderly drug use and misuse, protective services, crisis interventions, homecare, elder-abuse, and other current topics. Lecture 3 hours per week.

HMS 250
Principles of Case Management
3 credits
Provides an overview of current case management theory and practice in the field of mental health. Lecture 3 hours per week.

HMS 258
Case Management and Substance Abuse
3 credits
Focuses on the process for interviewing substance abuse clients. Includes intake, assessment, handling denial, and ending the interview. Teaches skills for writing short-term goals and treatment plans with emphasis on accountability. Examines various reporting devices. Lecture 3 hours per week.
hotel.restaurant.institutional
management

HRI 101-102
Hotel-Restaurant Organization
and Management I-II
3 credits each
Introduces the history, opportunities,
problems and trends of the hospitality
industry. Covers the organization of
the various sectors of the hospitality
industry including human resources,
genral business considerations, and
management theory. Lecture 3 hours
per week.

HRI 105
Introduction to Culinary Arts
1 credit
Covers the historical perspective of
the cooking and hospitality industry.
Includes career paths and opportunities
for culinarians, culinary professionalism,
people skills, motivational and
organizational skills. Lecture 1 hour
per week.

HRI 106-107
Principles of Culinary Arts I-II
3 credits each
Introduces the fundamental principles
of food preparation and basic culinary
procedures. Stresses the use of proper
culinary procedures combined with food
science, proper sanitation, standards
of quality for food items that are made,
and proper use and care of kitchen
equipment. Prerequisite or Co-requisite:
HRI 158. Lecture 3 hours per week.

HRI 128
Principles of Baking
3 credits
Instructs the student in the preparation
of breads, pastries, baked desserts,
candies, frozen confections, and sugar
work. Applies scientific principles and
techniques of baking. Promotes the
knowledge/skills required to prepare
baked items, pastries and confections.
Prerequisite: HRI 106 and/or HRI 107.
Lecture 2 hours. Laboratory 3 hours.
Total 5 hours per week.

HRI 134
Food and Beverage Service
Management
3 credits
Provides a conceptual and technical
framework for managing the service of
meals in a variety of commercial settings.
Studies the integration of production and
service delivery, guest contact dynamics,
reservations management and point-of-sale systems. Prerequisite: HRI 158.
Lecture 3 hours per week.

HRI 145
Garde Manger
3 credits
Studies garde manger, the art of
decorative cold food preparation and
presentation. Provides a detailed
practical study of cold food preparation
and artistic combination and display of
cold foods. Prerequisite: HRI 106 and/or
HRI 107. Lecture 2 hours. Laboratory 3
hours. Total 5 hours per week.

HRI 150
Introduction to Hospitality
Ownership
3 credits
Presents growth, development,
present status and trends of the
food and lodging industry. Includes
special problems of operating small
and medium sized establishments. Introduces credit and accounting
procedures, management of staff,
marketing, advertising, and security, as
well as personal attitudes, qualifications,
and ethics. Lecture 3 hours per week.

HRI 158
Sanitation and Safety
3 credits
Covers the moral and legal
responsibilities of management to insure
a sanitary and safe environment in a
food service operation. Emphasizes the
causes and prevention of food borne
illnesses in conformity with federal, state
and local guidelines. Focuses on OSHA
standards in assuring safe working
conditions. Lecture 3 hours per week.

HRI 160
Executive Housekeeping
3 credits
Studies the housekeeping department
with emphasis on organization, staffing
and scheduling, staff development,
work methods improvements,
equipment, cleaning materials and
cleaning procedures, maintenance and
refurnishing, room design and safety
engineering. Lecture 3 hours per week.

HRI 180
Convention Management and
Service
3 credits
Examines the scope and different
segments that make up the convention
market, explains what is required to
meet individual needs, and explores
methods and techniques for better
service. Lecture 3 hours per week.

HRI 205
Fundamentals of Wine
3 credits
Familiarizes the student with basic
knowledge needed to make decisions
relative to the purchase, storage, and
service of wine, as well as decisions
relative to the use of wine in the
hospitality and food service industry.
Lecture 3 hours per week.

HRI 206
International Cuisine
3 credits
Introduces the concepts of cultural
differences and similarities and the
preparation of the food specialties of
the major geographical areas of the
world. Focuses on emerging cuisines
as they become popular. Prerequisite:
HRI 106 and/or HRI 107. Lecture 2
hours. Laboratory 3 hours. Total 5
hours per week.

HRI 207
American Regional Cuisine
3 credits
Studies the distinct regional cooking
styles of America and its neighbors.
Emphasizes the indigenous ingredients
as well as the cultural aspect of each
region's cooking style. Includes the preparation of the various regional foods. Prerequisite: HRI 106 and/or HRI 107. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

HRI 215
Food Purchasing
3 credits
Presents the method and procedures for purchasing food for hotels, restaurants and institutions. Deals with markets, federal and trade grades, governmental regulations, packaging, comparative versions, price buying, yields and quality control. Lecture 3 hours per week.

HRI 224
Recipe and Menu Management
3 credits
Presents a comprehensive framework for creating and evaluating recipes and menus for commercial and non-commercial food service operations. Requires students to use microcomputer software to design recipes, recipe files, and menus. Teaches students menu engineering analysis and methods for optimizing menu contribution margin. Lecture 3 hours per week.

HRI 235
Marketing of Hospitality Services
3 credits
Studies principles and practices of marketing the services of the hotel and restaurant industry. Emphasizes the marketing concept with applications leading to customer satisfaction. Reviews methods of external and internal stimulation of sales. May include a practical sales/marketing exercise and computer applications. Lecture 3 hours per week.

HRI 251
Food and Beverage Cost Control I
3 credits
Presents methods of pre-cost and pre-control as applied to the menu, purchasing, receiving, storing, issuing, production, sales and service which result in achievement of an operation's profit potential. Emphasizes both manual and computerized approaches. Prerequisite: MTH 121. Lecture 3 hours per week.

HRI 255
Human Resources Management and Training for Hospitality and Tourism
3 credits
Prepares the students for interviewing, training involved in reservation registration, accounting for and checking out guests, and principles and practices of night auditing. Covers the complete guest operation in both traditional and computerized operations. Lecture 3 hours per week.

HRI 256
Principles and Applications of Catering
3 credits
Analyzes and compares the principles of on-premise and off-premise catering. Includes student presentations in a series of catered functions where they assume typical managerial/employee positions emphasizing planning, organizing, operating, managing and evaluating. Prerequisite: HRI 106. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

HRT 110
Principles of Horticulture
3 credits
Introduces concepts of plant growth and development. Covers horticultural practices, crops and environmental factors affecting plant growth. Lecture 3 hours per week.

HRT 115
Plant Propagation
3 credits
Teaches principles and practices of plant propagation. Examines commercial and home practices. Provides experience in techniques using seed-spores, cuttings, grafting, budding, layering, and division. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 121
Greenhouse Crop Production I
3 credits
Covers commercial practices related to production of floricultural crops. Considers production requirements, environmental control and management, and cultural techniques. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 122
Greenhouse Crop Production II
3 credits
Continues commercial practices related to production of floriculture crops. Considers production requirements, environmental control and management, and cultural techniques. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 125
Chemicals in Horticulture
3 credits
Emphasizes basic chemical principles
and their application to horticulture. Introduces principles of inorganic and organic chemicals. Studies chemical activities of insecticides, fungicides, herbicides, fertilizers, and growth regulators. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 150
Theory of Landscape Design
3 credits
Presents the theoretical aspects of landscape planning and design. Uses theory to analyze and solve design problems. Lecture 3 hours per week.

HRT 155
Plants and Society
3 credits
Covers the relationship between plants and people and the uses of plants as sources of food, medicine, drugs, spices, beverages, poisons, fibers, oils and plants exudates. Prerequisite: HRT 110. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 201-202
Landscape Plants I-II
3 credits each
Studies landscape use of plants. Considers ornamental value, growth habit, identification, and limitations. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 205
Soils
3 credits
Teaches theoretical and practical aspects of soils and other growing media. Examines media components, chemical and physical properties, and soil organisms. Discusses management and conservation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 207
Plant Pest Management
3 credits
Teaches principles of plant pest management. Covers morphology and life cycles of insects and other small animal pests and plant pathogens. Laboratory stresses diagnosis, chemical and non-chemical control of specific pests, and pesticide safety. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 225
Nursery and Garden Center Management
3 credits
Covers aspects of nursery management, including culture, plant handling, and facilities layout. Discusses aspects of garden center management, including planning and layout, purchasing, product selection, marketing, merchandising, and display. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 226
Greenhouse Management
3 credits
Discusses the theoretical and applied practices of managing a greenhouse facility. Emphasizes greenhouse construction and design, environmental control, energy conservation, and related topics. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 227
Professional Landscape Management
3 credits
Focuses on basic practices and techniques involving landscape management. Includes development of a year-round management calendar and preparation of bid and contract proposals. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 228
Turfgrass Management I
3 credits
Applies scientific principles for the establishment and maintenance of intensely managed turfgrass. Topics covered include cultivation selection, seeding, sprigging and sodding techniques, fertilization, watering, weed identification and control, insect identification and control, fungus identification and control, soil structure, drainage, topdressing, and mowing frequency and height. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 229
Turfgrass Management II
3 credits
Continuation of HRT 228. Applies scientific principles for the establishment and maintenance of intensely managed turfgrass. Topics covered include cultivar selection, seeding, sprigging and sodding techniques, fertilization, watering, weed identification and control, insect identification and control, fungus identification and control, soil structure, drainage, and mowing frequency and height. Prerequisite: HRT 228. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 231
Planting Design I
3 credits
Applies landscape theory and principles of drawing to the planning of residential and small scale commercial landscape designs. Prerequisites: HRT 150, 235, 201, and 202 or instructor permission. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 235
Landscape Drawing
3 credits
Teaches students the use of drafting equipment. Emphasizes drawing techniques and use of media. Includes hard line and free-style landscape drawing. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 240
Principles of Weed Science
3 credits
Provides in-depth knowledge and expertise in handling the critical tasks of identifying and determining appropriate methods of controlling weeds of turfgrass, landscapes, and greenhouses. Lecture 2 hours. Laboratory 2 hours. Total 4 hour per week.
HRT 259
Arboriculture
3 credits
Studies the techniques of tree care. Covers surgery, pruning, insect and disease recognition and control, fertilization, cabling, and lightning rod installation. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

HRT 275
Landscape Construction and Maintenance
3 credits
Examines practical applications of commercial landscape construction techniques and materials used. Covers construction, planting, and maintenance. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

humanities

HUM 150
Introduction to Viet Nam
3 credits
Introduces the culture, history, religion, literature and poetry of Viet Nam. Lecture 3 hours per week.

HUM 165
Controversial Issues in Contemporary American Culture
3 credits
Introduces students to selected issues in contemporary American culture. Includes topic areas ranging from welfare reform, economic development, privacy, environmental protection and conservation, evolution vs. creation, to family values, and special interest lobbying in state and national governments. Focuses on the development of the student’s critical thinking skills by analyzing, evaluating, and reflecting on opposing sides of the same issue as expressed by public leaders, special interest groups and academicians. Lecture 3 hours per week.

HUM 201
Survey of Western Culture I
3 credits
Studies thought, values, and arts of Western culture, integrating major developments in art, architecture, literature, music, and philosophy. Covers the following periods: Ancient and Classical, Early Christian and Byzantine, Medieval, and Early Renaissance. Lecture 3 hours per week.

HUM 202
Survey of Western Culture II
3 credits
Studies thought, values, and arts of Western culture, integrating major developments in art, architecture, literature, music, and philosophy. Covers the following periods: Renaissance, Baroque, Enlightenment, Romantic, and Modern. Lecture 3 hours per week.

HUM 210
Introduction to Women’s Studies
3 credits
Introduces interdisciplinary and cross-cultural theories that explore gender, race, and class issues relating to women’s lives, past and present. Prerequisite: ENG 111. Lecture 3 hours per week. Changes to SSC 210 in Fall 2008.

HUM 220
Introduction to African-American Studies
3 credits
Presents an interdisciplinary approach to the study of African-American life, history, and culture. Examines specific events, ideologies, and individuals that have shaped the contours of African-American life. Studies the history, sociology, economics, religion, politics, psychology, creative productions, and culture of African-Americans. Lecture 3 hours per week.

HUM 235
Filipino-American Culture
3 credits
Surveys the cultural history of Filipinos in the United States from early immigration until the present. Studies history, cultural values, social and economic life, music, dance, art and literature, including acculturation and assimilation. Lecture 3 hours per week.

HUM 241-242
Interdisciplinary Principles of the Humanities I-II
3 credits each
Integrates unifying principles of the humanities and related fields of study. Emphasizes the expansion of student’s intellectual perspective and development of concepts enabling the integration of knowledge from diverse fields into a unified whole. Lecture 3 hours per week.

HUM 246
Creative Thinking
3 credits
Examines and analyzes creative and effective thinking processes with applications in individual and group projects to solve business, scientific, environmental, and other practical problems. Lecture 3 hours per week.

HUM 247
Chronicles of the Sea
3 credits
Studies the ocean and man’s relationship with it. Covers the study of selected readings about the sea from a literary, historical and social/political perspective. May include field trips, reports, and a sea voyage. Lecture 3 hours per week.

HUM 256
Mythology in Literature and the Arts
3 credits
Studies cultural expressions of mythology in literature and the arts. Considers several of the following mythologies, with emphasis on parallels and divergencies: Egyptian, Near-Eastern, Greek, Roman, Celtic, Norse, Asian, and African. Lecture 3 hours per week.
HUM 259
Greek Mythology
3 credits
Surveys and analyzes major stories from Greek Mythology. Explores psychological, anthropological, and historical interpretations of the myths. Acquaints students with recurring mythological themes in language, art, music, and literature. Lecture 3 hours per week.

HUM 260
Survey of Twentieth-Century Culture
3 credits
Explores literature, visual arts, philosophy, music, and history of our time from an interdisciplinary perspective. Lecture 3 hours per week.

IDS 100
Theory and Techniques of Interior Design
3 credits
Introduces drafting and presentation, color theory, and coordination, space planning and arrangement of furnishings. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

IDS 105
Architectural Drafting for Interior Design
3 credits
Introduces tools and equipment, lettering, methods of construction, designing and delineation of architecture. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

IDS 106
Three-Dimensional Drawing and Rendering
3 credits
Provides instruction in graphic presentation of three-dimensionally drawn interiors. Presents the use of colored media to render three-dimensional drawings. Lecture 2 hours.

IDS 109
Styles of Furniture and Interiors
3 credits
Teaches history of furnishings and interiors from the ancient world to the present. Lecture 3 hours per week.

IDS 110
Period Residential Design
4 credits
Plans a period-inspired interior. May use field trips and visual materials to enhance this project. Presents problems and their solutions found in this kind of project. May require a final visual presentation with all necessary furnishings, materials, and color boards with rendered perspectives. Prerequisites: IDS 104, 105, 106, 109. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

IDS 120
Estimation for Interior Coverings
3 credits
Provides instruction in estimation of yardages for window treatments, carpet, custom carpet designs, wall coverings, tile, etc. Covers fixtureing, labor costing, procedures of fabrication and styling options. May require site/research visits to fabricators. Lecture 3 hours per week.

IDS 205
Materials and Sources
3 credits
Presents textiles, floor and wall coverings, and window treatments. Emphasizes construction, fiber, finish, and code applications. May use research and field trips to trade sources representing these elements. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

IDS 206
Lighting and Furnishings
3 credits
Provides instruction in lighting terminology and calculations and instructions in techniques of recognizing quality of construction in furnishings and related equipment. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

IDS 210
Theory and Research in Commercial Design
3 credits
Teaches graphic standards and specifications in interior design. Explains handicap codes and fire codes for large scale spaces. Provides programming and space planning with emphasis on systems furniture. Prerequisite: IDS 105. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

IDS 215
Advanced Rendering and Presentation
3 credits
Gives advanced problems in rendering and visual presentation. Teaches methods of presentation and development of completed interior design projects with rendered perspectives and presentation boards of furnishings, fixtures, finishes, schedules, and related materials. Prerequisite: IDS 105 and IDS 106. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week.

IDS 217
Designing Commercial Interiors II
4 credits
Presents problems in designing and developing presentations with emphasis on office spaces. Prerequisite: IDS 217. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

IDS 222
Business Procedures
3 credits
Provides instruction in preparation of contracts, purchase orders, specifications, and other business forms used in the interior design field. Lecture 3 hours per week.
course descriptions

**IDS 235**
Antiques
3 credits
Involves process of research, authentication, and determining provenance. Covers examples of furnishings, fixtures, textiles, glass, and ceramics. May provide field trips, lectures, examination, and discussion to assist in determining age, condition, and other properties. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

**IDS 245**
Computer Aided Drafting for Interior Designers
3 credits
Instructs in the use of the computer for drafting of floor plans, elevations, perspectives, shadowing, lighting, and color applications using Auto Cad software and the architectural and engineering software. **Prerequisite: IDS 105. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week.**

**industrial engineering technology**

**IND 101-102**
Quality Assurance Technology I-II
3 credits each
Studies principles and techniques of quality engineering for the management, design engineering economics, production, and assurance of quality. Emphasizes fundamentals of total quality assurance for product and process control. May include design review, fundamentals of statistics, procurement control, sampling and control chart systems, quality reporting, process capability analysis, tool and gauge control, document control, or troubleshooting quality control. **Lecture 3 hours per week.**

**IND 105**
Nondestructive Inspection (NDI) and Testing
3 credits
Studies nondestructive inspection and testing methods as they relate to industry. May include radiographic (RT), ultrasonic (UT), eddy current (ET), magnetic particle (MT), and liquid penetrant (PT) or other methods of testing. **Lecture 3 hours per week.**

**IND 106**
Industrial Engineering Technology
3 credits
Introduces basic skills required for a career in industrial engineering technology. Includes basic statistics for engineering technicians, the SI system, graphic analysis, and careers as an industrial engineering technician. **Lecture 3 hours per week.**

**IND 115**
Materials and Processes of Industry
4 credits
Studies materials and processes for the manufacture of products. Investigates the nature of various materials. Examines the manufacturing processes of industry and their effects on materials. **Lecture 4 hours per week.**

**IND 121**
Industrial Supervision I
3 credits
Introduces the concept of the supervisor as a leader. Discusses the role of the Industrial Supervisor in leading organizational change and helping employees through transitions. Defines leadership styles and the selection of the appropriate style. Introduces the Industrial Supervisor as a motivator in terms of job satisfaction, morale, job design competition, communication, and promotions. Presents ethical behavior and dilemmas in organizations. **Lecture 3 hours per week.**

**IND 122**
Industrial Supervision II
3 credits
Introduces the concept of the supervisor as a manager. Discusses the primary management functions and the differences between supervision and management. Discusses the planning process and scheduling techniques. Introduces concepts in organizing both formally and informally, accountability, span of control and delegation. Discusses the staffing process including legal considerations, forecasting, job analysis techniques, recruiting, interviewing and selection. Introduces the control process including what the Industrial Supervisor should control, control strategies, and how to control costs. Defines the decision making process and how to use employees, information and creativity in decision making. **Lecture 3 hours per week.**

**IND 135**
Standards of Quality and Auditing
3 credits
Presents general requirements of industrial, military and international quality standards. Reviews quality audit principles relative to products, processes and systems. Includes the design of an approach to the audit and audit standards, procedures, methods, facilities control, personnel, and reporting methods. Includes case studies and in-plant audits. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

**IND 137**
Team Concepts and Problem Solving
3 credits
Studies team concepts and problem solving techniques to assist project teams in improving quality and productivity. Provides knowledge of how to work as a team, plan and conduct good meetings, manage logistics and details, gather useful data, communicate the results and implement changes. **Lecture 3 hours per week.**
IND 142  
Biometrics and Technology  
3 credits  
Teaches the fundamentals of leading biometric technologies including an explanation of how various biometric technologies work, how they are most effectively deployed, and current association of biometrics within current technologies. Lecture 3 hours per week.

IND 145  
Introduction to Metrology  
3 credits  
Studies principles of measurement and calibration control, application of statistics to measurement processes, and standards of measurements in calibration. May include the use of gauges and instruments in modern production and dimensional control concepts. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

IND 146  
Statistical Quality Control  
3 credits  
Studies essentials and application of statistics in quality control function. May include definitions and uses of averages, standard deviations, ranges, and sampling plans. May discuss dependent and independent variables and distribution probabilities. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

IND 150  
Industrial Management  
3 credits  
Studies planning, organizing, directing, and influencing industrial activities. May include research, product design, methods and time management, quality assurance and current manufacturing methodologies. Lecture 3 hours per week.

IND 160  
Introduction to Robotics  
3 credits  
Studies evolution and history of robotics with an emphasis on automated and flexible manufacturing. Presents advantages and limitations of present robot systems. Lecture 3 hours per week.

IND 165  
Principles of Industrial Technology I  
4 credits  
Introduces principle concepts of technology involving mechanical, fluid, electrical, and thermal power as they relate to force, work, and rate. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

IND 166  
Principles of Industrial Technology II  
4 credits  
Introduces principle concepts of technology involving mechanical, fluid, electrical, and thermal power as they relate to resistance, energy, power, and force transformers. Places an emphasis on mechanical and advantage systems. Prerequisite: IND 165. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

IND 216  
Plant Layout and Materials Handling  
3 credits  
Examines arrangement and layout of physical facilities. Explains material handling and modern techniques for efficient utilization of space. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

IND 236  
Total Quality Concepts  
3 credits  
Discusses the fundamentals of Total Quality. Compares and contrasts the philosophies of the recognized experts on the subject. Discusses cultural change, continuous process improvement, and strategic planning. Introduces team skills and concepts. Emphasizes the systems approach to Total Quality philosophy. Lecture 3 hours per week.

IND 237  
Fundamentals of ISO 9000  
3 credits  
Presents the basics of ISO 9000 standards. Focuses on the latest improvements of the standards and the redesigned quality concepts set forth by the International Organization for Standardization (ISO). Includes a historical overview of the evolution of quality systems and explains the purpose of ISO quality systems certification. Discusses implementation approaches. Lecture 3 hours per week.

IND 245  
Time and Motion Study  
3 credits  
Studies principles and applications of motion analysis, process, operations, and micro-motion study; methods improvement, work simplification, standardization, rating, allowance and analysis of time data. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

IND 251  
Automated Manufacturing Systems I  
3 credits  
Presents basic principles used in the design and implementation in manufacturing work cells. Includes selection of the robot system, worksite, application cell sensors, development of cycle times, and economic analysis. Prerequisite: Divisional approval. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

INT 105-106  
Interpreting Foundations I-II  
3 credits each  
Develops fundamental skills of interpreting, including cognitive processes and intralingual language development in English and ASL.
Reviews Process Models of Interpreting, and uses one to analyze interpretations. Develops feedback skills essential to the team interpreting process. **Prerequisite:** Placement into ASL 261 and ENG 111. **Lecture 3 hours per week.**

**INT 107 Translation Skills**  
**3 credits**  
Further develops fundamental skills needed for the task of interpreting. Targets comprehending source language (either ASL or English), transferring content into memory store (breaking from original form), restructuring into target language, maintaining message equivalence, conveying implicit and inferred information, and applying appropriate discourse structure. Reviews Process Models of Interpreting, and uses it to analyze translations. Further develops feedback skills essential to the team interpreting process. **Prerequisite:** INT 105. **Lecture 3 hours per week.**

**INT 130 Interpreting: An Introduction to the Profession**  
**3 credits**  
Introduces basic principles and practices of interpreting, focusing on the history of the profession, logistics of interpreting situations, regulatory and legislative issues, resources, and the Code of Ethics. Describes the state quality assurance screening and national certification exam systems, including test procedures. **Lecture 3 hours per week.**

**INT 133 ASL-to-English Interpretation I**  
**3 credits**  
Begins consecutively interpreting monologues from the source language (ASL) to the target language (English). Watch entire ASL monologues, process them, analyze them, and then choose appropriate English to match the message. Eventually interpret the monologue into English. Puts interpreting theory into practice in a lab environment. Conducts research in the field of interpretation. Develops team interpreting techniques. Interacts with consumers of ASL-English interpretation. **Prerequisite:** INT 107. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

**INT 134 English-to-ASL Interpretation I**  
**3 credits**  
Begins consecutively interpreting monologues from the source language (English) to the target language (ASL). Listen to entire English monologues, process them, analyze them, then choose appropriate ASL to match the message. Puts interpreting theory into practice in a lab environment. Conducts research into the field of interpretation. Develops team interpreting techniques. Encourages interaction with consumers of ASL-English interpretation. **Prerequisite:** INT 107. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

**INT 233 ASL-to-English Interpretation II**  
**3 credits**  
Perform simultaneous interpretations of monologues in the source language (ASL) to the target language (English). Process an incoming ASL monologue while simultaneously producing an appropriate interpretation in English. Conduct research in the field of interpretation. Apply team interpreting techniques. Interact with consumers of interpretation. **Prerequisites:** INT 133 and INT 134. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

**INT 234 English-to-ASL Interpretation II**  
**3 credits**  
Perform simultaneous interpretations of monologues in the source language (English) into the target language (ASL). Process an incoming English monologue while simultaneously producing an appropriate interpretation in ASL. Conduct research in the field of interpretation. Apply team interpreting techniques. Interact with consumers of interpretation. **Prerequisites:** INT 133 and INT 134. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**
course descriptions

information technology design & database

ITD 110
Web Page Design I
4 credits
Stresses a working knowledge of web site designs, construction, and management using HTML or XHTML. Includes headings, lists, links, images, image maps, tables, forms, and frames. Lecture 4 hours per week.

ITD 112
Designing Web Page Graphics
4 credits
Explores the creation of digital graphics for web design. Basic design elements such as color and layout will be explored utilizing a computer graphics program(s). Lecture 4 hours per week.

ITD 132
Structured Query Language
4 credits
Incorporates a working introduction to commands, functions and operators used in SQL for extracting data from standard databases. Lecture 4 hours per week.

ITD 134
PL/SQL Programming
4 credits
Presents a working introduction to PL/SQL programming within the Oracle RDBMS environment. Includes PL/SQL fundamentals of block program structure, variables, cursors and exceptions, and creation of program units of procedures, functions, triggers and packages. Prerequisite: ITD 132 or SQL knowledge. Lecture 4 hours per week.

ITD 136
Database Management Software
4 credits
Covers an introduction to relational database theory and how to administer and query databases using multiple commercial database systems. Prerequisite: ITD 132 or SQL knowledge. Lecture 4 hours per week.

ITD 152
Oracle Forms Developer
4 credits
Provides a working introduction to building and testing interactive Oracle applications. Includes customizing forms with user input items such as check boxes, list items, and radio groups for use in a graphical user interface (GUI) environment. Includes modification of data access by creating event-related triggers. Prerequisite: ITD 134 or SQL and PL/SQL knowledge. Lecture 4 hours per week.

ITD 210
Web Page Design II
4 credits
Incorporates advanced techniques in web site planning, design, usability, accessibility, advanced site management, and maintenance utilizing web editing software(s). Prerequisite: ITD 110. Lecture 4 hours per week.

ITD 212
Interactive Web Design
4 credits
Provides techniques in interactive design concepts to create cross-platform, low-bandwidth animations utilizing a vector based application. Emphasizes the importance of usability, accessibility, optimization and performance. Prerequisite: ITD 112. Lecture 4 hours per week.

ITD 250
Database Architecture and Administration
4 credits
Involves in-depth instruction about the underlying architecture of databases and the handling of database administration. Prerequisite: ITD 132 and ITN 171. Lecture 4 hours per week.

ITD 251
Database System Development
3 credits
Provides the student the opportunity to solve a business problem from identification of the problem through the logical design and implementation on a database. Makes use of the knowledge that was gained in the prerequisite courses. Prerequisites: ITD 250 and ITD 260. Lecture 3 hours per week.

ITD 252
Database Backup and Recovery
3 credits
Concentrates instruction in the key tasks required to plan and implement a database backup and recovery strategy. Includes instruction in multiple strategies to recover from multiple types of failure. Lecture 3 hours per week.

ITD 258
Database Performance and Tuning
4 credits
Emphasizes instruction to optimize the performance of a database management system. Includes methods for tuning data access and storage and discussions of resolving data performance problems. Lecture 4 hours per week.

ITD 260
Data Modeling and Design
4 credits
Introduces life cycle application development methodologies in a systematic approach to developing relational databases and designing applications. Presents content introducing functional and business process modeling, using modeling information to produce application designs, analyzing data requirements as entities, attributes, and relationships and map an entity relationship diagram to an initial database design. Identifies the available automated development tools and utilizes Oracle Developer software to perform practical applications of these concepts. Co-requisite: ITD 132 should be taken prior to or with ITD 260. Lecture 4 hours per week.
course descriptions

ITD 295
Database Backup and Recovery and Performance Tuning
4 credits
Teaches the key tasks required to plan and implement a database backup and recovery strategy. Includes instruction in multiple strategies to recover from multiple types of failure. Provides instruction to optimize the performance of a database management system. Includes methods for tuning data access and storage and discussions of resolving database performance problems.
Prerequisites: ITD 250 and ITN 171.
Lecture 4 hours per week.

ITE 101
Introduction to Microcomputers
2 credits
Examines concepts and terminology related to microcomputers and introduces specific uses of microcomputers. Lecture 2 hours per week.

ITE 109
Information Systems for Legal Assistants
3 credits
Presents terminology and concepts of computer-based systems, an introductory coverage of operating systems and business application software to conduct legal research for litigation and other application programs traditionally used in the practice of law.
Lecture 3 hours per week.

ITE 115
Introduction to Computer Applications and Concepts
4 credits
Covers computer concepts and internet skills and uses a software suite which includes word processing, spreadsheet, database, and presentation software to demonstrate skills.
Lecture 4 hours per week.

ITE 127
Microcomputer Software: Beginning Windows
1 credit
Imparts first-time users with sufficient information to make practical use of the Windows software package. Presents the basics of the features and applications included in the Windows operating system package.
Lecture 1 hour per week.

ITE 130
Introduction to Internet Services
4 credits
Provides students with a working knowledge of Internet terminology and services including e-mail, WWW browsing, search engines, ftp, file compression, and other services using a variety of software packages.
Lecture 4 hours per week.

ITE 131
Survey of Internet Services
1 credit
Introduces students to basic Internet terminology and services including e-mail, WWW browsing, search engines, ftp, telnet, and other services.
Lecture 1 hour per week.

ITE 140
Spreadsheet Software
4 credits
Covers the use of spreadsheet software to create spreadsheets with formatted cells and cell ranges, control pages, multiple sheets, charts, and macros. Topics include type and edit text in a cell, enter data on multiple worksheets, work with formulas and functions, create charts, pivot tables, and styles, insert headers and footers, and filter data.
Covers MOS Excel objectives.
Lecture 4 hours per week.

ITE 141
Microcomputer Software: Spreadsheets
1 credit
Provides first-time users sufficient information to make practical use of spreadsheet software using the basics of building spreadsheets.
Lecture 1 hour per week.

ITE 150
Desktop Database Software
4 credits
Incorporates instruction in planning, defining, and using a database; performing queries; producing reports; working with multiple files; and concepts of database programming. Includes database concepts, principles of table design and table relationships, entering data, creating and using forms, using data from different sources, filtering, creating mailing labels. Covers MOS Access certification objectives.
Lecture 4 hours per week.

ITE 151
Microcomputer Software: Database Management
1 credit
Presents first-time users with sufficient information to make practical use of database management software using the basics of building databases. Covers specific business applications.
Lecture 1 hour per week.

ITE 200
Technology for Teachers (TSIP)
3 credits
Provides K-12 classroom teachers with the knowledge and skills needed to fulfill the Commonwealth of Virginia’s Technology Standards for Instructional Personnel. Students will finish the course with a solid understanding of educational technology, including how to use computers, how to access information on the World Wide Web, and how to integrate computers and
ITN 101
Introduction to Network Concepts
4 credits
Provides instruction in networking media, physical and logical topologies, common networking standards and popular networking protocols. Emphasizes the TCP/IP protocol suite and related IP addressing schemes, including CIDR. Includes selected topics in network implementation, support and LAN/WAN connectivity. Prerequisite: ITN 106 or ITN 171 or ITN 114, in some programs. Lecture 4 hours per week.

ITN 107
Personal Computer Hardware and Troubleshooting
4 credits
Includes specially designed instruction to give students a basic knowledge of hardware and software configurations. Includes the installation of various peripheral devices as well as basic system hardware components. Maps to A+ Hardware Certification. Lecture 4 hours per week.

ITN 109
Internet and Network Foundations
4 credits
Provides a basic comprehension of Internet and network technologies including IT job roles, connection methods, TCP/IP functionality and DNS. Explores web server technologies with security and project management concepts. Introduces network creation, physical and logical topologies including media properties, server types, IP addressing and network security. Lecture 4 hours per week.

ITN 115
Windows 2003 Server (SER)
4 credits
Consists of instruction that teaches students how to manage and maintain a Microsoft Windows Server 2003 environment. Lecture 4 hours per week.

ITN 116
Windows 2003 Network Infrastructure Implementation, Management and Maintenance (NI-IMM)
4 credits
Provides instruction on how to plan, implement, and maintain a Microsoft Windows Server 2003 network infrastructure. Lecture 4 hours per week.

ITN 117
Windows 2003 Network Infrastructure Planning and Maintenance (NI-PIM)
4 credits
Includes instruction on how to plan and maintain a Microsoft Windows Server 2003 network infrastructure. Lecture 4 hours per week.

ITN 118
Windows 2003 Active Directory Infrastructure Planning
4 credits
Encompasses instruction on how to plan, implement, and maintain a Microsoft Windows Server 2003 Active Directory infrastructure. Lecture 4 hours per week.

ITN 119
Networking Fundamentals and Introductory Routing – Cisco
4 credits
Contains an introduction to the functions of the layers of the OSI reference model, data link and network addresses, data encapsulation, different classes of IP addresses and subnetting, and the functions of the TCP/IP network-layer protocols. Includes features of the Cisco IOS software, including login, context-sensitive help, command history and editing, loading software, configuring and verifying IP addresses, preparing the initial configuration of a router, and adding routing protocols to the router configuration. Prerequisite: ITN 101. Lecture 4 hours per week.
course descriptions

ITN 151
Introductory Routing and Switching – Cisco
4 credits
Encompasses instruction in the advantages of LAN segmentation using bridges, routers, and switches. Includes Spanning Tree Protocol and Virtual LANs as well as multiprotocol support and traffic filtering. Includes network design issues and differences between the following WAN services: LAPB, Frame Relay, ISDN, HDLC, and PPP. Prerequisite: ITN 150. Lecture 4 hours per week.

ITN 170
Linux System Administration
4 credits
Focuses instruction on the installation, configuration and administration of the Linux operating system and emphasizes the use of Linux as a network client and workstation. Prerequisite: ITN 171. Lecture 4 hours per week.

ITN 171
Unix I
4 credits
Provides an introduction to UNIX operating systems. Teaches login procedures, file creation, UNIX file structure, input/output control, and the UNIX shell. Lecture 4 hours per week.

ITN 224
Web Server Management
4 credits
Focuses on the Web Server as a workhorse of the World Wide Web (WWW). Teaches how to set up and maintain a Web server and provides in-depth instruction in Web server operations and provides hands-on experience in installation and maintenance of a Web server. Prerequisite: ITN 109. Lecture 4 hours per week.

ITN 240
Windows 2003 Active Directory and Network Infrastructure Design (AD-NID)
4 credits
Includes instruction that teaches students how to design a Microsoft Windows Server 2003 Active Directory and network infrastructure. Prerequisite: ITN 115. Lecture 4 hours per week.

ITN 241
Windows 2003 Security Design (SD)
4 credits
Provides instruction that shows students how to gather and analyze business requirements for a secure network infrastructure and design a security solution that meets those requirements. Prerequisite: ITN 115. Lecture 4 hours per week.

ITN 242
Windows Microsoft Exchange 2003 Server (ES03)
4 credits
Incorporates instruction on how to implement, manage, and troubleshoot an Exchange Server 2003 organization. Prerequisite: ITN 115. Lecture 4 hours per week.

ITN 243
Windows 2003 Security Implementation and Administration (S-IA)
4 credits
Consists of instruction on how to implement, manage, maintain, and troubleshoot security in a Windows Server 2003 network infrastructure and also plan and configure a Windows Server 2003 PKI. Prerequisite: ITN 115. Lecture 4 hours per week.

ITN 244
Advanced Routing – Cisco
4 credits
Includes the characteristics of various Routing Protocols used in the TCP/IP networking environment, static routing, OSPF, IGRP, EIGRP, BGP, advanced IP addressing, and security. Examines various strategies for optimizing network routing performance. Prerequisite: ITN 150. ITN 151 should be taken prior to or with ITN 250. Lecture 4 hours per week.

ITN 245
Remote Access Networking – Cisco
4 credits
Focuses on in-depth instruction to a variety of wide area networking technologies and their implementation. Includes POTS and analog network connectivity, ISDN (both BRI and PRI), PPP, Cisco, AAA Security System, and Frame Relay. Prerequisite: ITN 151. Lecture 4 hours per week.

ITN 246
Advanced Switching – Cisco
4 credits
Provides in-depth instruction in switching as a core technology in today’s networking environment. Includes VLANs, trunking protocols, spanning-tree protocol, HSRP, and multi-layer switching. Prerequisite: ITN 151. Lecture 4 hours per week.

ITN 247
Network Troubleshooting – Cisco
4 credits
Provides instruction in troubleshooting tools and techniques appropriate to the network communications environment. Includes workstation troubleshooting software, communication equipment troubleshooting options, and typical problems related to Switching, WAN, and routing technologies. Prerequisites: ITN 250, ITN 251, and ITN 252. Lecture 4 hours per week.

ITN 248
Network Security Basics
4 credits
Provides instruction in the basics of network security in depth. Includes security objectives, security architecture, security models and security layers, risk management, network security policy, and security training. Includes the give security keys, confidentiality integrity, availability, accountability, and
ITN 261
Network Attacks, Computer Crime and Hacking
4 credits
Encompasses in-depth exploration of various methods for attacking and defending a network. Explores network security concepts from the viewpoint of hackers and their attack methodologies. Includes topics about hackers, attacks, Intrusion Detection Systems (IDS), malicious code, computer crime and industrial espionage. Prerequisite: ITN 260. Lecture 4 hours per week.

ITN 262
Network Communication, Security and Authentication
4 credits
Covers an in-depth exploration of various communication protocols with a concentration on TCP/IP. Explores communication protocols from the point of view of the hacker in order to highlight protocol weaknesses. Includes Internet architecture, routing, addressing, topology, fragmentation and protocol analysis, and the use of various utilities to explore TCP/IP. Prerequisite: ITN 260. Lecture 4 hours per week.

ITN 263
Internet/Intranet Firewalls and e-Commerce Security
4 credits
Conveys an in-depth exploration of firewall, Web security, and e-commerce security. Explores firewall concepts, types, topology and the firewall’s relationship to the TCP/IP protocol. Includes client/server architecture, the Web server, HTML and HTTP in relation to Web security, and digital certification, D.509, and public key infrastructure (PKI). Prerequisite: ITN 260. Lecture 4 hours per week.

ITN 266
Network Security Layers
4 credits
Provides an in-depth exploration of various security layers needed to protect the network. Explores network security from the viewpoint of the environment in which the network operates and the necessity to secure that environment to lower the security risk to the network. Includes physical security, personnel security, operating system security, software security and database security. Prerequisite: ITN 260. Lecture 4 hours per week.

ITN 267
Legal Topics in Network Security
3 credits
Conveys an in-depth exploration of the civil and common law issues that apply to network security. Explores statutes, jurisdictional, and constitutional issues related to computer crimes and privacy. Includes rules of evidence, seizure and evidence handling, court presentation and computer privacy in the digital age. ITN 260 should be taken prior to or with ITN 267. Lecture 3 hours per week.

ITN 269
Network Security Layers
4 credits
Provides an in-depth exploration of various security layers needed to protect the network. Explores network security from the viewpoint of the environment in which the network operates and the necessity to secure that environment to lower the security risk to the network. Includes physical security, personnel security, operating system security, software security and database security. Prerequisite: ITN 260. Lecture 4 hours per week.

ITN 270
Advanced Linux Network Administration
4 credits
Focuses instruction on the configuration and administration of the Linux operating system as a network server. Emphasizes the configuration of common network services such as routing, http, DNS, DHCP, ftp, telnet, SMB, NFS, and NIS. Prerequisite: ITN 170. Lecture 4 hours per week.

ITN 275
Incident Response and Computer Forensics
4 credits
Prepares the student for a role on an organizational IT support staff where the need for resolving computer incidents is becoming increasingly common. Includes legal and ethical issues of search and seizure of computer and peripheral storage media leading to laboratory exercises examining computers configured with mix of both simulated criminal and other activities which are not criminal in nature, but do violate scenario-driven organizational policy. Requires the student to make choices/recommendations for further pursuit of forensics evidence gathering and analysis. Students will select and gather the utilities and procedures necessary for a court-acceptable forensics toolkit which will then be used to gather and examine specially configured desktop computers. Students will then participate in a mock court proceeding using the collected evidence. Prerequisite: ITN 260. Lecture 4 hours per week.

ITN 293
Windows SQL Server
4 credits
Stresses instruction in planning, installing, configuring, administering, maintaining, optimizing, auditing, and troubleshooting Windows SQL Server. Prerequisite: ITN 115 or instructor permission. Lecture 4 hours per week.

ITP 100
Software Design
4 credits
Introduces principles and practices of software development. Includes instruction in critical thinking, problem solving skills, and essential programming logic in structured and object-oriented design using contemporary tools. Lecture 4 hours per week.

ITP 112
Visual Basic.NET I
4 credits
Concentrates instruction in fundamentals of object-oriented programming using Visual Basic.NET and the .NET Framework. Emphasizes program construction, algorithm development, coding, debugging, and documentation
of graphical user interface applications. \textit{Prerequisite: ITP 100 or programming experience. Lecture 4 hours per week.}

\textbf{ITP 120}\n\textbf{Java Programming I}\n4 credits\nEntails instruction in fundamentals of object-oriented programming using Java. Emphasizes program construction, algorithm development, coding, debugging, and documentation of console and graphical user interface applications. \textit{Prerequisite: ITP 100 or programming experience. Lecture 4 hours per week.}

\textbf{ITP 132}\n\textbf{C++ Programming I}\n4 credits\nCenters instruction in fundamentals of object-oriented programming and design using C++. Emphasizes program construction, algorithm development, coding, debugging, and documentation of C++ applications. \textit{Prerequisite: ITP 100 or programming experience. Lecture 4 hours per week.}

\textbf{ITP 136}\n\textbf{C# Programming I}\n4 credits\nPresents instruction in fundamentals of object-oriented programming and design using C#. Emphasizes program construction, algorithm development, coding, debugging, and documentation of C# applications using the .NET Framework. \textit{Prerequisite: ITP 100 or programming experience. Lecture 4 hours per week.}

\textbf{ITP 160}\n\textbf{Introduction to Game Design and Development}\n4 credits\nIntroduces object-oriented game design and development. Provides overview of the game design and development process and underlines the historical context, content creation strategies, game careers, and future trends in the industry. Utilizes a game language environment to introduce game design, object-oriented paradigms, software design, software development and product testing. Teaches skills of writing a game design document and creating a game with several levels and objects. Integrates 2D animations, 3D models, sound effects, and background music as well as graphic backgrounds. \textit{Prerequisite: ITP 100 or programming experience. Lecture 4 hours per week.}

\textbf{ITP 193}\n\textbf{Introduction to Modeling and Simulation}\n3 credits\nIntroduces the student to the concepts and terminology of the modeling and simulation field. Familiarizes the student with the types of software used. Exposes student to simulation software through projects. Includes analysis of project results. Discusses distributed simulation techniques and simulation protocols. \textit{Prerequisite: ITE 115. Lecture 3 hours per week.}

\textbf{ITP 212}\n\textbf{Visual Basic.NET II}\n4 credits\nIncludes instruction in application of advanced event-driven techniques to application development. Emphasizes database connectivity, advanced controls, web forms, and web services using Visual Basic.NET. \textit{Prerequisite: ITP 112. Lecture 4 hours per week.}

\textbf{ITP 220}\n\textbf{Java Programming II}\n4 credits\nImparts instruction in application of advanced object-oriented techniques to application development using Java. Emphasizes database connectivity, inner classes, collection classes, networking, and threads. \textit{Prerequisite: ITP 120. Lecture 4 hours per week.}

\textbf{ITP 232}\n\textbf{C++ Programming II}\n4 credits\nPresents in-depth instruction of advanced object-oriented techniques for data structures using C++. \textit{Prerequisite: ITP 132. Lecture 4 hours per week.}

\textbf{ITP 236}\n\textbf{C# Programming II}\n4 credits\nFocuses instruction in advanced object-oriented techniques using C# for application development. Emphasizes database connectivity and networking using the .NET Framework. \textit{Prerequisite: ITP 136. Lecture 4 hours per week.}

\textbf{ITP 240}\n\textbf{Server Side Programming}\n4 credits\nCenters around instruction in fundamentals of Internet application design, development, and deployment. Includes implementation of server component models, security, and database connectivity using server-side programming. \textit{Prerequisites: ITD 132 and ITD 110. Lecture 4 hours per week.}

\textbf{ITP 242}\n\textbf{ASP Server Side Scripting}\n4 credits\nProvides instruction in creation of ASP.NET Web applications to deliver dynamic content to a Web site utilizing server controls, web forms, and web services to accomplish complex data access tasks. \textit{Prerequisite: ITD 132. Lecture 4 hours per week.}

\textbf{ITP 251}\n\textbf{Systems Analysis and Design}\n3 credits\nFocuses on application of information technologies (IT) to system life cycle methodology, systems analysis, systems design, and system implementation practices. Covers methodologies related to identification of information requirements, feasibility in the areas of economic, technical and social requirements, and related issues are included in course content. Software applications may be used to enhance student skills. \textit{Prerequisite: ITP 100 and one semester of an approved programming language. Lecture 3 hours per week.}
ITP 293
Modeling and Simulation Protocols
4 credits
Expands techniques of object-oriented programming. Familiarizes the student with the fundamentals of distributed simulation. Presents a historical perspective of modeling and simulation network communication protocols and utilizes these protocols in sample applications. Prerequisite: ITP 193 (Introduction to Modeling and Simulation) and ITP 120. Lecture 4 hours per week.

ITP 293
Modeling and Simulation Applications
4 credits
Expands understanding of protocols within distributed applications. Utilizes modeling and simulation protocols for network communication in distributed simulations. Presents programming of behavioral and physical models in current industry distributed simulation applications. Prerequisite: ITP 293 (Modeling and Simulation Protocols). Lecture 4 hours per week.

Japanese

JPN 15 - 16
Japanese for Business I-II
2 credits each
Introduces students with little or no prior instruction in the Japanese language to the basic vocabulary and conversation skills needed for various situations in business settings, including cultural mores and customs. Prerequisite: JPN 15 for JPN 16 or previous experience with the language. Lecture 2 hours per week.

JPN 17 - 18
Japanese for the Tourist I-II
2 credits each
Introduces spoken Japanese to people intending to travel to a Japanese speaking country. Lecture 2 hours per week.

Legal Administration (Paralegal Studies)

LGL 110
Introduction to Law and the Legal Assistant
3 credits
Introduces various areas of law in which a legal assistant may be employed. Includes study of court systems (Virginia and federal) as well as a brief overview of criminal law, torts, domestic relations, evidence, ethics, the role of the legal assistant, and other areas of interest. Prerequisite: ENG 3 and ENG 5 or placement scores indicating readiness for ENG 111. Lecture 3 hours per week.

LGL 115
Real Estate Law for Legal Assistants
3 credits
Studies law of real property and gives in-depth survey of the more common types of real estate transactions and conveyances such as deeds, contracts, leases, and deeds of trust. Focuses on drafting these various instruments and studies the system of recording and search of public documents. LGL 110 should be taken prior to or with LGL 115. Lecture 3 hours per week.

LGL 117
Family Law
3 credits
Studies elements of a valid marriage, grounds for divorce and annulment, separation, defenses, custody, support, adoptions, and applicable tax consequences. Includes property settlement, pre- and ante-nuptial agreements, pleadings, and rules of procedure. May include specific federal and Virginia consumer laws. LGL 110 should be taken prior to or with LGL 117. Lecture 3 hours per week.

LGL 118
Family Mediation
3 credits
Explores concepts in the resolution of family disputes, such as a comparison of family mediation with general mediation, custody and visitation, divorce and separation, parenting issues and parenting arrangements, support and property issues, tax consequences of divorce, and ethics of family mediation. Focuses on experiential learning as informed by role-play, demonstration, and critique. Introduces students to the variety of settings in which family mediation processes are utilized, and the ethical and unauthorized practice of law opinions encountered in family mediation practice. Prerequisite: LGL 115. Lecture 3 hours per week.

LGL 125
Legal Research
3 credits
Provides an understanding of various components of a law library, and emphasizes research skills through the use of digests, encyclopedias, reporter systems, codes, Shepard’s Citations, ALR, and other research tools. May include overview of computer applications and writing projects. Prerequisite: LGL 110. Lecture 3 hours per week.

LGL 126
Legal Writing
3 credits
Studies proper preparation of various legal documents, including legal memoranda, letters, and pleadings. Involves practical applications. May include case and appellate briefs. Prerequisites: ENG 111 and LGL 125. Lecture 3 hours per week.
course descriptions

LGL 130
Law Office Administration and Management
3 credits
Introduces management principles and systems applicable to law firms, including record keeping, disbursements, escrow accounts, billing, and purchasing. May include accounting methods and software packages applicable to law firms. Lecture 3 hours per week.

LGL 150
Law and Mediation
3 credits
Explores concepts, such as conflict resolution, communication and problem solving, as the basis for the exploration of the mediation process. Significant focus is on experiential learning, as informed by initial introduction to the theoretical basis. Students will also be introduced to the variety of settings in which mediation processes are utilized, and the utilization of mediation within the Commonwealth of Virginia. Co-requisite: LGL 110. Lecture 3 hours per week.

LGL 200
Ethics for the Legal Assistant
1 credit
Examines general principles of ethical conduct applicable to legal assistants. Includes the application of rules of ethics to the practicing legal assistant. Prerequisite or Co-requisite: LGL 110. Lecture 1 hour per week.

LGL 210
Virginia and Federal Procedure
3 credits
Examines the rules of procedure in the Virginia and federal court systems, including the Federal Rules of Civil Procedure and the Rules of Practice and Procedure in the District Court, Circuit Court, Court of Appeals, and Supreme Court of Virginia. Lecture 3 hours per week.

LGL 215
Torts
3 credits
Studies fundamental principles of the law of torts. May include preparation and use of pleadings and other documents involved in the trial of a civil action. Emphasizes personal injury, products liability, and malpractice cases. Prerequisite: LGL 110. Lecture 3 hours per week.

LGL 216
Trial Preparation and Discovery Practice
3 credits
Examines the trial process, including the preparation of a trial notebook, pretrial motions, and orders. May include preparation of interrogatories, depositions, and other discovery tools used in assembling evidence in preparation for the trial or an administrative hearing. Prerequisite: LGL 110. Lecture 3 hours per week.

LGL 218
Criminal Law
3 credits
Focuses on major crimes, including their classification, elements of proof, intent, conspiracy, responsibility, parties, and defenses. Emphasizes Virginia law. May include general principles of applicable constitutional law and criminal procedure. Prerequisite: LGL 110. Lecture 3 hours per week.

LGL 225
Estate Planning and Probate
3 credits
Introduces various devices used to plan an estate, including wills, trusts, joint ownership and insurance. Considers various plans in light of family situations and estate objectives. Focuses on practices involving administration of an estate, including taxes and preparation of forms. Prerequisite: LGL 110. Lecture 3 hours per week.

LGL 226
Real Estate Abstracting
3 credits
Reviews aspects of abstracting title to real estate, recordation of land transactions, liens, grantor-grantee indices, warranties, covenants, restrictions, and easements. Prerequisite: LGL 115. Lecture 3 hours per week.

LGL 230
Legal Transactions
3 credits
Presents an in-depth study of general contract law, including formation, breach, enforcement, and remedies. May include an overview of UCC sales, commercial paper, and collections. Prerequisite or Co-requisite: LGL 110. Lecture 3 hours per week.

LGL 234
Intellectual Property Law
3 credits
Presents outline of federal copyright and federal and state trademark law. Examines the functions of legal assistants in preparing registrations as well as infringement litigation. Covers related areas of law including trade secrecy and differences between various types of intellectual property. Examines the basics of patent law. Prerequisite: LGL 235. Lecture 3 hours per week.

LGL 235
Legal Aspects of Business Organizations
3 credits
Studies fundamental principles of agency law and the formation of business organizations. Includes sole proprietorships, partnerships, corporations, limited liability companies, and other business entities. Reviews preparation of the documents necessary for the organization and operation of businesses. Prerequisite: LGL 110. Lecture 3 hours per week.
LGL 238 Bankruptcy
3 credits
Provides a practical understanding of non-bankruptcy alternatives and the laws of bankruptcy including Chapters 7, 11, 12 and 13 of the Bankruptcy Code. Emphasis will be placed on preparing petitions, schedules, statements and other forms. Prerequisite or Co-requisite: LGL 110. Lecture 3 hours per week.

MDA 103 Medical Assistant Science III
2 credits
Prepares students to perform clinical assistant skills and emergency care procedures, including basic life support, bandage application, physical assessment of patient, surgical asepsis, and basic diagnostic techniques. Prerequisite: Instructor permission. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

MDA 104 Medical Assistant Science IV
3 credits
Prepares students to perform diagnostic tests and assist with physical examinations including basic radio logic procedures, ECG administration, basic pulmonary functions, and allergy testing. Prerequisite: Instructor permission. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MDA 107 Pharmacology for Medical Assistants
2 credits
Focuses on the administration of medications by the medical assistant. Introduces general principles of drug action, pharmacology of the major drug classifications, and drug side effects. Prerequisite: Instructor permission. Lecture 2 hours per week.

MDA 203 Medical Office Procedures
3 credits
Instructs students in the practice of the management of a medical office in areas such as receptionist duties, telephone techniques, appointment scheduling, verbal and written communications, medical and non-medical record management. Explains library and editorial duties, inventory, care of equipment and supplies, security, office maintenance, management responsibilities, placement, and professional ethics and professionalism. Prerequisite: Instructor permission. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

MDA 207 Medical Law and Ethics
2 credits
Instructs students in the legal relationship of the physician, patient, and medical assistant; professional liabilities, Medical Practice Acts, professional attitudes and behavior and the types of medical practice. Also includes a basic history of medicine. Prerequisite: Instructor permission. Lecture 2 hours per week.

MDA 208 Medical Office Coding
2 credits
Introduces students to ICD-9 and CPT-4 classification coding systems used in physician offices, hospitals, and ambulatory care settings. Prerequisite: Instructor permission. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

MDA 209 Medical Office Insurance
2 credits
Focuses on various medical insurance policies with in-depth study of health insurance and managed care including capitation versus fee for service in the HMO area. Discusses managed care companies in this area and their requirements. Prerequisite: Instructor permission. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

MDA 210 Medical Office Software Applications
1 credit
Instructs students in the use of software in the medical office including billing, scheduling appointments, and patient records. Laboratory 2 hours per week.

MDA 221 Diagnostic Laboratory Procedures
4 credits
Instructs students in the practice of laboratory procedures commonly performed in a physician’s office. Includes the use and care of equipment.
and supplies, the processing of reports and requisitions, terminology, and the safety of patient and student. Includes urinalysis and hematology testing. **Prerequisite:** Instructor permission. **Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.**

### Mechanical Engineering Technology

**MEC 111 Materials for Industry**
3 credits
Studies the nature, structure, properties, and typical applications of metallic, polymeric, ceramic, and composite materials. Promotes job entry understanding of basic material concepts. Focuses on applications of materials as well as the behavior of materials subjected to external stresses. Addresses as required the earth’s limited material resources, energy efficient materials, dependence on foreign sources of materials, material systems, thermal processing, and electronic-related materials. **Lecture 3 hours per week.**

**MEC 120 Principles of Machine Technology**
3 credits
Studies fundamental machine operations and practices, including layout, measuring devices, hand tools, drilling, reaming, turning between centers, cutting tapers and threads, and milling; fabrication of mechanical parts on drill press, lathe and mill. **Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.**

**MEC 126 Computer Programming for Technologists**
3 credits
Introduces computer software and programming. Covers programming for the microcomputer using high level languages. Teaches computer solutions of mathematical problems. **Prerequisite:** ELE 150. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

**MEC 131 Mechanics I - Statics for Engineering Technology**
3 credits
Teaches Newton’s laws, resultants and equilibrium of force systems, trusses and frames, determination of centroids, and distributed loads and moments of inertia. Introduces dry friction and force systems in space. **Prerequisite:** MTH 116 or MTH 164. **Lecture 3 hours per week.**

**MEC 132 Mechanics II - Strength of Materials for Engineering Technology**
3 credits
Teaches the concepts of stress and strain. Provides an analysis of stresses and deformations in loaded members, connectors, shafts, beams, columns, and combined stress. **Prerequisite:** MEC 131. **Lecture 3 hours per week.**

**MEC 268 Fluid Power - Hydraulic Systems**
3 credits
Studies hydraulic components and their integration into complex systems including system analysis and trouble-shooting. Introduces design considerations necessary for repair and modification. Covers closed loop control and proportional valves with electronic control. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

**MEC 269 Fluid Power - Pneumatic Systems**
3 credits
Teaches pneumatic components, systems and trouble analysis. Introduces basic design for modification and repair. Covers open-loop control, fluidics, robotics and computer controls. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

### Mental Health

**MEN 135 Human Services and the Law**
3 credits
Examines current issues in mental health and impact of federal and state laws on delivery of services. Considers issues of civil commitment of the mentally ill and confidentiality and rights of clients. **Lecture 3 hours per week.**

### Marketing

**MKT 100 Principles of Marketing**
3 credits
Presents principles, methods, and problems involved in marketing to consumers and organizational buyers. Discusses problems and policies connected with distribution and sale of products, pricing, promotion, and buyer motivation. Examines variations of marketing research, legal, social, ethical, e-commerce, and international considerations in marketing. **Lecture 3 hours per week.**

**MKT 110 Principles of Selling**
3 credits
Presents a fundamental, skills-based approach to selling and relationship building. Emphasizes learning effective interpersonal communication skills in all areas of the sales process through skill-building activities. Examines entry-level sales careers in retailing, wholesaling, services and industrial selling. **Lecture 3 hours per week.**

**MKT 160 Marketing for Small Business**
3 credits
Presents the development of the marketing mix for a small business. Includes areas such as product development, pricing, promotion, salesmanship, customer relations, and consumer behavior. **Lecture 3 hours per week.**
MKT 216
Retail Organization and Management
3 credits
Examines the organization of the retail establishment to accomplish its goals in an effective and efficient manner. Includes study of site location, internal layout, store operations, and security. Examines the retailing mix, the buying or procurement process, pricing, and selling. Studies retail advertising, promotion, and publicity as a coordinated effort to increase store traffic. Lecture 3 hours per week.

MKT 220
Principles of Advertising
3 credits
Emphasizes the role of advertising in the marketing of goods, services, and ideas. Discusses the different uses of advertising: types of media; how advertising is created; agency functions; and legal, social, and economic aspects of the industry. Introduces advertising display, copy and art work preparation, printing and selection of media. Lecture 3 hours per week.

MKT 260
Customer Service Management
3 credits
Examines the role of customer service in achieving a firm's long-term goals; discusses the basic principles of effective customer service; explores the tasks and responsibilities of a customer service manager. Includes such topics as purpose of customer service; establishment of customer service goals and policies; recruitment, selection and training of customer service employees; motivation techniques; empowering employees for better decision making; and evaluation of customer service employees and program. Lecture 3 hours per week.

MKT 271
Consumer Behavior
3 credits
Examines the various influences affecting consumer buying behavior before, during, and after product purchases.

MKT 276
International Marketing Management
3 credits
Presents the process of marketing and management and applies it to the marketing of products within the global marketplace. Introduces the student to activities involving the gathering and analyzing of information in the development and implementation of an international marketing plan. Lecture 3 hours per week.

MKT 282
Principles of E-Commerce
3 credits
Studies on-line business strategies, and the hardware and software tools necessary for Internet commerce. Includes the identification of appropriate target segments, the development of product opportunities, pricing structures, distribution channels and execution of marketing strategies. Lecture 3 hours per week.

Military Science

MSC 111-112
Military Science I-II
2 credits each
Covers the first year of general military science: American military history, introduction to operations and basic tactics, map and aerial photo reading, and leadership laboratory. Courses offered only in cooperation with four-year colleges authorized to offer Army ROTC programs. Lecture 2 hours per week.

MSC 125
Sea Power and Maritime Affairs
3 credits
Provides an in-depth assessment of the broad principles, concepts and elements of sea power with historical and modern applications to the United States and other world powers. Lecture 3 hours per week.

MSC 130
Introduction to Naval Science
3 credits
Provides an introduction for midshipmen to the organization of the naval service, the varied career opportunities available, the long-held customs and traditions of the service, basic leadership, ethics and character development, the duties of a junior officer and Navy policies on wellness issues. Prepares NROTC midshipmen for their first experience onboard a Navy ship by imparting basic information concerning shipboard procedures and safety. Lecture 3 hours per week.

MSC 211-212
Military Science III-IV
2 credits each
Focuses on the second year of general military science: American military history, introduction to operations and basic tactics, map and aerial photo reading, and leadership laboratory. Courses offered only in cooperation with four-year colleges authorized to offer Army ROTC programs. Lecture 2 hours per week.

MSC 230
Naval Ship Systems I: Naval Engineering
3 credits
Provides an understanding of the physical properties and laws of thermodynamic systems, shipboard auxiliary systems, main propulsion, and electrical theory of shipboard power generation and distribution systems. Examines the criteria of ship design for seaworthiness, structural integrity and operational employment, the principles of fluid dynamics and shipboard safety. Lecture 3 hours per week.

MSC 231
Naval Ship Systems II: Weapons
3 credits
Provides an in-depth understanding of Naval Weapons, their associated
systems, and the integration of these weapon systems into the overall naval strategy. **Lecture 3 hours per week.**

### Mathematics

**MTH 1**

**Developmental Mathematics**

1 credit

Designed to bridge the gap between a weak mathematical foundation and the knowledge necessary for the study of mathematics courses in technical, professional, and transfer programs. Topics may include arithmetic, algebra, geometry, and trigonometry. **Lecture 1 hour per week.**

**MTH 2**

**Arithmetic**

4 credits

Covers arithmetic principles and computations including whole numbers, fractions, decimals, percents, measurement, graph interpretation, geometric forms, and applications. Develops the mathematical proficiency necessary for selected curriculum entrance. **Credits not applicable toward graduation. Lecture 4 hours per week.**

**MTH 3**

**Algebra I**

5 credits

Covers the topics of Algebra I including real numbers, equations and inequalities, exponents, polynomials, Cartesian coordinate system, rational expressions, and applications. Develops the mathematical proficiency necessary for selected curriculum entrance. **Credits not applicable toward graduation. Lecture 5 hours per week.**

**MTH 4**

**Algebra II**

5 credits

Expands upon the topics of Algebra I including rational expressions, radicals and exponents, quadratic equations, systems of equations, and applications. Develops the mathematical proficiency necessary for selected curriculum entrance. **Credits not applicable toward graduation. Lecture 5 hours per week.**

**MTH 103-104**

**Applied Technical Mathematics I-II**

3 credits each

Presents a review of arithmetic, elements of algebra, geometry, and trigonometry. Directs applications to specialty areas. **Prerequisites: A placement recommendation for MTH 04 and Algebra I or equivalent. Lecture 5 hours per week.**

**MTH 115-116**

**Technical Mathematics I-II**

3 credits each

Presents algebra through exponential and logarithmic functions, trigonometry, vectors, analytic geometry, and complex numbers. **Prerequisites: A placement recommendation for MTH 103 and one unit of high school mathematics or equivalent. Lecture 3 hours per week.**

**MTH 121**

**Fundamentals of Mathematics I**

3 credits

Covers concepts of numbers, fundamental operations with numbers, formulas and equations, graphical analysis, binary numbers, Boolean and matrix algebra, linear programming, and elementary concepts of statistics. **Prerequisites: A placement recommendation for MTH 121 and Arithmetic or equivalent. Lecture 3 hours per week.**

**MTH 126**

**Mathematics for Allied Health**

3 credits

Presents scientific notation, precision and accuracy, decimals and percents, ratio and proportion, variation, simple equations, techniques of graphing, use of charts and tables, logarithms, and the metric system. **Prerequisites: A placement recommendation for MTH 126 and one unit of high school mathematics or equivalent. Lecture 3 hours per week.**

**MTH 150**

**Topics in Geometry**

3 credits

Presents the fundamentals of plane and solid geometry and introduces non-Euclidean geometries and current topics. **Prerequisites: A placement recommendation for MTH 150 and Algebra I and Geometry or equivalent. Lecture 3 hours per week.**

**MTH 152**

**Mathematics for the Liberal Arts II**

3 credits

Presents topics in functions, combinations, probability, statistics and algebraic systems. **Prerequisites: A placement recommendation for MTH 152 and Algebra I, Algebra II, and Geometry or equivalent. Lecture 3 hours per week.**

**MTH 158**

**College Algebra**

3 credits

Covers the structure of complex number systems, polynomials, rational expressions, graphing, systems of equations and inequalities and functions, quadratic and rational equations and inequalities. **Prerequisites: A placement recommendation for MTH 158 and Algebra I, Algebra II and Geometry or equivalent. Lecture 3 hours per week.**

**MTH 163**

**Precalculus I**

3 credits

Presents college algebra, matrices, and algebraic, exponential, and logarithmic functions. **Prerequisites: A placement recommendation for MTH 163 and Algebra I, Algebra II, and Geometry or equivalent. (Credit will not be awarded for both MTH 163 and MTH 166.) Lecture 3 hours per week.**
MTH 164  
Precalculus II  
3 credits  
Presents trigonometry, analytic geometry, and sequences and series.  
Prerequisite: MTH 163 or equivalent.  
(Credit will not be awarded for both MTH 164 and MTH 166.) Lecture 3 hours per week.

MTH 166  
Precalculus with Trigonometry  
5 credits  
Presents college algebra, analytic geometry, trigonometry, and algebraic, exponential, and logarithmic functions.  
Prerequisites: A placement recommendation for MTH 166 and Algebra I, Algebra II, and Geometry or equivalent. (Credit will not be awarded for both MTH 163-164 and MTH 166.) Lecture 5 hours per week.

MTH 173  
Calculus with Analytic Geometry I  
5 credits  
Presents analytic geometry and the calculus of algebraic and transcendental functions including the study of limits, derivatives, differentials, and introduction to integration along with their applications. Designed for mathematical, physical, and engineering science programs.  
Prerequisites: A placement recommendation for MTH 173 and four units of high school mathematics including Algebra I, Algebra II, Geometry, and Trigonometry or equivalent. (Credit will not be awarded for more than one of MTH 173, MTH 175, or MTH 273.) Lecture 5 hours per week.

MTH 174  
Calculus with Analytic Geometry II  
4 credits  
Continues the study of analytic geometry and the calculus of algebraic and transcendental functions including rectangular, polar, and parametric graphing, indefinite and definite integrals, methods of integration, and power series along with their applications.

MTH 240  
Statistics  
3 credits  
Presents an overview of statistics, including descriptive statistics, elementary probability, probability distributions, estimation, hypothesis testing, and correlation and regression.  
Prerequisites: A placement recommendation for MTH 240, Algebra I and II or equivalent. (Credit will not be awarded for both MTH 240 and MTH 241.) Lecture 3 hours per week.

MTH 270  
Applied Calculus  
3 credits  
Introduces limits, continuity, differentiation and integration of algebraic and transcendental functions, techniques of integration, and partial differentiation.  
Prerequisite: MTH 163 or MTH 166 or equivalent. (Credit will not be awarded for more than one of MTH 174, MTH 176 or MTH 274.) Lecture 4 hours per week.

MTH 277  
Vector Calculus  
4 credits  
Presents vector-valued functions, partial derivatives, multiple integrals, and topics from the calculus of vectors. Designed for mathematical, physical, and engineering science programs.  
Prerequisite: MTH 174 or equivalent. Lecture 4 hours per week.

MTH 279  
Ordinary Differential Equations  
4 credits  
Introduces ordinary differential equations. Includes first-order differential equations, second and higher-order ordinary differential equations with applications. Designed for mathematical, physical, and engineering science programs.  
Prerequisite: MTH 174 or equivalent. Lecture 4 hours per week.

MUS 101-102  
Basic Musicianship I-II  
3 credits each  
Provides exercises leading to knowledge and skill in the rudiments of music. Includes rhythmic notation as well as scales, keys, and intervals along with exercises in sight reading and ear training. Lecture 3 hours per week.

MUS 111-112  
Music Theory I-II  
4 credits each  
Discusses elements of musical construction of scales, intervals, triads, and chord progressions. Develops ability to sing at sight and write from dictation. Introduces the analysis of the Bach chorale style. Expands facility with harmonic dictation and enables the student to use these techniques at the keyboard. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

MUS 121-122  
Music Appreciation I-II  
3 credits each  
Increases the variety and depth of the student's interest, knowledge, and involvement in music and related cultural activities. Acquaints the student with traditional and twentieth century music literature, emphasizing the relationship music has as an art form with man and society. Increases the student's awareness of the composers and performers of all eras through listening and concert experiences. Lecture 3 hours per week.

MUS 131-132  
Class Voice I-II  
2 credits each  
Introduces the many aspects of singing from the physical act through the aesthetic experience. The course is designed for the beginning singer who desires vocal improvement, and for the voice major as an addition to and extension of skills and knowledge necessary for artistic development.
Introduces appropriate repertoire. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

**MUS 136**  
**Applied Music - Voice**  
2 credits  
Teaches singing, proper breath control, diction, and development of tone. Studies the standard vocal repertoire. Two half-hour lessons per week. 4 hours practice required. **Prerequisite:** Divisional approval.

**MUS 137**  
**Chorus Ensemble**  
1 credit  
Ensemble consists of performance from the standard repertoire, including study of ensemble techniques and interpretation. **Prerequisite:** Divisional approval. May be repeated for credit. Laboratory 3 hours per week.

**MUS 141-142**  
**Class Piano I-II**  
2 credits each  
Offers the beginning piano student activities in learning musical notation, accomplishing sight reading skills, and in mastering techniques of keyboard playing. Presents appropriate literature. Open to all students and may be used to fulfill applied minor instrument requirement for music major. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

**MUS 145**  
**Applied Music - Keyboard**  
2 credits  
Teaches piano, organ, harpsichord, or synthesizer. Studies the standard repertoire. Two half-hour lessons per week. 4 hours practice required. **Prerequisite:** Divisional approval.

**MUS 155**  
**Applied Music - Woodwinds**  
2 credits  
Teaches fundamentals of the woodwind instruments. Studies the standard repertoire. Two half-hour lessons per week. 4 hours practice required. **Prerequisite:** Divisional approval.

**MUS 159**  
**Improvisational Techniques**  
3 credits  
Introduces the principles of improvisation using harmonic structures and progressions from the period of common practice. Includes listening to and performing music of the standard jazz and popular repertoire. Develops performance skills utilizing specific improvisational devices employed in different historical periods. **Prerequisite:** selected Applied Music or freshman level proficiency. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**MUS 165**  
**Applied Music - Strings**  
2 credits  
Teaches fundamentals of string instruments, harp or guitar. Studies the standard repertoire. Two half-hour lessons per week. 4 hours practice required. **Prerequisite:** Divisional approval.

**MUS 175**  
**Applied Music - Brass**  
2 credits  
Teaches fundamentals of brass instruments. Studies the standard repertoire. Two half-hour lessons per week. 4 hours practice required. **Prerequisite:** Divisional approval.

**MUS 185**  
**Applied Music - Percussion**  
2 credits  
Teaches fundamentals of percussion instruments. Studies the standard repertoire. Two half-hour lessons per week. 4 hours practice required. **Prerequisite:** Divisional approval.

**MUS 211-212**  
**Advanced Music Theory I-II**  
4 credits each  
Increases facility in the analysis and usage of diatonic and chromatic harmonies. Continues harmonic analysis of Bach style. Includes exercises in sight-singing, ear-training, and keyboard harmony. **Prerequisite:** MUS 111-112 or equivalent. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

**MUS 221-222**  
**History of Music I-II**  
3 credits each  
Presents the chronology of musical styles from antiquity to the present time. Relates the historical development of music to parallel movements in art, drama, and literature. Develops techniques for listening analytically and critically to music. Lecture 3 hours per week.

**MUS 236**  
**Advanced Applied Music - Voice**  
2 credits  
Continues MUS 136. Two half-hour lessons per week. 4 hours practice required. **Prerequisite:** Divisional approval.

**MUS 237**  
**Chorus Ensemble**  
1 credit  
Continues MUS 137. Laboratory 3 hours per week.

**MUS 245**  
**Advanced Applied Music - Keyboard**  
2 credits  
Continues MUS 145. Two half-hour lessons per week. 4 hours practice required. **Prerequisite:** Divisional approval.

**MUS 265**  
**Advanced Applied Music - Strings**  
2 credits  
Continues MUS 165. Two half-hour lessons per week. 4 hours practice required. **Prerequisite:** Divisional approval.
natural science

**NAS 115**  
*Science in the Workplace*  
3 credits  
Explores concepts of basic physical sciences as they apply to the workplace. Presents scientific methods, energy, heat, and temperature as related to various materials used in the workplace. Designed for trade workers that work with a variety of materials in many different applications. Assists workers with the physical properties of materials as they relate to various manufacturing methods. **Lecture 3 hours per week.**

**NAS 120**  
*Introductory Meteorology*  
3 credits  
Studies cloud formation, weather maps, forecasting, and wind systems with emphasis on local weather patterns. **Lecture 3 hours per week.**

**NAS 125**  
*Meteorology*  
4 credits  
Presents a non-technical survey of fundamental meteorology. Focuses on the effects of weather and climate on humans and their activities. Serves for endorsement or recertification of earth science teachers. **Lecture 3 hours. Recitation and laboratory 2 hours. Total 5 hours per week.**

**NAS 130**  
*Elements of Astronomy*  
4 credits  
Covers history of astronomy and its recent developments. Stresses the use of astronomical instruments and measuring techniques and includes the study and observation of the solar system, stars, and galaxies. **Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.**

**NAS 131-132**  
*Astronomy I-II*  
4 credits each  
Studies the major and minor bodies of the solar system, stars and nebulae of the Milky Way, and extragalactic objects. Examines life and death of stars, origin of the universe, history of astronomy, and instruments and techniques of observation. **Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.**

**NAS 177**  
*Upper Extremity Anatomy and Kinesiology*  
2 credits  
Focuses on the upper extremity anatomy to include the entire shoulder girdle and the impact of pathology and injury related to the skeletal, nervous and muscular systems. Covers planes of movement of the upper extremity associated with basic physics and types of levers. **Lecture 2 hours per week.**

**NAS 215**  
*Man in His Environment*  
6 credits  
Analyses ecological and technological forces at work in today's world including air and water pollution, pesticides, and land use. **Lecture 4 hours per week. Recitation and laboratory 6 hours per week. Total 10 hours per week.**

nursing

**NUR 27**  
*Nurses Aide I*  
4 credits  
Teaches care of older patients with emphasis on the social, emotional, and spiritual needs. Covers procedures; communication and interpersonal relations; observation, charting and reporting; safety and infection control; anatomy and physiology; personal care, nutrition and patient feeding; death and dying. **Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.**

**NUR 108**  
*Nursing Principles and Concepts*  
6 credits  
Introduces principles of nursing, health and wellness concepts, and the nursing process. Identifies nursing strategies to meet the multidimensional needs of individuals. Includes math computational skills, basic computer instruction related to the delivery of nursing care, introduction to the profession of nursing, nursing process, documentation; basic needs related to integumentary system, teaching/learning, stress, psychosocial, safety, nourishment, elimination, oxygenation, circulation, rest, comfort, sensory, fluid and electrolyte and mobility needs in adult clients. Also includes care of the pre/post operative client. Provides supervised learning experience in college nursing laboratories and/or cooperating agencies. **Prerequisite: Admission to the Nursing Program. Lecture 3 hours. Laboratory 9 hours. Total 12 hours per week.**

**NUR 115**  
*LPN Transition*  
6 credits  
Introduces the role of the registered nurse through concepts and skill development in the discipline of professional nursing. This course serves as a bridge course for licensed practical nurses and is based upon individualized articulation agreements, mobility exams, or other assessment criteria as they relate to local programs and service areas. Includes math computational skills and basic computer instruction related to the delivery of nursing care. **Lecture 4 hours. Laboratory 6 hours. Total 10 hours per week.**

**NUR 130**  
*Physical Assessment and Basic Pharmacology*  
3 credits  
Teaches a systematic approach to performing physical assessment skills and basic pharmacological concepts. Includes basic principles of data collection and basic analysis using skills of interviewing and techniques of inspection, palpation, percussion and auscultation. Principles of pharmacology include dosage calculations, major drug classifications, drug legislation, legal aspects of medication administration, drug action on specific body systems,
and basic computer applications. Provides supervised learning experiences in a college laboratory. Lecture 1 hour. Laboratory 6 hours. Total 7 hours per week.

NUR 170 Essentials of Medical/Surgical Nursing
4 credits
Focuses on the care of individuals/families requiring medical or surgical treatment. Uses all components of the nursing process with increasing degrees of skill. Includes mathematical computational skills and basic computer instruction related to the delivery of nursing care. Provides supervised learning experiences in college nursing laboratories and/or cooperating agencies. Prerequisites: NUR 108 and NUR 130. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

NUR 180 Essentials of Maternal/Newborn Nursing
4 credits
Utilizes the concepts of the nursing process in caring for families in the antepartum, intrapartum, and postpartum periods. Includes math computational skills and basic computer instruction related to the delivery of nursing care. Provides supervised learning experiences in college nursing laboratories and/or cooperating agencies. Prerequisites: NUR 108 and NUR 130. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

NUR 201 Psychiatric Nursing
4 credits
Focuses on the care of individuals/families requiring clinical treatment. Uses all components of the nursing process with increasing degrees of skill. Includes math computational skills and basic computer instruction related to the delivery of nursing care, alterations in behavior, eating disorders, mood disorders, anxiety, chemical dependency and dementias. Provides supervised learning experiences in college nursing laboratories and/or cooperating agencies. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

NUR 255 Nursing Organization and Management
3 credits
Addresses management and organizational skills as they relate to nursing. Emphasizes group dynamics, resolution of conflicts, and leadership styles. Prerequisite: NUR 271. Lecture 3 hours per week.

NUR 270 Essential Nursing Concepts II
4 credits
Focuses on complex nursing care of individuals, families and/or groups in various stages of development who are experiencing alterations related to their biopsychosocial needs. Uses all components of the nursing process with increasing degrees of skill. Includes math computation skills, basic computer instruction related to the delivery of nursing care with patients having fluid & electrolyte imbalance related to inflammatory bowel disease, intestinal obstruction, peptic ulcer disease and cirrhosis; altered regulatory hormonal mechanism related to endocrine disorders; altered inflammatory process related to STD/AIDS, endocarditic, rheumatic fever/valvular disorders and pancreatitis. Provides supervised learning in college nursing laboratories and/or cooperating agencies. Prerequisite: NUR 201. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

NUR 271 Essential Nursing Concepts III
4 credits
Focuses on complex nursing care of individuals, families and/or groups in various stages of development who are experiencing alterations related to their biopsychosocial needs. Uses all components of the nursing process with increasing degrees of skill. Includes math computation skills, basic computer instruction related to the delivery of nursing care with patients having altered transport to and from cells related to anemia, hemophilia, hypertension, coronary artery disease, heart failure, cystic fibrosis; abnormal proliferation and maturation of cells related to cancer. Provides supervised learning experience in college nursing laboratories and/or cooperating agencies. Prerequisite: NUR 270. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

NUR 272 Essential Nursing Concepts IV
4 credits
Focuses on complex nursing care of individuals, families and/or groups with multidimensional needs in a variety of settings. Uses all components of the nursing process with increasing degrees of skill. Includes math computation skills, basic computer instruction related to the delivery of nursing care with patients having altered transport to and from cells related to tuberculosis, chronic obstructive pulmonary disease, croup, congenital heart defects, peripheral vascular disease, brain attack, chest injuries; altered neural regulatory mechanisms related to meningitis, spinal cord injury, spina bifida, myelomeningocele, scoliosis, seizure disorder, Parkinson’s disease; altered sensory motor function related to multiple sclerosis. Provides supervised learning experience in college nursing laboratories and/or cooperating agencies. Prerequisite: NUR 271. Lecture 2 hours. Laboratory 6 hours. Total 8 hours per week.

NUR 273 Essential Nursing Concepts V
4 credits
Focuses on complex nursing care of individuals, families and/or groups with multidimensional needs in a variety of settings. Uses all components of the nursing process with increasing degrees of skill. Includes math computation skills, basic computer instruction related to the delivery of nursing care with patients having abnormal proliferation and maturation of cells related to cancer; altered fluid and electrolyte imbalance related to burns, renal failure, nephritic syndrome, glomerulonephritis; multi-
course descriptions

occupational therapy

OCT 100 Introduction to Occupational Therapy
3 credits
Introduces the concepts of occupational therapy as a means of directing a person’s participation in tasks selected to develop, maintain or restore skills in daily living. Examines the role of the assistant for each function of occupational therapy, and for various practice settings in relationship to various members of the health care team. Prerequisite: Admission into the Occupational Therapy Program. Lecture 3 hours per week.

OCT 201 Occupational Therapy with Psychosocial Dysfunction
3 credits
Focuses on the theory and application of occupational therapy in the evaluation and treatment of psychosocial dysfunction. Includes a survey of conditions which cause emotional, mental, and social disability, as well as the role of the occupational therapy assistant in the assessment, planning and implementation of treatment programs. Prerequisite: Instructor permission. Lecture 3 hours per week.

OCT 202 Occupational Therapy with Physical Disabilities
4 credits
Focuses on the theory and application of occupational therapy in the evaluation and treatment of physical dysfunction. Includes a survey of conditions which cause physical disability as well as the role of the occupational therapy assistant in assessment, planning and implementation of treatment programs. Prerequisite: Instructor permission. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

OCT 203 Occupational Therapy with Developmental Disabilities
4 credits
Focuses on the theory and application of occupational therapy in the evaluation and treatment of developmental dysfunction. Includes a survey of conditions which cause developmental disability across the life span, with particular emphasis on children and the elderly. Investigates the role of the occupational therapist in assessment, planning and implementation of treatment programs. Prerequisite: Instructor permission. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

OCT 205 Therapeutic Media
2 credits
Develops proficiency in various crafts used as treatment modalities in occupational therapy. Emphasizes how to analyze, adapt and teach select activities as well as how to equip and maintain a safe working environment. Prerequisite: Instructor permission. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

OCT 206 Dyadic and Group Dynamics
3 credits
Provides theory and activity to develop positive interpersonal relationships and effective communication ability. Includes non-verbal communication, listening, observation, interviewing and documentation. Covers group process and its application to occupational therapy, including types of therapeutic groups, group membership roles, leadership skills and forces which affect group function and decision making. Prerequisite: Instructor permission. Lecture 3 hours per week.

OCT 207 Therapeutic Skills
4 credits
Presents techniques used in the treatment of a variety of conditions frequently seen across the life span. Emphasizes the activities of self-care, work, and leisure as they relate to the development/resumption of normal social role functioning. Prerequisite: Instructor permission. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

OCT 208 Occupational Therapy Service Management
3 credits
Presents principles and techniques of management appropriate to the occupational therapy assistant. Includes roles and functions of the supervisor and the supervisee, scheduling, billing, quality improvement. Issues relevant to professional practice and patient care will be discussed with similarities and differences between various facilities highlighted. Prerequisite: Instructor permission. Lecture 3 hours per week.

OCT 210 Assistive Technology in Occupational Therapy
2 credits
Explores the assistive technologies available for persons with physical, sensory and cognitive disabilities. Provides instruction in the process of assessment, selection adaptation and training of assistive technology to persons with a disability. Presents information on funding and maintenance of devices. Exposes students to technology in clinical practice and equipment companies. Prerequisites:
OCT 202 and 203 or instructor permission. Lecture 2 hours per week.

OCT 220
Occupational Therapy for the Adult
2 credits
Reviews normal changes related to aging and factors contributing to dysfunction. Analyzes intervention strategies for common problems, including wellness programs and home modifications. Reviews relevant legislation, continuum of care and caregiver issues. Prerequisite: Instructor permission. Lecture 2 hours per week.

PBS 265
Interviewing
3 credits
Analyzes the principles and techniques of interviewing in various organizational settings. Examines reliability and validity of information gained through information interviewing, employment selection interviewing, performance appraisal and disciplinary interviewing, as well as counseling interviewing. Lecture 3 hours per week.

PED 101
Fundamentals of Physical Activity I
2 credits
Presents principles underlying the components of physical fitness. Utilizes conditioning activities involving cardiovascular strength and endurance, respiratory efficiency, muscular strength, and flexibility. May include fitness assessment, nutrition and weight control information, and concepts of wellness. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 103
Aerobic Fitness I
2 credits
Develops cardiovascular fitness through activities designed to elevate and sustain heart rates appropriate to age and physical condition. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 105
Aerobic Dance I
2 credits
Focuses on physical fitness through dance exercises. Emphasizes the development of cardiovascular endurance, muscular endurance, and flexibility. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 109
Yoga
2 credits
Focuses on the forms of yoga training emphasizing flexibility. Special emphasis given to cardiovascular endurance. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 111
Weight Training I
2 credits
Focuses on muscular strength and endurance training through individualized workout programs. Teaches appropriate use of weight training equipment. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 113
Lifetime Activities I
2 credits
Presents lifetime sports and activities. Teaches skills and methods of lifetime sports and activities appropriate to the local season and facilities available. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 117
Fitness Walking
1 credit
Teaches content and skills needed to design, implement, and evaluate an individualized program of walking, based upon fitness level. Laboratory 2 hours per week.

PED 123
Tennis I
2 credits
Teaches tennis skills with emphasis on stroke development and strategies for individual and team play. Includes rules, scoring, terminology, and etiquette. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 127
Cycling
2 credits
Introduces cycling techniques, equipment selection, care and maintenance, safety, and physical conditioning. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 129
Self Defense
2 credits
Examines history, techniques, and movements associated with self-defense. Introduces the skills and methods of self-defense emphasizing mental and physical discipline. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.
PED 133-134
Golf I-II
2 credits each
Teaches basic skills of golf, rules, etiquette, scoring, terminology, equipment selection and use, and strategy. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 135
Bowling I
2 credits
Teaches basic bowling skills and techniques, scoring, rules, etiquette, and terminology. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 137-138
Martial Arts I-II
2 credits each
Emphasizes forms, styles, and techniques of body control, physical and mental discipline, and physical fitness. Presents a brief history of development of martial arts theory and practice. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 141-142
Swimming I-II
2 credits each
Introduces skills and methods of swimming strokes. Focuses on safety and physical conditioning. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 154
Volleyball
2 credits
Introduces volleyball skills, techniques, strategies, rules, and scoring. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 156
Softball
2 credits
Emphasizes softball skills, techniques, strategies, and rules. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PED 181
Downhill Skiing I
2 credits
Teaches basic skills of downhill skiing; selection and use of equipment; terminology and safety rules. Includes field experience. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week.

PHI 101-102
Introduction to Philosophy I-II
3 credits each
Introduces a broad spectrum of philosophical problems and perspectives with an emphasis on the systematic questioning of basic assumptions about meaning, knowledge, reality, and values. Lecture 3 hours per week.

PHI 111
Logic I
3 credits
Introduces inductive and deductive reasoning with an emphasis on common errors and fallacies. Lecture 3 hours per week.

PHI 115
Practical Reasoning
3 credits
Studies informal logic and language techniques as they relate to reasoning and argument. Provides practice in analyzing arguments and constructing sound arguments. Lecture 3 hours per week.

PHI 220
Ethics
3 credits
Provides a systematic study of representative ethical systems. Lecture 3 hours per week.

PHI 226
Social Ethics
3 credits
Provides a critical examination of moral problems and studies the application of ethical concepts and principles to decision-making. Topics may include abortion, capital punishment, euthanasia, man and the state, sexuality, war and peace, and selected issues of personal concern. Lecture 3 hours per week.

PHI 260
Studies in Eastern Thinking
3 credits
Introduces an in-depth study of the East through a variety of approaches which include music, literature, drama and cinema. Places special emphasis on Chinese and Japanese philosophy and religion, especially Buddhism. Lecture 3 hours per week.

PHT 101
Photography I
3 credits
Teaches principles of photography and fundamental camera techniques. Requires outside shooting and laboratory work. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week.

PHT 110
History of Photography
3 credits
Surveys important photographers, processes, and historical influences of the nineteenth and twentieth centuries. Lecture 3 hours per week.

PHT 135
Electronic Darkroom
3 credits
Teaches students to create and manipulate digital photographs. Covers masking, color corrections, and merging of illustrations with photographs. Examines the ethical and property-rights issues which are raised in the manipulation of images. Prerequisite: PHT 101 or equivalent. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week.
course descriptions

PHT 201
Advanced Photography I
3 credits
Provides weekly critiques of students’ work. Centers on specific problems found in critiques. Includes working procedures and critical skills in looking at photographs. Prerequisite: PHT 135. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

PHT 221-222
Studio Lighting I-II
3 credits each
Examines advanced lighting and camera techniques under controlled studio conditions. Includes view camera use, electronic flash, advanced lighting techniques, color temperature and filtration, and lighting ratios. Requires outside shooting. Prerequisite: PHT 135. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

PHT 231-232
Photojournalism I-II
3 credits each
Introduces equipment, techniques, skills, and concepts of photojournalism. Teaches photography for features, spot news, and photo essays. Emphasizes editing, captioning, and layout. May require individual projects. Prerequisite: PHT 135. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

PHT 256
Communicating Through the Photographic Sequence
3 credits
Using experiences of sequencing involves the student in creating a book composed of images that have been placed in a sequence that has special visual meaning. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week.

PHT 270
Digital Imaging I
3 credits
Introduces students to the tools and techniques used by professionals in the electronic imaging field. Focuses on current trends within the photographic, prepress and internet industries. Includes image capture, manipulation, and cut-put. Exposes students to the hardware and software used by today’s creative professionals in a combination of lectures, demonstrations and class projects. Prerequisite: PHT 135. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

MTH 173 or MTH 273 or divisional approval. Prerequisite for PHY 242: MTH 174 or divisional approval. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

physics

PHY 100
Elements of Physics
4 credits
Covers basic concepts of physics, including Newtonian mechanics, properties of matter, heat and sound, fundamental behavior of gases, ionizing radiation, and fundamentals of electricity. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

PHY 130
Survey of Applied Physics
3 credits
Surveys topics such as heat, electricity, and light with emphasis on practical applications. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

PHY 201-202
General College Physics I-II
4 credits each
Teaches fundamental principles of physics. Covers mechanics, thermodynamics, wave phenomena, electricity and magnetism, and selected topics in modern physics. Prerequisite: MTH 163 or equivalent. Lecture 2 hours. Laboratory 3 hours. Total 6 hours per week.

PHY 241-242
University Physics I-II
4 credits each
Teaches principles of classical and modern physics. Includes mechanics, wave phenomena, heat, electricity, magnetism, relativity, and nuclear physics. Prerequisite for PHY 241:
### Polysomnographic Technology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSG 101</td>
<td>Polysonmography I</td>
<td>4</td>
<td>Surveys the dynamics of normal and abnormal human sleep and the practice of sleep diagnosis and treatment. Studies methods of acquisition, diagnosis, and treatment of sleep disorders. Includes the practice in the use of polysomnographic equipment. Familiarizes students with medical terminology, instrumentation setup and calibration, recording and monitoring techniques, documentation, professional issues, and patient-technologist interactions related to polysomnographic technology. Co-requisite: PSG 190. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.</td>
</tr>
<tr>
<td>PSG 103</td>
<td>Polysonmography Record Evaluation</td>
<td>3</td>
<td>Presents the general principles of analyzing and scoring polysomnographic records. Studies sleep staging, recognition and analysis of various abnormal respiratory and neurophysiologic events, and recognition and elimination of artifact. Includes scoring and analyzing raw data for the purpose of generating full reports. Co-requisite: PSG 164. Lecture 3 hours per week.</td>
</tr>
<tr>
<td>PSG 164</td>
<td>Polysonmography Clinical Procedures I</td>
<td>4</td>
<td>Offers a practicum in a functioning Sleep Disorders Center. Provides practice in patient set-up, machine calibrations, equipment usage, Nocturnal Polysomnographs, BiPAP and CPAP Titration Trials, and patient education under the supervision of Polysomnographic Technicians. Co-requisite: PSG 103. Clinicals 16 hours per week.</td>
</tr>
</tbody>
</table>

### Psychology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 105</td>
<td>Psychology of Personal Adjustment</td>
<td>3</td>
<td>Introduces psychological principles that contribute to well-adjusted personality. Considers the effects of stress and coping with the problems of everyday life. Lecture 3 hours per week.</td>
</tr>
<tr>
<td>PSY 116</td>
<td>Psychology of Death and Dying</td>
<td>3</td>
<td>Focuses on psychological aspects of death and dying. Teaches the meaning of death and ways of handling its personal and social implications. Includes psychological, sociological, cultural, and religious views of death. Lecture 3 hours per week.</td>
</tr>
<tr>
<td>PSY 125</td>
<td>Interpersonal Relationships</td>
<td>3</td>
<td>Studies individual behavior as it affects the individual's relationships. Considers such topics as attitudes, needs, values, leadership, communication, and group dynamics. Teaches constructive methods of interpersonal problem solving. Lecture 3 hours per week.</td>
</tr>
<tr>
<td>PSY 126</td>
<td>Psychology for Business and Industry</td>
<td>3</td>
<td>Focuses on the application of psychology to interpersonal relations and the working environment. Includes topics such as group dynamics, motivation, employee-employer relationships, and interpersonal communications. May include techniques for selection and supervision of personnel. Lecture 3 hours per week.</td>
</tr>
<tr>
<td>PSY 165</td>
<td>Psychology of Human Sexuality</td>
<td>3</td>
<td>Focuses on scientific investigation of human sexuality and psychological and social implications of such research. Considers socio-cultural influences, the physiology and psychology of sexual response patterns, sexual dysfunctions, and development of relationships. Lecture 3 hours per week.</td>
</tr>
<tr>
<td>PSY 166</td>
<td>Psychology of Marriage</td>
<td>3</td>
<td>Analyzes personality interactions in marriage and other intimate relationships. Examines theories of personal development and types of relationships resulting from interactions. Lecture 3 hours per week.</td>
</tr>
<tr>
<td>PSY 200</td>
<td>Principles of Psychology</td>
<td>3</td>
<td>Surveys the basic concepts of psychology. Covers the scientific study of behavior, behavioral research methods and analysis, and theoretical interpretations. Includes topics that cover physiological mechanisms, sensation/perception, motivation, learning, personality, psychopathology, therapy, and social psychology. Lecture 3 hours per week.</td>
</tr>
<tr>
<td>PSY 201-202</td>
<td>Introduction to Psychology I-II</td>
<td>3 each</td>
<td>Examines human and animal behavior, relating experimental studies to practical problems. Includes topics such as sensation/perception, learning, memory, motivation, emotion, stress, development, intelligence, personality, psychopathology, therapy, and social psychology. Lecture 3 hours per week.</td>
</tr>
<tr>
<td>PSY 215</td>
<td>Abnormal Psychology</td>
<td>3</td>
<td>Explores historical views and current perspectives of abnormal behavior. Emphasizes major diagnostic categories and criteria, individual and social factors of maladaptive behavior, and types of therapy. Includes methods of clinical assessment and research strategies. Prerequisites: PSY 200, 201, or 202. Lecture 3 hours per week.</td>
</tr>
</tbody>
</table>
PSY 216
Social Psychology
3 credits
Examines individuals in social contexts, their social roles, group processes and inter-group relations. Includes topics such as small group behavior, social behavior, social cognition, conformity, attitudes, and motivation. Prerequisites: PSY 200, 201, or 202. Lecture 3 hours per week.

PSY 219
Cross-Cultural Psychology
3 credits
Investigates psychological principles from a cross-cultural perspective. Examines cultural basics for views of reality. Describes topics such as time, space, values, sex-roles, and human development in relation to culture. Prerequisites: PSY 200, 201, or 202. Lecture 3 hours per week.

PSY 220
Introduction to Behavior Modification
3 credits
Studies the history of behaviorism and the principles and applications of behavior modification. Emphasizes observation and application of behavior modification principles. Lecture 3 hours per week.

PSY 230
Developmental Psychology
3 credits
Studies the development of the individual from conception to death. Follows a life-span perspective on the development of the person’s physical, cognitive, and psychosocial growth. Lecture 3 hours per week.

PSY 231-232
Life Span Human Development I-II
3 credits each
Investigates human behavior through the life cycle. Describes physical, cognitive, and psycho-social aspects of human development from conception to death. Lecture 3 hours per week.

PSY 235
Child Psychology
3 credits
Studies development of the child from conception to adolescence. Investigates physical, intellectual, social and emotional factors involved in the child’s growth. Lecture 3 hours per week.

PSY 236
Adolescent Psychology
3 credits
Studies development of the adolescent. Investigates physical, intellectual, social, and emotional factors of the individual from late childhood to early adulthood. Lecture 3 hours per week.

PSY 255
Psychological Aspects of Criminal Behavior
3 credits
Studies psychology of criminal behavior. Includes topics such as violent and non-violent crime, sexual offenses, insanity, addiction, white collar crime, and other deviant behaviors. Provides a background for law enforcement occupations. Prerequisites: PSY 125, 200, 201, 202 or divisional approval. Lecture 3 hours per week.

PSY 265
Psychology of Men and Women
3 credits
Examines the major determinants of sex differences. Emphasizes psychosexual differentiation and gender identity from theoretical, biological, interpersonal, and socio-cultural perspectives. Includes topics such as sex roles, socialization, rape, abuse, and androgyny. Prerequisites: PSY 125, 200, 201, or 202. Lecture 3 hours per week.

PSY 235
Child Psychology
3 credits
Studies development of the child from conception to adolescence. Investigates physical, intellectual, social and emotional factors involved in the child’s growth. Lecture 3 hours per week.

PSY 236
Adolescent Psychology
3 credits
Studies development of the adolescent. Investigates physical, intellectual, social, and emotional factors of the individual from late childhood to early adulthood. Lecture 3 hours per week.

PSY 255
Psychological Aspects of Criminal Behavior
3 credits
Studies psychology of criminal behavior. Includes topics such as violent and non-violent crime, sexual offenses, insanity, addiction, white collar crime, and other deviant behaviors. Provides a background for law enforcement occupations. Prerequisites: PSY 125, 200, 201, 202 or divisional approval. Lecture 3 hours per week.

PSY 265
Psychology of Men and Women
3 credits
Examines the major determinants of sex differences. Emphasizes psychosexual differentiation and gender identity from theoretical, biological, interpersonal, and socio-cultural perspectives. Includes topics such as sex roles, socialization, rape, abuse, and androgyny. Prerequisites: PSY 125, 200, 201, or 202. Lecture 3 hours per week.

physical therapist assistant

PTH 105
Introduction to Physical Therapist Assisting
3 credits
Introduces the physical therapist assistant student to the field of physical therapy practice and develops basic patient care skills for application in the initial physical therapy clinical experience. Prerequisite: Instructor permission. Lecture 1 hour. Laboratory 4 hours. Total 5 hours per week.

PTH 110
Medical Reporting
1 credit
Emphasizes the principles of medical reporting, including the ability to abstract pertinent information from actual medical records. Includes the writing of patient progress notes in standardized formats and medical terminology. Prerequisite: Instructor permission. Lecture 1 hour per week.

PTH 115
Kinesiology for the Physical Therapist Assistant
4 credits
Focuses on the relationship of specific joint structure and function, the role of individual muscles and groups of muscles and neurologic principles in both normal and pathological movement. The course includes a review of basic physics and biomechanical principles applied to human movement. Includes specific posture and gait analysis. Prerequisite: Instructor permission. Lecture 2 hours. Laboratory 4 hours. Total 6 hours per week.

PTH 121-122
Therapeutic Procedures I-II
5 credits each
Prepares the students to properly and safely administer basic physical therapy procedures utilized by physical therapist assistants. The procedures include therapeutic modalities. Procedures
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisite: Instructor permission. Lecture hours. Laboratory hours. Total hours per week.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTH 131</td>
<td>Clinical Education</td>
<td>2</td>
<td>Provides supervised instruction in the delivery of physical therapy in one of various clinical settings. Emphasizes the practice of all therapeutic skills learned in the first year, including direct patient care skills and all forms of communication.</td>
<td></td>
</tr>
<tr>
<td>PTH 151</td>
<td>Musculoskeletal Structure and Function</td>
<td>5</td>
<td>Studies the human musculoskeletal system. Covers terms of position and movement, location, and identification of specific bony landmarks, joint structure and design, ligaments, muscle origin, action and innervation, and emphasizes types of contraction.</td>
<td>Lecture 3 hours. Laboratory 4 hours. Total 7 hours per week.</td>
</tr>
<tr>
<td>PTH 200</td>
<td>Psychological Aspects of Therapy</td>
<td>2</td>
<td>Focuses on the psychological reactions and sociological impact of illness and injury in clients and their families, and among health caregivers who work with them. Examines individual self-identity and the nature of changing client/therapist relationships across the life span.</td>
<td>Lecture 2 hours per week.</td>
</tr>
<tr>
<td>PTH 225</td>
<td>Rehabilitation Procedures</td>
<td>5</td>
<td>Focuses on treatment techniques typical of long-term rehabilitation, e.g., the rehabilitation of congenital, neurological, and disfigurement associated with chronic injury and disease.</td>
<td></td>
</tr>
<tr>
<td>RAD 105</td>
<td>Introduction to Radiology, Protection and Patient Care</td>
<td>3</td>
<td>Presents a brief history of the radiologic profession, code of ethics, conduct for radiologic students, and basic fundamentals of radiation projection. Teaches the care and handling of the sick and injured patient in the Radiology Department.</td>
<td>Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.</td>
</tr>
<tr>
<td>RAD 120</td>
<td>Medical Care Procedures &amp; Safety in Radiology</td>
<td>3</td>
<td>Teaches the fundamentals of radiation safety, body mechanics and medical legal considerations in Radiology. Presents techniques in infection control, patient care safety, and response to emergency situations. Introduces pharmacology, contrast media, and treatment of adverse reactions. Students acquire skills in vital sign assessment, sterile technique, venipuncture, and other medical care procedures.</td>
<td>Predatory: Admission to RAD program. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.</td>
</tr>
<tr>
<td>RAD 121</td>
<td>Radiographic Procedures I</td>
<td>4</td>
<td>Introduces procedures for positioning the patient’s anatomical structures relative to X-ray beams and image receptors. Emphasizes procedures for routine examination of the chest, abdomen, extremities, and axial skeleton.</td>
<td>Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.</td>
</tr>
<tr>
<td>RAD 131-132</td>
<td>Elementary Clinical Procedures I-II</td>
<td>3</td>
<td>Each</td>
<td></td>
</tr>
</tbody>
</table>
### Course Descriptions

**RAD 141-142**  
**Principles of Radiographic Quality I-II**  
4 credits each  
Presents factors that control and influence radiographic quality, as well as various technical conversion factors useful in radiography. Discusses automatic film processing, sensitometry, and quality assurance testing. 
**Prerequisite:** Instructor permission. 
Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**RAD 205**  
**Radiation Protection and Radiobiology**  
3 credits  
**Lecture 3 hours per week.**

**RAD 206**  
**Human Disease and Radiography**  
2 credits  
Introduces the various diseases and anomalies that may be manifested on the radiograph. Presents diseases related to the various body systems. Places emphasis on the relationship of the disease process and radiographic density. 
**Lecture 2 hours per week.**

**RAD 221**  
**Radiographic Procedures II**  
4 credits  
Continues procedures for positioning the patient’s anatomical structures relative to X-ray beams and image receptors. Emphasizes procedures for routine examination of the skull, contrast studies of internal organs, and special procedures employed in the more complicated investigation of the human body. 
**Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.**

**RAD 231-232**  
**Advanced Clinical Procedures I-II**  
5 credits each  
Reinforces technical skills in fundamental radiographic procedures. Introduces more intricate contrast media procedures. Focuses on technical proficiency, application of radiation, protection, nursing skills, and exposure principles. Teaches advanced technical procedures and principles of imaging modalities, correlating previous radiographic theory, focusing on full responsibility for patients in technical areas, perfecting technical skills, and developing awareness of related areas utilizing ionizing radiation. Provides clinical experience in cooperating health agencies. 
**Clinical 15 hours per week.**

**RAD 233**  
**Anatomy and Positioning of the Breast**  
1 credit  
Presents the risk factors for breast disease, anatomy and physiology of the breast and discusses the various pathologies identified through mammography. Includes routine and special projections of the breast. 
**Prerequisite:** ARRT or eligible. 
**Lecture 1 hour per week.**

**RAD 234**  
**Breast Imaging/Instrumentation**  
1 credit  
Discusses the dedicated radiography equipment necessary for breast imaging. Includes proper technical factors, radiation protection techniques, and proper accessory equipment. 
**Prerequisite:** ARRT or eligible. 
**Lecture 1 hour per week.**

**RAD 235**  
**Quality Assurance in Mammography**  
1 credit  
Discusses the components of quality assurance in mammography and the accreditation programs developed to ensure quality in breast imaging facilities. 
**Prerequisite:** ARRT or eligible. 
**Lecture 1 hour per week.**

**RAD 242**  
**Computed Tomography Procedures and Instrumentation**  
2 credits  
Focuses on the patient care, imaging procedure and physics and instrumentation related to computed tomography imaging. 
**Prerequisite:** ARRT or eligible. 
**Lecture 2 hours per week.**

**RAD 244**  
**Case Studies in CT (Computed Tomography)**  
1 credit  
Presents case studies in computed tomography. Focuses on both abnormal and normal studies. 
**Prerequisite:** ARRT or eligible. 
**Lecture 1 hour per week.**

**RAD 255**  
**Radiographic Equipment**  
3 credits  
Studies principles and operation of general and specialized X-ray equipment. 
**Lecture 3 hours per week.**

**RAD 280**  
**Terminal Competencies in Radiography**  
1 credit  
Includes preparation and ensures that students possess competencies which relate to materials covered by the ARRT Content Specifications for national exam eligibility. Incorporates activities designed to verify that students have mastered skills in the critical content areas to include equipment operation and maintenance, image production and evaluation, radiographic procedures, radiation protection and patient care. 
**Prerequisite:** Instructor permission. 
**Laboratory 3 hours per week.**
real estate

REA 100
Principles of Real Estate
4 credits
Examines practical applications of real estate principles. Includes a study of titles, estates, land descriptions, contracts, legal instruments and concepts, real estate mathematics, financing, agency, appraisal, fair housing, and management of real estate. Lecture 4 hours per week.

REA 110
Real Estate Sales
3 credits
Focuses on the fundamentals of sales principles as they apply to real estate. Includes prospects, motives, needs, and abilities to buy real estate. Lecture 3 hours per week.

religion

REL 100
Introduction to the Study of Religion
3 credits
Explores various religious perspectives and ways of thinking about religious themes and religious experience. Lecture 3 hours per week.

REL 200
Survey of the Old Testament
3 credits
Surveys books of the Old Testament, with emphasis on prophetic historical books. Examines the historical and geographical setting and place of the Israelites in the ancient Middle East as background of the writings. Lecture 3 hours per week.

REL 210
Survey of the New Testament
3 credits
Surveys books of the New Testament, with special attention upon placing the writings within their historical and geographical setting. Lecture 3 hours per week.

REL 215
New Testament and Early Christianity
3 credits
Surveys the history, literature, and theology of early Christianity in the light of the New Testament. Lecture 3 hours per week.

REL 216
Life and Teachings of Jesus
3 credits
Studies the major themes in the teachings of Jesus of Nazareth as recorded in the Gospels, and examines the events of his life in light of modern biblical and historical scholarship. Lecture 3 hours per week.

REL 217
Life and Letters of Paul
3 credits
Studies the journeys and religious thought of the apostle Paul. Lecture 3 hours per week.

REL 230
Religions of the World
3 credits
Introduces the religions of the world with attention to origin, history, and doctrine. Lecture 3 hours per week.

REL 247
History of Christianity
3 credits
Surveys the development of Christianity from its origins to the present. Lecture 3 hours per week.

REL 255
Selected Problems and Issues in Religion
3 credits
Examines selected problems and issues of current interest in religion. May be repeated for credit. Lecture 3 hours per week.

respiratory therapy

RTH 102
Integrated Sciences for Respiratory Care II
3 credits
Integrates the concepts of mathematics, chemistry, physics, microscopy, and computer technology as these sciences apply to the practice of respiratory care. Prerequisite: MTH 3 and Instructor permission. Lecture 3 hours per week.

RTH 120
Fundamental Theory for Respiratory Care
2 credits
Presents the theory of basic patient assessment and functional medical terminology. Prerequisite: Instructor permission. Lecture 2 hours per week.

RTH 121
Cardiopulmonary Science I
3 credits
Focuses on pathophysiology, assessment, treatment, and evaluation of patients with cardiopulmonary disease. Explores cardiopulmonary, renal and neuromuscular physiology and pathophysiology. Prerequisite: Instructor permission. Lecture 3 hours per week.

RTH 131-132
Respiratory Care Theory and Procedures I-II
4 credits each
Presents theory of equipment and procedures and related concepts used for patients requiring general, acute, and critical cardiopulmonary care. Prerequisite: Instructor permission. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

RTH 145
Pharmacology for Respiratory Care I
1 credit
Presents selection criteria for the use of and detailed information
on pharmacologic agents used in pulmonary care. Prerequisite: Instructor permission. Lecture 1 hour per week.

**RTH 217**
**Pulmonary Rehabilitation, Home Care and Health Promotion**
2 credits
Focusses on purpose and implementation of a comprehensive pulmonary rehabilitation program. Explores procedures and approaches used in pulmonary home care. Identifies and discusses major health and wellness programs applied to cardiopulmonary patients. Prerequisite: Instructor permission. Lecture 2 hours per week.

**RTH 222**
**Cardiopulmonary Science II**
3 credits
Focuses on assessment, treatment, and evaluation of patients with cardiopulmonary disease. Explores cardiopulmonary, renal and neuromuscular physiology, and pathophysiology. Lecture 3 hours per week.

**RTH 225**
**Neonatal and Pediatric Respiratory Procedures**
3 credits
Focuses on the cardiopulmonary physiology, pathology and application of therapeutic procedures in the management of the newborn and pediatric patient. Prerequisite: Instructor permission. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**RTH 235**
**Diagnostic and Therapeutic Procedures II**
3 credits
Presents the use of multiple diagnostic and therapeutic techniques used in ambulatory and critical care patients. Prerequisite: Instructor permission. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**RTH 236**
**Critical Care Monitoring**
3 credits
Focuses on techniques and theory necessary for the evaluation and treatment of the critical care patient, especially arterial blood gases and hemodynamic measurements. Explores physiologic effects of advanced mechanical ventilation. Prerequisite: Instructor permission. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

**RUS 101-102**
**Beginning Russian I-II**
4 credits each
Develops the understanding, speaking, reading, and writing of Russian, and emphasizes the structure of the language. Lecture 4 hours per week. May include one additional hour of oral practice per week.

**SAF 120**
**Safety and Health Standards: Regulations and Codes**
3 credits
Teaches development of safety standards, the Occupational Safety and Health Act (OSHA), its rules and regulations; penalties for non-compliance, and methods of compliance. Includes an examination of Government Regulatory Codes and appraisal of consensus, advisory, and proprietary standards. Lecture 3 hours per week.

**SAF 125**
**Computer Applications for Technicians**
4 credits
Introduces the use of the personal computer with emphasis on technical software applications for occupational/technical professionals. Lecture 4 hours per week.

**SAF 126**
**Principles of Industrial Safety**
3 credits
Teaches principles and practices of accident prevention, analysis of accident causes, mechanical safeguards, fire prevention, housekeeping, occupational diseases, first aid, safety organization, protection equipment and general safety principles and promotion. Lecture 3 hours per week.

**SAF 127**
**Industrial Safety**
2 credits
Provides basic understanding of safety and health in an industrial situation. Includes hazardous materials, substances, conditions, activities and habits as well as the prescribed methods and equipment needed for the apprentice to protect himself/herself and others. Lecture 2 hours per week.

**SAF 135**
**Safety Program Organization and Administration**
3 credits
Introduces techniques of organizing and administering practical safety programs. Emphasizes safety as a management function. Includes an examination of history, occupational safety and health regulations, and a survey of current laws, codes and standards. Lecture 3 hours per week.

**SAF 140**
**Introduction to Industrial Hygiene**
3 credits
Studies environmental energy, physical and chemical hazards, including gases, vapors, dusts, fumes, and mists; the importance of personal protective equipment, and contamination control methodology. Lecture 3 hours per week.

**SAF 205**
**Human Factors and Safety Psychology**
3 credits
Studies stresses on the human system, both physiological and psychological, that contribute to the severity of
They are enrolled. Covers topics such as services offered at the college, including the learning resources center, counseling and advising, listening, test taking, and study skills, and topical areas which are applicable to their particular discipline. Lecture 3 hours per week.

**SDV 105**
**Personal Development From a Woman’s Perspective**
1 credit
Addresses the psychological and educational adjustment needs of the female college student. Covers three segments: personal development, career education, and study skills. Emphasizes the special needs of the re-entry woman. Provides education and support for the individual. Lecture 1 hour per week.

**SDV 106**
**Preparation for Employment**
1 credit
Provides experience in resume writing, preparation of applications, letters of application, and successfully preparing for and completing the job interview. Assists students in identifying their marketable skills and aptitudes. Develops strategies for successful employment search. Assists students in understanding effective human relations techniques and communication skills in job search. May be substituted for SDV 100. Lecture 1 hour per week.

**SOC 201-202**
**Introduction to Sociology I-II**
3 credits each
Introduces basic concepts and methods of sociology. Presents significant research and theory in areas such as socialization, group dynamics, gender roles, minority group relations, stratification, deviance, culture, and community studies. Includes population, social change, and social institutions (family, education, religion, political system, economic system). Lecture 3 hours per week.

**SOC 211-212**
**Principles of Anthropology I-II**
3 credits each
Inquires into the origins, development, and diversification of human biology and human cultures. Includes fossil records, physical origins of human development, human population genetics, linguistics, cultures’ origins and variation, and historical and contemporary analysis of human societies. Lecture 3 hours per week.

**SOC 215**
**Sociology of the Family**
3 credits
Studies topics such as marriage and family in social and cultural context.
Addresses the single scene, dating and marriage styles, child-rearing, husband and wife interaction, single parent families, alternative lifestyles. **Lecture 3 hours per week.**

**SOC 246**  
**Death and Society**  
3 credits  
Analyses death and its relationship to social behavior and social institutions. Focuses attention on types of death, bereavement, funerals, estate planning/inheritance, and the student's own responses to these issues. **Lecture 3 hours per week.**

**SOC 266**  
**Minority Group Relations**  
3 credits  
Investigates minorities such as racial and ethnic groups. Addresses social and economic conditions promoting prejudice, racism, discrimination, and segregation. **Lecture 3 hours per week.**

**SOC 268**  
**Social Problems**  
3 credits  
Applies sociological concepts and methods to analysis of current social problems. Includes delinquency and crime, mental illness, drug addiction, alcoholism, sexual behavior, population crisis, race relations, family and community disorganization, poverty, automation, wars, and disarmament. **Lecture 3 hours per week.**

**Spanish**

**SPA 16**  
**Spanish For Business**  
2 credits  
Introduces the student to Spanish used in business transactions. **Lecture 2 hours per week.**

**SPA 101-102**  
**Beginning Spanish I-II**  
4 credits each  
Introduces understanding, speaking, reading, and writing skills and emphasizes basic Spanish sentence structure. May include an additional hour of oral drill and practice per week. **Lecture 4 hours per week.**

**SPA 150**  
**Spanish for Law Enforcement**  
3 credits  
Introduces Spanish to those in the criminal justice field. Emphasizes oral communication and practical first-hand police and justice vocabulary. May include oral drill and practice. **Lecture 3 hours per week.**

**SPA 160**  
**Spanish for the Green Industry I**  
3 credits  
Introduces basic conversation skills in Spanish to those working in the “Green” industry. Emphasizes the use of vocabulary and expressions needed for communication in horticulture, landscaping, nursery/greenhouse, and turf management. Addresses cultural aspects of working with Spanish speaking populations. **Lecture 3 hours per week.**

**SPA 163**  
**Spanish for Health Professionals I**  
3 credits  
Introduces Spanish to those in the health sciences. Emphasizes oral communication and practical medical vocabulary. May include oral drill and practice. **Lecture 3 hours per week.**

**Speech and Drama**

**SPD 100**  
**Principles of Public Speaking**  
3 credits  
Applies theory and principles of public address with emphasis on preparation and delivery. **Lecture 3 hours per week.**

**SPD 110**  
**Introduction to Speech Communication**  
3 credits  
Examines the elements affecting speech communication at the individual, small group, and public communication levels with emphasis on practice of communication at each level. **Lecture 3 hours per week.**

**SPD 111**  
**Voice and Diction I**  
3 credits  
Enables students to improve pronunciation, articulation, and voice quality. Includes applied phonetics. **Lecture 3 hours per week.**

**SPD 126**  
**Interpersonal Communication**  
3 credits  
Teaches interpersonal communication skills for both daily living and the world of work. Includes perception, self-concept, self-disclosure, listening and feedback, nonverbal communication, attitudes, assertiveness, and other interpersonal skills. **Lecture 3 hours per week.**

**SPA 203-204**  
**Intermediate Spanish I-II**  
3 credits each  
Continues to develop understanding, speaking, reading, and writing skills. Classes conducted in Spanish. **Prerequisite: SPA 102 or equivalent. May include oral drill and practice. Lecture 3 hours per week.**
SPD 131-132  
**Acting I-II**  
3 credits each  
Develops personal resources and explores performance skills through such activities as theatre games, role playing, improvisation, work on basic script units, and performance of scenes. **Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.**

SPD 141-142  
**Theatre Appreciation I-II**  
3 credits each  
Aims to increase knowledge and enjoyment of theatre. Considers process, style, organization, written drama, and performed drama. **Lecture 3 hours per week.**

SPD 151-152  
**Film Appreciation I-II**  
3 credits each  
Aims to increase the student’s knowledge and enjoyment of film and film criticism through discussion and viewing of movies. **Lecture 3 hours per week.**

SPD 229  
**Intercultural Communication**  
3 credits  
Emphasizes the influence of culture on the communication process including differences in values, message systems, and communication rules. **Lecture 3 hours per week.**

SPD 233-234  
**Rehearsal and Performance I-II**  
3 credits each  
Explores various aspects of the theatre through involvement in college theatre production. **Lecture 3 hours per week.**

SPD 240  
**Basic Set Design**  
3 credits  
Studies basic techniques and methods of scenic design for the stage. **Lecture 3 hours per week.**

SPD 241-242  
**Introduction to Directing I-II**  
3 credits each  
Introduces theory and practice of stage direction through the study of directing methods as well as the execution and discussion of directing exercises. **Prerequisites: SPD 131 and SPD 132 or divisional approval. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

SPD 251  
**Stage Lighting and Sound**  
3 credits  
Provides students with a basic understanding of the principles of stage lighting and sound. Instructs students in the fundamentals of stage lighting such as: functions of lighting, qualities of light, design, basic electricity, lighting instruments and equipment, board operation, and safety. Instructs students in the functions of sound, equipment, design, and sound operation. **Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.**

SPD 266  
**Outdoor Drama**  
3 credits  
Enables students to study production techniques through participation as actors or technicians in outdoor drama. **Prerequisite: divisional approval. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.**

TRK 101  
**DOT Safety Rules and Regulations**  
2 credits  
Includes an intensive study of the Department of Transportation and state and local laws and regulations governing the motor carrier industry as applied to the professional operation of commercial vehicles. **Co-requisites: TRK 102 and 103. Lecture 2 hours per week.**

TRK 102  
**Preventive Maintenance for Truck Drivers**  
1 credit  
Focuses on the fundamentals of preventive maintenance and inspection procedures for gasoline and diesel powered tractor trailers. Includes drivelines, brake systems, electrical systems and accessories encountered by the professional truck driver. **Co-requisites: TRK 101 and 103. Lecture 1 hour per week.**

TRK 103  
**Tractor Trailer Driving**  
9 credits  
Prepares the prospective driver to operate a motor vehicle in a safe and responsible manner. Provides practical training in over-the-road and city driving, including backing skills, and pre-trip inspection. Emphasizes defensive driving. **Co-requisites: TRK 101 and 102. Lecture 3 hours. Laboratory 12 hours. Total 15 hours per week.**

TRK 110  
**Survey of the Trucking Industry**  
3 credits  
Provides an overview of the trucking industry and the characteristics of the professional truck driver. Emphasizes the uses of technology in the trucking industry, including simulators, mobile information management and communication, and electronic mapping techniques. Provides an introduction to the transportation of hazardous materials and environmental issues. **Lecture 3 hours per week.**

WEL 100  
**Fundamentals of Welding**  
3 credits  
Introduces arc and oxyfuel welding and cutting. Provides fundamental principles of joining ferrous and non-ferrous metals, welding and cutting processes, equipment operation, and safety procedures with emphasis upon
course descriptions

welding and cutting procedures. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

WEL 117
Oxyfuel Welding and Cutting
3 credits
Introduces history of oxyacetylene welding, principles of welding and cutting, nomenclature of the equipment, development of the puddle, running flat beads, and butt welding in different positions. Explains silver brazing, silver and soft soldering, and safety procedures in the use of tools and equipment. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

WEL 123
Shielded Metal Arc Welding (Basic)
3 credits
Teaches operation of AC and DC power sources, welding polarities, heats and electrodes for use in joining various metal alloys by the arc welding process. Deals with running beads, butt, and fillet welds in all positions. Emphasizes safety procedures. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

WEL 124
Shielded Metal Arc Welding (Advanced)
3 credits
Continues instruction on operation of AC and DC power sources, welding polarities, heats and electrodes for use in joining various metal alloys by the arc welding process. Deals with running beads, butt, and fillet welds in all positions. Emphasizes safety procedures. Prerequisite: WEL 123. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

WEL 126
Pipe Welding I
3 credits
Teaches metal arc welding processes including the welding of pressure piping in the horizontal, vertical, and horizontal-fixed positions in accordance with section IX of the ASME Code. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

WEL 135
Inert Gas Welding
2 credits
Introduces practical operations in the use of inert gas shielded arc welding. Studies equipment operation, setup, safety and practice of GMAW (MIG) and GTAW (TIG). Prerequisite: WEL 117. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

WEL 136
Welding III (Inert Gas)
2 credits
Studies Tungsten and metallic inert gas procedures and practices including principles of operation, shielding gasses, filler rods, process variations and applications, manual and automatic welding, equipment and safety. Prerequisite: WEL 117. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

WEL 138
Pipe and Tube Welding
2 credits
Develops entry level skills for the inert gas tungsten welding process (TIG) with emphasis upon thin and thick wall carbon and stainless piping and tubing. Prerequisite: WEL 136. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

WEL 141-142
Welder Qualification Tests I-II
3 credits each
Studies techniques and practices of testing welding joints through destructive and non-destructive testing. Prerequisite for WEL 142: WEL 141. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

WEL 150
Welding Drawing and Interpretation
2 credits
Teaches fundamentals required for successful drafting as applied to the welding industry. Includes blueprint reading, geometric principles of drafting and freehand sketching, basic principles of orthographic projection, preparation of drawings and interpretation of symbols. Lecture 2 hours per week.
governing board commonwealth of virginia

state board for community colleges

Mark R. Graham, Chair
Robert W. Shinn, Vice Chair
Glenn DuBois, Secretary

Shahnaz M. Ahmed  Chris A. Lumsden
Megan C. Beyer  Nathaniel Xavier Marshall
Hank W. Chao  Jefferey K. Mitchell
Mark R. Graham  R. Michael Mohler
Gary C. Hancock  C. Michael Petters
Barbara A. Johnsen  Robert W. Shinn
Adele C. Johnson  Alan G. Toxopeus
Constance R. Kincheloe  Glenn DuBois

virginia community college system

Glenn DuBois, Chancellor

tidewater community college board

Dorcas T. Helfant-Browning, Chair
Sidney M. Oman, Vice Chair
Deborah M. DiCroce, Secretary

Samuel F. Coppage  Vernon L. Randall
City of Norfolk  City of Portsmouth
LaVonne P. Ellis  Lowell M. Stike
City of Chesapeake  City of Portsmouth
Dorcas T. Helfant-Browning  Richard D. Trumble
City of Virginia Beach  City of Portsmouth
John T. Kavanaugh  William E. Ward
City of Norfolk  City of Chesapeake
Bruce J. Meyer  Thomas H. Wilson
City of Virginia Beach  City of Virginia Beach
Sidney M. Oman  Stephan Woodard
City of Chesapeake  City of Norfolk

tidewater community college

Deborah M. DiCroce, President
Linda M. Rice, Provost, Chesapeake Campus
Alex J. Kajstura, Provost, Norfolk Campus
Terry L. Jones, Provost, Portsmouth Campus
Quintin B. Bullock, Provost, Virginia Beach Campus
Michael D. Summers, Vice President for Academic and Student Affairs
Franklin T. Dunn, Vice President for Administration
Phyllis F. Milloy, Vice President for Finance
Richard F. Andersen, Vice President for Information Systems
Theresa M. Bryant, Vice President for Workforce Development
Lisa S. Kleiman, Director of Institutional Effectiveness
Ann P. Woolford-Singh, Post ACE Fellow
Susan M. James, Executive Assistant to the President
district administration

Deborah M. DiCroce
President
B.A., Old Dominion University
M.A., Old Dominion University
Ed.D., College of William and Mary

Curtis K. Aasen
Associate Director—Institutional Effectiveness
B.S., North Carolina State University
M.A., Old Dominion University

Richard F. Andersen
Vice President—Information Systems
B.S.J., Northwestern University
M.A., George Washington University

Lillian M. Bailey
Coordinator—Academy of Nonprofit Excellence
A.S., Tidewater Community College
B.S., Bluefield College
M.A.Ed., Virginia Polytechnic Institute and State University

James K. Ballard
Director—Information Systems Development and Support
A.A.S., Virginia Western Community College

Leslie K. Boughton
Coordinator—Job Skills Training
B.A., Norfolk State University
M.S., Norfolk State University

Michael E. Bryan
Coordinator—Student Outcomes Assessment
B.A., Hofstra University
M.S., Dowling College
Ed.D., University of North Carolina at Chapel Hill

Theresa M. Bryant
Vice President—Workforce Development
B.A., Mississippi University for Women
M.A., Mississippi University for Women
M.B.A., Columbus State University

Reyne D. Buchholz
Chief Accountant
B.S., University of Mary

Johnna M. Coleman-Yates
Director—Workforce Services
B.S., James Madison University
M.P.A., Troy State University

Franklin T. Dunn
Vice President—Administration
B.A., University of Kansas
M.A., Naval War College
M.A., Salve Regina University

Valarie J. Evans
Associate Vice President— Academic Projects
B.S., Norfolk State University
M.S., Old Dominion University
D.A., George Mason University

Timothy M. Fink
Director—Facilities Management and Services
B.S., New Jersey Institute of Technology

Wanda W. Hare
Associate Vice President— Workforce Development Operations
B.S., Old Dominion University
M.S., Old Dominion University

Jennifer E. Harpham
Director—Central Financial Aid
A.A.B., Zane State College
B.B.A., Mount Vernon Nazarene University
M.B.A., University of Findlay

Linda W. Harris
Coordinator—Disability Services
A.A.S., Tidewater Community College
B.A., Virginia Wesleyan College
J.D., College of William and Mary

Diann S. Holt
Associate Vice President— Career and Technical Education
B.S., James Madison University
M.S., Virginia Polytechnic Institute and State University
Ed.D., Vanderbilt University
Susan M. James  
**Executive Assistant to the President**  
A.A.S., Tidewater Community College  
B.A., Saint Leo University  
M.P.A., Troy State University  

Lisa S. Kleiman  
**Director—Institutional Effectiveness**  
B.S., Old Dominion University  
M.A., Old Dominion University  

Mary G. Landon  
**Associate Vice President—Workforce Development**  
A.A.S., Community College of Allegheny  
B.S., Southern Illinois University  
M.S., Old Dominion University  

Thomas H. Lee  
**Coordinator—Multimedia Student Services**  
B.S., Old Dominion University  
M.S.Ed., Old Dominion University  

Tyjaun A. Lee  
**Associate Vice President—Enrollment Management and Student Services**  
B.S.S., Ohio University  
M.Ed., Ohio University  
Ph.D., Ohio University  

Linda L. Lewis  
**Associate Vice President—Government and External Relations**  
B.S., West Virginia University  
M.S., Clarion University  

Mary Pat Liggio  
**Coordinator—Women’s Center**  
B.A., University of Dallas  
M.A., Fordham University  

Mary Mayer-Hennelly  
**Associate Vice President—Instructional Resources**  
B.A., University of Massachusetts  
M.S.L.S., McGill University  
M.P.A., Old Dominion University  

Charles E. McGee  
**Director—Network Services and Support**  
B.S., Excelsior College  
Certificate of CompTIA  

Ann M. Mead  
**Coordinator—Workforce Information Technology**  
B.S., James Madison University  

Susan W. Meslang  
**Director—Grants and Sponsored Programs**  
B.S., Old Dominion University  
M.S., Old Dominion University  

Phyllis F. Milloy  
**Vice President—Finance**  
B.S., Averett University  
M.B.A., Averett University  

Robin S. Moore  
**Director—Material Management**  
Virginia Contracting Officer Certification  

Barbara R. Murray  
**Coordinator—Apprenticeship Programs**  
A.A.S., Owens Community College  
A.S., Tidewater Community College  
B.S., Old Dominion University  

Jeanne B. Natali  
**Coordinator—International Programs**  
B.S., California University of Pennsylvania  
M.A., Old Dominion University  
Ph.D., Old Dominion University  

Willa L. Priest  
**Base Operations Officer**  
B.S., University of Virginia  
M.A., Central Michigan University  
C.A.S., College of William and Mary  

Lonnie J. Schaffer  
**Associate Vice President—College Transfer Education**  
B.A., University of Iowa  
M.A., Michigan State University  
Ed.D., College of William and Mary  

Calvin R. Scheidt, Jr.  
**Associate Vice President—Military Programs**  
B.S., University of La Verne  
M.B.A., National University  
M.P.A., Troy State University  
Ph.D., La Salle University
Edward F. Skrobiszewski  
*Recruitment Officer*  
A.A.S., Tidewater Community College  
B.A., Virginia Commonwealth University  
M.S., Old Dominion University  

Gretta Y. Smith  
*Director—Human Resources*  
B.S., James Madison University  
M.P.A., Virginia Commonwealth University  

Kellie C. Sorey  
*Registrar*  
B.S., Virginia Polytechnic Institute and State University  
M.A.Ed., Virginia Polytechnic Institute and State University  
Ph.D., Old Dominion University  

Michael D. Summers  
*Vice President—Academic and Student Affairs*  
B.S., University of Illinois  
M.Ed., Western Illinois University  
Ed.D., University of Illinois  

Sharon C. Waters  
*Grants Officer/Writer*  
B.A., Hampton University  
M.F.A., University of Southern California  
Ph.D., Regent University  

C. Mike Williams  
*Associate Vice President—Educational Technology*  
A.A., Navarro College  
B.A., Stephen F. Austin State University  
M.A., Stephen F. Austin State University  
Ed.S., Nova Southeastern University  

Kay M. Williams  
*Director—Student Support Services Project*  
B.A., Hampton University  
M.S., Stevens Institute of Technology  

Ann P. Woolford-Singh  
*Post ACE Fellow*  
B.A., City University of New York at Brooklyn College  
M.A., New York University  
Ph.D., Old Dominion University  

Jessica J. Yandell  
*Coordinator—Tidewater Tech Prep Consortium*  
A.S., Tidewater Community College  
B.S., Old Dominion University  
M.S., Loyola Institute for Ministry  

Rebecca K. Yingling  
*Director—Continuing Education*  
A.A.S., University of Toledo  
B.S., Northern Illinois University  
M.S.Ed., Northern Illinois University  

Yanyan Yong  
*Coordinator—Instructional Design and Support*  
B.A., Beijing Second Language Institute  
M.S., Southern Illinois University  
Ph.D., Southern Illinois University  

John W. Zwick  
*Director—Library and Automation Resources*  
B.A., University of Oklahoma  
M.S.L.S., University of Oklahoma  

Linda M. Rice  
*Provost*  
B.A., Randolph-Macon Woman’s College  
Certificate, University of Chicago  
M.S., Old Dominion University  
Ph.D., Old Dominion University  

Cynthia H. Hunter  
*Coordinator—Enrollment and Financial Support Services*  
B.S., Virginia State University  
M.A.Ed., Norfolk State University  

Constance V. King  
*Business Manager*  
B.S., Ramapo College  
M.B.A., Rutgers University  

**chesapeake campus**  

**Linda M. Rice**  
*Provost*  
B.A., Randolph-Macon Woman’s College  
Certificate, University of Chicago  
M.S., Old Dominion University  
Ph.D., Old Dominion University  

**Cynthia H. Hunter**  
*Coordinator—Enrollment and Financial Support Services*  
B.S., Virginia State University  
M.A.Ed., Norfolk State University  

**Constance V. King**  
*Business Manager*  
B.S., Ramapo College  
M.B.A., Rutgers University
faculty and staff

David R. Loope  
Dean—Languages, Mathematics, and Sciences  
B.A., University of Tennessee  
M.A., Wake Forest University  
Ed.D., College of William and Mary

Judy B. McMillan  
Campus Dean—Student Services  
B.A., Michigan State University  
M.S.Ed., Old Dominion University  
Ed.S., George Washington University  
Ed.D., College of William and Mary

James E. Perkinson, Jr.  
Dean—Business, Public Services, and Technologies  
B.S., East Carolina University  
M.S.Ed., Old Dominion University

Lois H. Radford  
Coordinator—Library Services  
B.A., University of South Florida  
M.A., University of South Florida

norfolk campus

Alex Kajstura  
Provost  
B.S., Silesian University  
M.S., Texas Tech University  
M.B.A., LeTourneau University  
Ph.D., Southern Illinois University

Joanne Diddlemeyer  
Dean—Languages, Mathematics and Sciences  
B.A., Regis College  
M.S.Ed., Old Dominion University  
Ed.S., George Washington University  
Ed.D., George Washington University

Reginald L. Osby  
Business Manager  
B.S., Norfolk State University  
M.B.A., Western New England College

Marilyn L. Peacock  
Dean—Business, Social Sciences and Public Services  
B.S., James Madison University  
M.S., College of William and Mary

portsmout campus

Timothy G. Wise  
Campus Dean—Student Services  
B.A., Florida State University  
M.S., Florida State University  
Ed.D., Florida State University

Terry L. Jones  
Provost  
A.B., Samford University  
M.A., Samford University  
Ph.D., Vanderbilt University

Ann P. Ambrose  
Dean—Business, Public Services, and Technologies  
B.S., Norfolk State University  
M.S., Virginia Polytechnic Institute and State University

Kimberly A. Beatty  
Dean—Languages, Mathematics and Sciences  
B.A., Morgan State University  
M.A., Morgan State University

John E. Gibbs, Jr.  
Director—Visual Arts Center  
B.S., Old Dominion University  
M.F.A., Norfolk State University

Mary S. Glanzer  
Coordinator—Library Services  
B.S., Longwood University  
M.S.L.S., University of Kentucky

Haroleen D. Ray  
Campus Dean—Student Services  
B.A., Norfolk State University  
Ed.M., Rutgers University

Theresa A. Ruffing  
Coordinator—Financial Support Services  
B.A., University of Kentucky  
M.S., Old Dominion University
P. Randall Shannon
Coordinator—Student Development and Services
B.A., Roanoke College
M.Ed., University of Virginia
C.A.G.S., Virginia Polytechnic Institute and State University

John H. Thornburg
Business Manager
B.S., Old Dominion University
B.A., Old Dominion University

Carolyn E. McLellan
Dean—Information Technology and Business
B.S., Old Dominion University
M.A., Regent University

Daryl L. Minus
Campus Dean—Student Services
B.S., Hampton University
M.A., New York University

Brenda S. Sedlacek
Dean—Engineering and Industrial Technologies
B.S., University of Southern California
M.I.T., Virginia Polytechnic Institute and State University

Margo M. Simmons
Coordinator—Financial Aid Services
B.A., Winston-Salem State University
M.A., Norfolk State University

Bonita G. Startt
Interim Dean—Languages and Speech
B.S., Old Dominion University
M.S.Ed., Old Dominion University

Michelle W. Woodhouse
Dean—Social Sciences and Public Services
B.S., Virginia Commonwealth University
M.A., Norfolk State University
Ed.D., Nova Southeastern University

P. Randall Shannon
Coordinator—Student Development and Services
B.A., Roanoke College
M.Ed., University of Virginia
C.A.G.S., Virginia Polytechnic Institute and State University

John H. Thornburg
Business Manager
B.S., Old Dominion University
B.A., Old Dominion University

Carolyn E. McLellan
Dean—Information Technology and Business
B.S., Old Dominion University
M.A., Regent University

Daryl L. Minus
Campus Dean—Student Services
B.S., Hampton University
M.A., New York University

Brenda S. Sedlacek
Dean—Engineering and Industrial Technologies
B.S., University of Southern California
M.I.T., Virginia Polytechnic Institute and State University

Margo M. Simmons
Coordinator—Financial Aid Services
B.A., Winston-Salem State University
M.A., Norfolk State University

Bonita G. Startt
Interim Dean—Languages and Speech
B.S., Old Dominion University
M.S.Ed., Old Dominion University

Michelle W. Woodhouse
Dean—Social Sciences and Public Services
B.S., Virginia Commonwealth University
M.A., Norfolk State University
Ed.D., Nova Southeastern University

Virginia Beach Campus

Quintin B. Bullock
Provost
B.S., Prairie View A&M University
M.Ed., Prairie View A&M University
D.D.S., University of Texas

Sonya R. Fitchett
Coordinator—Enrollment Services
B.S., Old Dominion University
M.A., Old Dominion University

Gregory P. Frank
Dean—Mathematics and Sciences
B.S., Virginia Polytechnic Institute and State University
M.S., Virginia Polytechnic Institute and State University

Janice E. Johnson
Coordinator—Library Services
B.S., Morris Brown College
M.S., Indiana University
M.S.L.S., Atlanta University
Advanced Certificate, University of Pittsburgh
M.M., Norfolk State University
Ed.D., Vanderbilt University

Kathy J. Maalouf
Coordinator—Support Services
B.A., University of Central Florida
M.S., Christopher Newport University
M.S.Ed., Old Dominion University

Carolyn E. McLellan
Dean—Information Technology and Business
B.S., Old Dominion University
M.A., Regent University

Daryl L. Minus
Campus Dean—Student Services
B.S., Hampton University
M.A., New York University

Brenda S. Sedlacek
Dean—Engineering and Industrial Technologies
B.S., University of Southern California
M.I.T., Virginia Polytechnic Institute and State University

Margo M. Simmons
Coordinator—Financial Aid Services
B.A., Winston-Salem State University
M.A., Norfolk State University

Bonita G. Startt
Interim Dean—Languages and Speech
B.S., Old Dominion University
M.S.Ed., Old Dominion University

Michelle W. Woodhouse
Dean—Social Sciences and Public Services
B.S., Virginia Commonwealth University
M.A., Norfolk State University
Ed.D., Nova Southeastern University
professors and classified staff emeriti
(years of TCC service)

Joseph E. Browne
Professor of Biology (1992 - 2004)

William J. Clark III
Dean of Academics, Norfolk Campus
(1978 - 2004)

Mary Ruth Clowdsley,
Director of Grants (1976 - 2001)

Allan Crandall
Associate Professor of History
(1968 - 2000)

Elizabeth S. Daughtry
Associate Professor of Chemistry
(1978 - 2001)

Anita Dial
Education Support Specialist II
(1981 - 2004)

Nancy S. Duncan
Director of Human Resources

Nancy S. M. Guarnieri
Professor of Early Childhood Education
(1973 - 2006)

Etta Louise Hillier
Professor of Accounting (1978 - 2005)

Catherine N. Holloway
Associate Professor of Information Systems Technology (1981 - 2003)

Barbara J. Hund
Professor of English/Speech (1980 - 1999)

Anne S. Iott
Director of Visual Arts Center (1971 - 2002)

Christine D. Jennings
Associate Professor of English
(1994 — 2005)

Barbara T. Johnson
Associate Professor of Sociology
(1974 - 2002)

Constance M. Jones
Associate Professor of History
(1981 - 2004)

Gerald L. Kerr
Professor of Legal Assisting (1993 - 2004)

Donna Reiss
Associate Professor of English
(1982 - 2004)

Wilma S. Robinson
Professor of Administrative Support Technology (1973 - 1999)

John L. Skrobiszewski
Dean of Languages, Mathematics and Sciences, Portsmouth Campus
(1969 - 2006)

Richard E. Witte
Professor of Reading (1978 - 2004)

Frederick H. Zeisberg
Dean of Student Services, Virginia Beach Campus (1974 - 2006)
teaching and professional faculty

The locations of principal assignment are indicated as follows: Chesapeake Campus (C), Norfolk Campus (N), Portsmouth Campus (P), Portsmouth Campus—Visual Arts Center (P-VAC), and Virginia Beach Campus (V).

Ronald L. Alexander
Instructor—Electrical Technology (P)
Master Training Specialist Certificate — United States Navy

Rick G. Alley
Instructor—English (C)
B.A., Old Dominion University
M.F.A., University of Massachusetts

Kathy S. Anderson
Assistant Professor—Accounting (N)
B.S., Old Dominion University
M.B.A., College of William & Mary

Cassandra L. Andrews
Associate Professor—Early Childhood Education (N)
B.S., Hampton University
M.A., Hampton University

Rachel B. Ankney
Assistant Professor—English (V)
B.A., Old Dominion University
M.F.A., Old Dominion University

Joseph C. Antinarella
Assistant Professor—English (C)
B.A., State University of New York at Cortland
M.A., State University of New York at Stony Brock

David W. Arnold
Instructor—Culinary Arts (N)
A.O.S., Culinary Institute of America

Julia S. Arnold
Professor—Mathematics (N)
B.A., University of South Florida
M.A., University of Georgia
M.S., Old Dominion University
Ph.D., Old Dominion University

Robert P. Arthur
Professor—English (V)
B.A., University of Richmond
M.A., University of Richmond
M.F.A., University of Arkansas

M. Yvonne Aucoin
Assistant Professor—Mathematics (N)
B.S., James Madison University
M.A., East Carolina University

Absalon C. Auza
Instructor—Maritime Logistics (P)
B.A., Saint Leo University
B.S., Saint Leo University
M.A., Cambridge College

Donald V. Averso
Instructor—Culinary Arts (N)
B.S., Seton Hall University

Martha A. Bagby
Associate Professor—Reading (C)
B.A., Wake Forest University
M.S.Ed., Old Dominion University

Marissa R. Bailey
Assistant Professor—English (N)
A.B., Morehead State University
M.F.A., Old Dominion University

A. Marie Baker
Associate Professor—Early Childhood Education (P)
B.S., Longwood University
M.S.Ed., Old Dominion University

Michael W. Bailes
Assistant Professor—History (N)
B.A., Salisbury University
M.A., Salisbury University

Colleen A. Banks
Assistant Professor—Mathematics (N)
B.S., St. Augustine College
M.S., Old Dominion University
Travis C. Baran  
*Instructor—English (P)*
A.A., State University of New York at Cayuga Community College  
B.A., State University of New York at Oswego  
M.A., State University of New York at Oswego

Stanley E. Barger  
*Associate Professor—English (V)*
B.A., University of Mississippi  
M.A., University of New Hampshire

Michele C.C. Barnes  
*Instructor—Counselor (V)*
A.A., Florida Community College  
B.S., Southern Illinois University  
M.A., Webster University

Rita J. Barnes  
*Assistant Professor—Counselor (C)*
B.A., Olivet College  
M.S., Old Dominion University

Melanie C. Basinger  
*Assistant Professor—Physical Therapy (V)*
B.S., Ithaca College  
M.S., Old Dominion University

Bernice Baxter  
*Instructor—Certified Nurse Aide (V)*
L.P.N., Virginia Beach School of Practical Nursing  
A.A.S., Tidewater Community College

Lisa L. Behm  
*Instructor—Biology (C)*
B.S., State University of New York at College of Environmental Science and Forestry  
M.S., Old Dominion University

Amy C. Beldon  
*Assistant Professor—Counselor (V)*
B.S., Southern Illinois University  
M.S.Ed., Old Dominion University

Denise A. Bell  
*Professor—Nursing (P)*
A.S., Norfolk State University  
B.S., Hampton University  
M.S., Hampton University

Debra K. Benham  
*Professor—Information Systems Technology (V)*
B.S., Ball State University  
M.Ed., Ball State University

James E. Benson  
*Assistant Professor—Speech (P)*
B.A., Vanguard University of Southern California  
M.A., Regent University

Enoch A. Bentley III  
*Instructor—Mathematics (C)*
A.S., Tidewater Community College  
B.S., Old Dominion University  
M.S., Old Dominion University

Stephen P. Bergfield  
*Associate Professor—Environmental Protection (P)*
A.A.S., Tidewater Community College  
B.S., Old Dominion University

Roberta L. Bernardini  
*Professor—Nursing (P)*
B.S.N., Mount Mercy College  
M.S., University of Michigan

Denise M. Bieszczad  
*Assistant Professor—Respiratory Therapy (V)*
B.S., Indiana University of Pennsylvania  
M.A., George Washington University

Cynthia M. Bird  
*Assistant Professor—Accounting (V)*
B.S., Virginia Polytechnic Institute and State University  
M.A., Virginia Polytechnic Institute and State University

Philip L. Black  
*Associate Professor—Psychology (P)*
A.A., Lon Morris Junior College  
B.B.A., North Texas State University  
M.B.A., East Texas State University

Gregory A. Blystone  
*Instructor—Maritime Logistics (P)*
A.S., Tidewater Community College  
US Navy Certifications
Wayne T. Blythe
Associate Professor—
Electricity/Electronics (V)
B.S., Virginia Polytechnic Institute
and State University
M.Div., Southeastern Baptist
Theological Seminary
Th.M., Southeastern Baptist
Theological Seminary

Maryann D.E. Bohr
Assistant Professor—Accounting (V)
B.S., West Virginia University Institute
of Technology
M.B.A., Owen Graduate School
of Business at Vanderbilt University

Susan D. Boland
Assistant Professor—English as
a Second Language (V)
B.A., The New School
M.A., George Mason University
M.F.A., Old Dominion University

Dwight Bolling
Associate Professor—Sociology (V)
B.S., Florida State University
M.S., Florida State University

Ian M. Bolling
Assistant Professor—Sociology (C)
B.A., Virginia Wesleyan College
M.A., Florida State University
J.D., College of William and Mary

Rita T. Bouchard
Assistant Professor—Nursing (P)
B.S., Mount St. Mary’s College
M.S.N., University of California at Los Angeles

Kimberly M. Bovee
Associate Professor—English (V)
B.A., Virginia Polytechnic Institute
and State University
M.A., Virginia Polytechnic Institute
and State University
Ph.D., Loyola University

Robert L. Braaten
Associate Professor—Business
Management and Administration (P)
B.S., Old Dominion University
M.B.A., Old Dominion University

Kevin M. Brady
Assistant Professor—History (C)
B.S.E., Baylor University
M.A., Baylor University

Patrick F. Brady
Assistant Professor—Spanish (V)
A.B., University of Missouri
M.A., University of Missouri

Michael P. Breitkreutz
Instructor—Electrical (P)
A.A., Saint Leo University

Robin C. Brevard
Instructor—Nursing - CNA (V)
A.A.S., Tidewater Community College

Robert N. Brewer, Jr.
Instructor—Trucking (P)
Commercial Driver’s License

Tracy K. Brieger
Instructor—Horticulture (C)
A.A.S, Tidewater Community College
B.A., Indiana University of Pennsylvania

Kenneth O. Broun, Jr.
Associate Professor—Mathematics (V)
B.S., Old Dominion University
M.S., Old Dominion University

Robyn S. Browder
Associate Professor—English (V)
B.A., Frederick College
M.S.Ed., Old Dominion University

Walter H. Brueggeman, Jr.
Associate Professor—
Automotive Technology (C)
C.M.A.T., C.M.T.T., National Institute for
Automotive Service Excellence

Katherine D. Buhler
Assistant Professor—Biology (V)
B.S., Old Dominion University
M.S., Old Dominion University
Wendy D. Buie  
Associate Professor—Counselor (V)  
B.A., University of North Carolina at Asheville  
M.S., North Carolina A&T State University  

Travis B. Bundy  
Instructor—Air Conditioning/Refrigeration (P)  
United States Navy Certifications  

Shawn P. Burns  
Instructor—Engineering (P)  
B.S., Southern Illinois University  

Maureen A. Cahill  
Professor—Reading (V)  
B.S., Norfolk State University  
M.S., Old Dominion University  
Ed.D., Nova Southeastern University  

Carlos H. Cajares  
Assistant Professor—Emergency Medical Services (V)  
Certificate, Tidewater Community College  
B.S., Hampton University  
M.P.A., Old Dominion University  

Thomas G. Calogrides, Jr.  
Professor—Emergency Medical Services (V)  
Certificate, Tidewater Community College  
B.S., Old Dominion University  
M.S.Ed., Old Dominion University  

April M. Campbell  
Instructor—English (P)  
B.A., Florida State University  
M.A., Florida State University  

Jesse L. Cannady, Jr.  
Instructor—Welding (P)  

Carla A. Cannon  
Instructor—Biology (N)  
B.S., Tennessee State University  
M.A., Hampton University  

Cherie N. Carl  
Instructor—Librarian (V)  
B.A., Lynchburg College  
M.S.L.S., The Catholic University of America  

Scott N. Carlson  
Assistant Professor—Accounting (C)  
B.S., Loyola Marymount University  
M.S., Golden Gate University  
CPA License  

Gene T. Carter  
Instructor—Interior Design (C)  
B.F.A., Virginia Commonwealth University  

Lisa D. Carter  
Professor—Information Systems Technology (V)  
B.S., Old Dominion University  
M.B.A., Old Dominion University  

Christopher W. Cartwright  
Associate Professor—Civil Engineering (V)  
A.S., Tidewater Community College  
B.S., Virginia Polytechnic Institute and State University  
M.S., University of Arkansas  

Joan E. Casteel  
Associate Professor—Information Systems Technology (V)  
B.S., Virginia Polytechnic Institute and State University  
M.B.A., Old Dominion University  

Christopher D. Cerezo  
Instructor—Electrical (P)  
Navy Leadership Development Certificate, United States Navy  

James D. Chandler  
Professor—Mathematics (C)  
B.S., Davidson College  
M.A., University of Virginia  
Ph.D., University of Virginia  

Emanuel Chestnut  
Instructor—Counselor (V)  
A.A., Saint Leo University  
B.A., Saint Leo University  
M.A., Norfolk State University  

Ives E. Clark  
Professor—Administrative Support Technology (V)  
B.S., Elizabeth City State University  
M.S., North Carolina Central University
Rodney L. Clayton  
Instructor—Geophysical Sciences (V)  
A.S., Tidewater Community College  
B.S., Old Dominion University  
M.S., Old Dominion University  

William Clement  
Associate Professor—Information Systems Technology (V)  
B.S., State University of New York at Oswego  
M.S.Ed., Old Dominion University  

Cheryl D. Cobb  
Professor—English (V)  
B.A., College of William and Mary  
M.A., Old Dominion University  
Ph.D., George Washington University  

James F. Coble  
Professor—Geophysical Sciences (V)  
B.S., Western Carolina University  
M.S., East Carolina University  
Ph.D., University of Kentucky  

Steven A. Coco  
Instructor—Emergency Medical Services (V)  
A.A., Saint Leo University  

Frederick B. Cole  
Instructor—Automotive Technology (C)  

William D. Conner  
Assistant Professor—Accounting (P)  
B.S., Christopher Newport University  
M.A., Miami University of Ohio  

A. Judith L. Cook  
Instructor—Radiologic Technology (V)  
A.A.S., Owens Technical College  
B.Ed., University of Toledo  

Forrest B. Crock  
Instructor—Biology (C)  
B.S., Longwood University  
M.S., Old Dominion University  

Gary L. Cross  
Assistant Professor—Respiratory Therapy (V)  
A.A.S., Tidewater Community College  
B.S., Old Dominion University  

Mittie J. Crouch  
Associate Professor—Speech and Drama (N)  
B.A., Montreat College  
M.A., Regent University  
Ph.D., Regent University  

Christine Damrose-Mahlmann  
Assistant Professor—Counselor (N)  
A.A., Tidewater Community College  
B.A., Christopher Newport University  
M.S.Ed., Old Dominion University  

Susan B. Day  
Associate Professor—Economics (V)  
B.A., University of Illinois  
M.S.Ed., Old Dominion University  
M.A., Old Dominion University  

Susan M. de Veer  
Instructor—International Student Advisor (V)  
B.A., Old Dominion University  
M.A., Old Dominion University  

Joseph S. Delia  
Instructor—Electrical Technology (P)  
Group PACE Instructor’s Certificate, United States Navy  

Ralph D. Denton  
Associate Professor—Drafting (V)  
B.S., Old Dominion University  
M.S.Ed., Virginia Polytechnic Institute and State University  
Machinist Diploma, Newport News Apprentice School, Newport News Shipbuilding and Drydock Company  

Stacey E. Deputy  
Instructor—Biology (C)  
B.S., Randolph-Macon Woman’s College  
M.S., Old Dominion University  

Terry A. DeRoche  
Associate Professor—Mathematics (V)  
B.S., Radford University  
M.S.Ed., Old Dominion University  

Jacquelyn A. Dessino  
Associate Professor—Librarian (P)  
B.A., Shippensburg State College  
B.S., Nicholls State University  
M.S.L.S., Louisiana State University
faculty and staff

Bill C. DeWeese  
Professor—English (V)  
B.S., Murray State University  
M.A., University of Arkansas  
Ed.D., College of William and Mary

Sarah E. DiCalogero  
Instructor—Mathematics (N)  
B.S., University of Virginia  
M.S., University of Virginia

Dixie D. Dickinson  
Associate Professor—Sociology (V)  
A.B., Wesleyan College  
M.A., University of Georgia

Richard A. Dienst  
Associate Professor—Fire Science (V)  
A.S., Community College of the Air Force  
B.S., Southern Illinois University  
M.P.A., Governors State University

Sergei Dolgalev  
Professor—Drafting (V)  
M.A., Moscow Architectural Institute  
Ph.D., Central Research and Design Institute

Maria Silvina Doncel  
Assistant Professor—Spanish (N)  
B.A., Instituto Nacional de Ensenanza  
B.A., Superior en Lenguas Vivas  
M.A., Old Dominion University

Susan N. Dozier  
Professor—Information System Technology (V)  
B.A., Virginia Polytechnic Institute and State University  
M.S.Ed., Old Dominion University

Lorenz N. C. Drake  
Professor—Drafting (P)  
B.S., University of Maryland  
M.S.Ed., Virginia Polytechnic Institute and State University

Richard B. Duncan  
Associate Professor—Mathematics (P)  
A.B., East Carolina University  
M.A., East Carolina University

Sandra K. Dunn  
Assistant Professor—Counselor (V)  
A.A.S., Tidewater Community College  
B.S., Norfolk State University  
M.S.Ed., Troy State University  
M.A., Norfolk State University

Edward L. Dye  
Professor—Business Management and Administration (V)  
B.B.A., Ohio University  
M.Ed., Bowling Green State University  
M.B.A., Averett University

Deborah M. Edson  
Assistant Professor—Spanish (V)  
B.A., Texas Tech University  
M.A., Texas Tech University

H. Frank Edwards  
Instructor—Air Conditioning/Refrigeration (P)  
Instructor Training Certificate, United States Navy

Kimberly S. Edwards  
Instructor—English (C)  
B.S., Eastern Michigan University  
M.A., Eastern Michigan University

David A. Ekker  
Assistant Professor—Industrial Management (V)  
A.A.E., Naval Postgraduate School  
B.S., University of Illinois  
M.B.A., Chaminade University

Marshall H. Ellis  
Assistant Professor—English (V)  
B.A., Old Dominion University  
M.A., George Washington University

Thomas I. Ellis  
Associate Professor—English (N)  
B.A., Ohio Wesleyan University  
M.A., University of Oregon  
Ph.D., University of Oregon

Paul G. English  
Professor—Business Management and Administration (C)  
B.S., University of Richmond  
M.B.A., Old Dominion University  
M.A., Old Dominion University
Cecilio G. Esperat  
Instructor—Food Service Management (P)

Stephen M. Ezzell  
Associate Professor—Engineering (V)  
B.S., North Carolina State University  
M.S., Rollins College  
M.S., Naval Postgraduate School

Jennifer J. Ferguson  
Assistant Professor—Respiratory Therapy (V)  
A.A.S., Tidewater Community College  
B.A., Ottawa University  
M.S.Ed., Old Dominion University

Raymond S. Fernandez  
Associate Professor—English (V)  
B.A., University of Texas  
M.A., University of Florida

Lisa S. Finley  
Instructor—Graphic Design (P-VAC)  
B.F.A., University of Missouri  
B.A., University of Missouri  
M.A.Ed., Virginia Commonwealth University

William A. Fitton, Jr.  
Professor—Information Systems Technology (V)  
B.A., Old Dominion University  
M.B.A., Old Dominion University  
Ed.D., Vanderbilt University  
CDP, CNA, CNE, CNI

Mildred J. Fowler  
Associate Professor—Biology (V)  
B.S., Old Dominion University  
M.S.Ed., Old Dominion University  
Certificate, Eastern Virginia Medical School

Glenn E. Fox, Jr.  
Professor—Psychology (C)  
B.S., Virginia Polytechnic Institute and State University  
M.A., Radford University  
Ph.D., Virginia Polytechnic Institute and State University

Roger D. Frampton  
Professor—Chemistry (P)  
B.S., Durham University  
Ph.D., University of East Anglia, Norwich, U.K.

Edward B. Francis  
Assistant Professor—Art (P-VAC)  
B.S., Southern Connecticut State University  
M.F.A., Kent State University

Jeanine L. Freeze  
Professor—Nursing (P)  
B.S.N., George Mason University  
M.S.N., Old Dominion University  
Ph.D., Virginia Commonwealth University

David J. French  
Associate Professor—Mathematics (C)  
B.S., Bluefield College  
M.A., Marshall University

Mary A. Froncillo  
Instructor—Mathematics (V)  
A.A., Pensacola Junior College  
B.A., University of West Florida  
M.S., Old Dominion University

Roger A. Fuller  
Associate Professor—Librarian (N)  
A.S., Chesapeake College  
B.S., Old Dominion University  
M.S., Old Dominion University  
M.S.Ed., Old Dominion University

John R. F. Gallo  
Instructor—Mathematics (V)  
B.S., United States Military Academy  
M.S., George Washington University

George W. Garrett, Sr.  
Associate Professor—Mathematics (V)  
B.S., United States Naval Academy  
M.S., Naval Postgraduate School

Thomas L. Garrett, Jr.  
Associate Professor—Mathematics (P)  
B.A., University of Mississippi  
M.T.S., College of William and Mary  
M.S., Old Dominion University
Daniel D. George  
*Instructor—Air Conditioning/Refrigeration (P)*  
United States Navy Certifications

Richard W. Gill  
*Associate Professor—Mathematics (N)*  
B.S., College of William and Mary  
M.S., University of South Carolina

Kelly T. Gillerlain  
*Assistant Professor—Business (C)*  
B.A., American University  
M.B.A., Troy State University

Melinda Gillus  
*Assistant Professor—Nursing (P)*  
B.S., Virginia Union University  
B.S.N., Norfolk State University  
M.S.N., Hampton University

John R. Goodwin  
*Assistant Professor—Accounting (P)*  
B.S., Old Dominion University  
M.B.A., Old Dominion University

Carrie L. Gordon  
*Instructor—Biology (V)*  
B.S., Campbell University  
M.S., Virginia Polytechnic Institute and State University

Paul E. Gordy  
*Associate Professor—Engineering (V)*  
B.S.E.E., Old Dominion University  
M.S., Old Dominion University

Matthew S. Gorris  
*Assistant Professor—Theatre Arts (V)*  
B.G.S., Kent State University  
M.F.A., Kent State University

Phyllis E. Gowdy  
*Assistant Professor—English (N)*  
B.A., Western Maryland College  
M.A., Old Dominion University

Teresa A. Granger  
*Assistant Professor—Nursing (P)*  
Diploma, Riverside School of Professional Nursing  
B.S.N., Christopher Newport University  
M.S.N., Hampton University

George C. Grant  
*Professor—Chemistry (V)*  
B.A., Lehigh University  
Ph.D., Rensselaer Polytechnic Institute

Gloria I. Grant  
*Professor—English (V)*  
B.A., Old Dominion University  
M.A., Old Dominion University  
Ph.D., University of South Carolina

Arthur A. Gray  
*Assistant Professor—Culinary Arts (N)*  
A.A., Columbia College  
A.S., Florida Community College  
B.A., Columbia College  
M.A., University of North Florida

David C. Green  
*Associate Professor—Business Management and Administration (P)*  
B.A., Wake Forest University  
M.B.A., George Washington University

Sarah E. Greene  
*Instructor—Librarian (V)*  
B.A., New York University  
M.S.L.S., University of Maryland

Mark D. Greer  
*Assistant Professor—Physics (V)*  
B.S., Old Dominion University  
M.S., Old Dominion University

Star G. Grieser  
*Assistant Professor—American Sign Language (C)*  
B.A., Rochester Institute of Technology

Joseph W. Grimsley  
*Associate Professor—History (V)*  
B.A., University of North Carolina at Greensboro  
M.A., North Carolina State University  
Ph.D., Mississippi State University

Andre Grisham  
*Instructor—Maritime Logistics (P)*  
Instructor Training Certificate—United States Navy

Robert O. Guess II  
*Associate Professor—Information Systems Technology (C)*  
B.G.S., Virginia Commonwealth University  
M.S., Norwich University
Keratiloe N. Gwebu  
Assistant Professor—Nursing (P)  
B.S.N., University of Alabama  
M.S.N., University of Alabama  

Leah E. Hagedorn  
Professor—History (N)  
B.A., Goucher College  
M.A., University of North Carolina at Chapel Hill  
Ph.D., University of North Carolina at Chapel Hill  

Donald V. Haley  
Associate Professor—Administration of Justice (V)  
A.A.S., Tidewater Community College  
B.A., Saint Leo University  
M.P.A., Troy State University  

Eldridge C. Hamm, Jr.  
Professor—Business Management and Administration (V)  
B.S., University of Richmond  
M.S., Virginia Commonwealth University  

Thelbert R. Hammond II  
Instructor—Culinary Arts (N)  
B.A., College of William and Mary  

Mary E. Hanlin  
Instructor—Librarian (N)  
B.A., Christopher Newport University  
M.S.L.S., University of Pittsburgh  

Thomas J. Hargrove  
Associate Professor—English (C)  
B.A., Fordham College  
M.A., Fordham College  
Ph.D., St. John's University  

Joseph V. Harrell  
Professor—Physics (C)  
B.S., Old Dominion University  
M.S., Old Dominion University  
Ph.D., Old Dominion University  

Elise B. Harris  
Assistant Professor—Mathematics (V)  
B.S., Norfolk State University  
M.S.Ed., Old Dominion University  

Katina L. Harris-Carter  
Instructor—Biology (P)  
B.S., Western Illinois University  
M.S., Hampton University  

Robert E. Harrison  
Instructor—Librarian (C)  
B.A., Clarion University  
M.S.L.S., Clarion University  

Aubrey E. Hartman  
Associate Professor—Physics (P)  
B.S., Roanoke College  
M.S., University of Tennessee  

Alison H. Harwell  
Associate Professor—Counselor (V)  
B.S., Cornell University  
M.S., Cornell University  

Judith R. Hatcher  
Associate Professor—Dance (N)  
B.F.A., Texas Christian University  
M.A., University of California at Los Angeles  

David E. Hawk  
Instructor—Air Conditioning/Refrigeration (P)  
Air Conditioning and Heating Diploma, Advanced Technology Institute  

Robert H. Hawkes  
Professor—Arts (P-VAC)  
B.F.A., Virginia Commonwealth University  
M.F.A., Ohio University  

Eric T. Hayes  
Associate Professor—Chemistry (C)  
B.S., Virginia Polytechnic Institute and State University  
M.S., University of Cincinnati  
Ph.D., University of Cincinnati  

Douglas A. Henry  
Instructor—Food Service Management (P)  
B.B.A., Kent State University  

Christy A. Hewett  
Assistant Professor—Mathematics (V)  
B.S., Southern Illinois University  
M.S., Southern Illinois University
Rosemary S. Hill  
Associate Professor—Art (P-VAC)  
B.F.A., University of Mississippi  
M.Ed., University of Memphis  
M.F.A., Louisiana State University

Beverly D. Hills  
Instructor—Librarian (C)  
A.S., Tidewater Community College  
B.S., Old Dominion University  
M.S.L.S., Catholic University of America

Thomas P. Hilton  
Associate Professor—Philosophy (V)  
B.S., East Tennessee State University  
M.A., East Tennessee State University  
M.A., Old Dominion University

Nancy L. Hinson  
Instructor—Maritime Logistics (P)  
A.A.S., Thomas Nelson Community College  
Instructor Training Certificate, United States Navy

David S. Hodge  
Instructor—Librarian (V)  
B.S., Pennsylvania State University  
M.S.L.S., Clarion University

Ellyn J. Hodgis  
Assistant Professor—Radiologic Technology (V)  
A.A.S., Tidewater Community College  
B.S., Old Dominion University

James R. Holden  
Associate Professor—Biology (P)  
B.S., Ohio Northern University  
M.S., Clemson University  
Ph.D., University of Northern Colorado

Jack L. Hollinger  
Professor—Speech and Drama (V)  
B.A., Tusculum College  
M.F.A., Ohio University

Richard L. Holtz  
Associate Professor—Administration of Justice (V)  
A.A., Old Dominion University  
B.A., Old Dominion University

Diana B. Homsi  
Assistant Professor—Biology (V)  
B.S., Old Dominion University  
M.S., Old Dominion University

C. Gregory Hood  
Professor—Physics/Mathematics (V)  
B.S., Massachusetts Institute of Technology  
M.A., Boston University  
Ph.D., Boston University

Brittany P. Horn  
Instructor—Librarian (V)  
B.A., Old Dominion University  
M.S.L.S., University of Maryland

Robert E. House, Jr.  
Assistant Professor—English (V)  
B.A., Bard College  
M.A., University of Colorado

Dale R. Horeth  
Associate Professor—Biology (V)  
A.S., Tidewater Community College  
B.S., State University of New York at Regents  
M.S., Old Dominion University

Velma Hunter  
Counselor (N)  
B.A., Coker College  
M.S., University of Louisville

Cheryl K. Jackson  
Assistant Professor—English (P)  
B.A., Westminster College  
M.Ed., Pennsylvania State University

Edwin S. Jacob  
Associate Professor—Speech and Drama (C)  
B.F.A., University of Arizona  
M.F.A., Virginia Commonwealth University
Frances M. Jacobson  
Associate Professor—History (V)  
B.A., Old Dominion University  
M.A., Old Dominion University

Fred H. Jeffcoate  
Assistant Professor—Counselor (P)  
B.S., West Virginia Institute of Technology  
M.Ed., College of William and Mary

Doris O. Jellig  
Associate Professor—English (V)  
B.A., Cabrini College  
M.S., St. John’s University

William D. Jenkins  
Professor—Marketing and Economics (V)  
B.A., University of North Carolina  
M.B.A., University of North Carolina at Chapel Hill  
Ph.D., University of North Carolina at Chapel Hill

Linda M. Jensen  
Instructor—Spanish (V)  
B.A., College of William and Mary  
M.A., University of Virginia

Ann L. Johnston  
Professor—English as a Second Language (V)  
A.B., University of Michigan  
M.A., University of Michigan  
M.A., Princeton University  
Ph.D., Princeton University

Nancy H. Jolemore  
Associate Professor—English (N)  
B.A., Old Dominion University  
M.A., Old Dominion University  
M.F.A., Old Dominion University

Darryl K. Jones  
Instructor—Maritime Logistics (P)  
B.A., Saint Leo University  
Master Training Specialist Certificate, United States Navy

Kimberly O. Jones  
Assistant Professor—Funeral Services (V)  
A.A.S., University of the District of Columbia  
B.S., Old Dominion University  
M.L.S., University of Maryland

Valerie M. Jones  
Professor—Business Management and Administration (V)  
B.S., Virginia State University  
M.B.A., Old Dominion University

Joseph Joyner, Jr.  
Assistant Professor—Mathematics (N)  
B.G.S., Roosevelt University  
B.S., C.W. Post College  
M.A., City University of New York at Herbert H. Lehman College

Peter Kane  
Associate Professor—Hotel Restaurant Management (V)  
A.A., Suffolk County Community College  
A.O.S., Culinary Institute of America  
B.S., Florida International University  
M.S., Troy State University

Brian H. Kaneta  
Instructor—Maritime Logistics (P)  
Instructor Training Certificate, United States Navy

Lisa Y. Kern-Lipscomb  
Instructor—English (P)  
B.A., Norfolk State University  
M.A., Old Dominion University

Kenneth W. Kimble  
Instructor—Air Conditioning/Refrigeration (P)  
Instructor Training Certificate, United States Navy

David J. Kiracofe  
Associate Professor—History (C)  
B.A., College of William and Mary  
M.A., University of Connecticut  
Ph.D., University of Connecticut

Michael D. Kirby  
Assistant Professor—Mathematics (V)  
B.A., Christopher Newport University  
M.S., College of William and Mary
faculty and staff

Timothy P. Konhaus  
Assistant Professor—History (V)
B.A., Slippery Rock University  
M.A., Slippery Rock University

Albert V. Koon  
Associate Professor—Electricity/Electronics (V)
A.A.S., Tidewater Community College

Ruth G. Kopanski  
Professor—Nursing (P)
B.S., Duquesne University  
M.A., Webster University  
M.S.N., Widener University

Helena M. Krohn  
Associate Professor—History (N)
B.A., Longwood University  
M.A., University of Virginia

Robert S. Kunzinger  
Associate Professor—English (V)
B.A., St. Bonaventure University  
M.A., Pennsylvania State University  
M.F.A., Old Dominion University

Sean S. LaCroix  
Instructor—Economics (C)
B.A., North Carolina State University  
M.S., University of North Carolina at Charlotte

Samuel H. Lamb II  
Professor—Psychology (V)
B.S., Old Dominion University  
M.S.Ed., Old Dominion University  
Ed.D., Virginia Polytechnic Institute and State University

Sonya L. Landas  
Assistant Professor—Psychology (V)
B.S., Old Dominion University  
M.S., Western Washington University

Wendy W. Lark  
Instructor—Maritime Logistics (P)
A.A., Saint Leo University  
B.S., Saint Leo University  
B.A., Saint Leo University  
M.B.A., Troy State University

Sharon H. Lawhorne  
Assistant Professor—Biology (V)
B.A., Lynchburg College  
M.Ed., Lynchburg College

Constance M. Lawson  
Assistant Professor—Counselor (C)
A.A., Charles Stewart Mott Community College  
B.S., University of Michigan  
M.S.Ed., University of Wisconsin

Brian Lee Lawton  
Instructor—Culinary Arts (N)
A.A.S., City College of Chicago at Harold Washington  
A.A.S., Tidewater Community College  
A.S., Johnson & Wales University

Jerry W. Ledbetter  
Instructor—Trucking (P)
Commercial Driver’s License

David L. Lee  
Instructor—Automotive Technology (C)
A.A.S., Tidewater Community College

Thomas E. Leonard  
Professor—Accounting (N)
B.S., University of Richmond  
M.B.A., College of William and Mary

Lydia A. Leporte  
Assistant Professor—Accounting (V)
B.S., University of Pennsylvania  
M.A., American University  
M.A., University of West Florida

Corinne V. Lilyard-Mitchell  
Assistant Professor—Arts (P-VAC)
A.A., Tidewater Community College  
B.A., Norfolk State University  
M.F.A., Norfolk State University

Steven E. Litherland  
Instructor—Librarian (P)
A.S., Tidewater Community College  
B.A., Old Dominion University  
M.S., University of Tennessee
Dorothy P. Little  
Assistant Professor—Counselor (N)  
B.A., Howard University  
M.A., Hampton Institute

L. Muriel Locke  
Associate Professor—Mathematics (C)  
B.S.Ed., Temple University  
M.A., University of North Carolina at Charlotte

Michael E. Lyle  
Instructor—Geophysical Sciences (V)  
B.S., Old Dominion University  
M.S., East Carolina University

Carroll S. MacFarlane  
Instructor—Basic Academic Skills (P)  
B.S., Roger Williams University  
M.S.M., Troy State University

Anne F. Mach  
Associate Professor—Emergency Medical Services (V)  
B.S.N., University of Phoenix

Claudia D. Macon  
Assistant Professor—Business Management and Administration (V)  
B.S., Old Dominion University  
M.B.A., Old Dominion University

William M. Marcil  
Assistant Professor—Occupational Therapy (V)  
A.A.S., Maria College  
B.S., State University of New York at Buffalo  
M.S., State University of New York at Buffalo  
Ph.D., Regent University

John E. Mares III  
Instructor—Engineering (P)  
A.A.S., Excelsior College

Michele A. Marits  
Instructor—English (V)  
B.A., Old Dominion University  
M.A., Old Dominion University

Clifton E. Marsh  
Associate Professor—Sociology (N)  
B.A., California State University at Long Beach  
M.A., California State University at Long Beach  
Ph.D., Syracuse University

Kathleen A. Masciiangelo  
Associate Professor—Emergency Medical Services (V)  
B.S.N., West Virginia University  
M.S., Old Dominion University

Angela C. Mason  
Instructor—Biology (P)  
B.S., University of Cincinnati  
M.S., Ohio University

Virginia A. May  
Assistant Professor—Physical Therapy (V)  
A.A.S., Northern Virginia Community College  
B.S., Old Dominion University  
M.P.T., Old Dominion University

Gerald L. Mayhew  
Professor—Psychology/Developmental Disabilities (C)  
B.A., Arizona State University  
Ph.D., Arizona State University

Robert A. Maynard  
Associate Professor—Mathematics (V)  
B.S., Ohio State University  
M.S., Ohio State University  
M.E., Old Dominion University

Thomas J. McHugh  
Associate Professor—Chemistry (N)  
B.S., Old Dominion University  
M.S., Old Dominion University  
Ph.D., Arizona State University

Iain McKaig  
Professor—Mathematics (V)  
B.A., Virginia Wesleyan College  
M.S., Old Dominion University  
Ph.D., Old Dominion University

Judith McKaig  
Assistant Professor—Mathematics (N)  
B.A., Christopher Newport University  
M.S., Old Dominion University
Danielle G. McLemore  
Instructor—Counselor (N)  
A.A., City College of Chicago at Harold Washington  
B.S., Southern Illinois University  
M.A., Norfolk State University  

Kathleen C. McNamara  
Associate Professor—Medical Assistant (V)  
A.A.S.(RN), Tidewater Community College  
B.A., Saint Leo University  
Certified Medical Assistant  

William McNamara  
Assistant Professor—Information Systems Technology (V)  
A.A., Saint Leo University  
B.A., Saint Leo University  

Christine L. Medlin  
Professor—Dietetics (V)  
B.S., Drexel University  
M.S., University of Kentucky  
Ph.D., University of Tennessee  

Arthur A. Mendonsa  
Professor—Information Systems Technology (C)  
B.S., United States Naval Academy  
M.S., Old Dominion University  

Annette S. Mewborn  
Instructor—English (V)  
A.S., Tidewater Community College  
B.A., Norfolk State University  
M.A., Old Dominion University  

Diana J. Miller  
Instructor—English (V)  
A.S., Tidewater Community College  
B.A., Old Dominion University  
M.A., Old Dominion University  

Wallace E. Miller  
Instructor—Trucking (P)  
Commercial Driver’s License  

Richard A. Mims  
Assistant Professor—Welding (P)  

Dana C. Mitchell  
Instructor—Mathematics (P)  
B.S., Virginia Polytechnic Institute and State University  
M.B.A., Old Dominion University  
M.A., University of North Carolina at Charlotte  

Michael H. Mitchell  
Associate Professor—Biology (C)  
A.S., Tidewater Community College  
B.S., Old Dominion University  
M.S., Old Dominion University  
Ph.D., Old Dominion University  

Cecelia L. Monroe  
Assistant Professor—Biology (N)  
B.S., University of Mary Washington  
M.S., Old Dominion University  

William E. Moore III  
Professor—Drafting and Design (P)  
B.S., East Carolina University  
M.A.Ed., East Carolina University  

Jimmy L. Morse  
Instructor—Truck Driving (P)  

Jane F. Mosher  
Assistant Professor—Information Systems Technology (V)  
A.B., Emmanuel College  
M.Ed., Salem State College  

David P. Neff  
Professor—History (V)  
B.S., Jacksonville University  
M.A., Old Dominion University  
M.A., Georgetown University  
A.D., George Mason University  

P. Charlotte Jarrett Newsom  
Associate Professor—Mathematics (V)  
B.S., Samford University  
M.S., Florida State University  

James W. Newsom  
Associate Professor—Mathematics (V)  
B.A., College of William and Mary  
M.S., Purdue University
Craig A. Nilsen  
Professor—Arts (P-VAC)  
B.A., University of Delaware  
M.F.A., West Virginia University

Gary D. Noah  
Associate Professor—Information Systems Technology (V)  
B.S., Embry-Riddle Aeronautical University  
M.P.A., Valdosta State University

Brenda M. Norman  
Instructor—Mathematics (V)  
A.S., Tidewater Community College  
B.S., Old Dominion University  
M.S., Old Dominion University

Robert C. Noyes  
Assistant Professor—Counselor (P)  
B.A., Brown University  
M.A., University of Virginia

James P. O’Brien  
Professor—Psychology (V)  
B.A., University of Richmond  
M.S., Virginia Commonwealth University  
Ph.D., Catholic University of America

Kathleen D. O’Connor  
Associate Professor—English/Foreign Language (C)  
B.A., State University of New York at New Paltz  
M.A., George Mason University

Jaime T. Ordonez  
Instructor—Electrical (P)  
Master Training Specialist Certificate, United States Navy

Karen L. Overman  
Instructor—Mathematics (V)  
B.S., Virginia Polytechnic Institute and State University  
M.S., Old Dominion University

Karl H. Oyster, Jr.  
Instructor—Psychology (V)  
B.S., Ohio University  
M.A., Ball State University

William A. Paquette  
Professor—History (P)  
A.B., Grove City College  
M.A., Duquesne University  
Ph.D., Emory University

Anne M. Parrella  
Professor—History (C)  
A.B., Indiana State University  
M.A., University of Virginia  
Ph.D., University of Virginia

William J. Pascara  
Associate Professor—English (C)  
B.S., East Carolina University  
M.A., Old Dominion University  
M.S.Ed., Old Dominion University

Allan V. Pearce, Jr.  
Associate Professor—Mathematics (P)  
B.S., Frederick College  
M.A., College of William and Mary

Andrea A. Pearman  
Instructor—Speech (V)  
B.A., Maryville College  
M.A., Regent University

William W. Pearsall  
Associate Professor—Administration of Justice (C)  
A.A.S., Northern Virginia Community College  
B.A., National-Louis University  
J.D., Appalachian School of Law

Cynthia H. Pedigo  
Associate Professor—Legal Assisting (V)  
B.A., James Madison University  
J.D., College of William and Mary

Carl A. Penning  
Instructor—Information Systems Technology (P)  
Instructor Training Certificate, United States Navy  
MCP, MCPI, MCSE, MCT

Kathleen L. Pennington  
Assistant Professor—Nursing (P)  
B.S.N., University of Virginia  
M.S.N., Old Dominion University
Joseph E. Reish  
Associate Professor—Psychology (P)  
B.S., Virginia Polytechnic Institute and State University  
M.A., Radford University

Donald E. Remy  
Assistant Professor—Electromechanical Controls Technology (C)  
B.S., Old Dominion University  
M.S.Ed., Old Dominion University

Patricia L. Richardson  
Associate Professor—English (V)  
B.S., Saint Paul's College  
M.A., Virginia State University

Laura C. Rieves  
Instructor—Psychology (V)  
B.S., Old Dominion University  
M.S., Old Dominion University

Marci A. Rimar  
Instructor—Air Conditioning/Refrigeration (P)  
A.A., Coastline Community College  
United States Navy Certifications

Caroline C. Rivera  
Assistant Professor—Biology (N)  
B.A., Florida Atlantic University  
M.A., New Mexico State University

Remigio D. Rivera  
Instructor—Cosmetology (P)  
United States Navy Certifications

James N. Roberts  
Assistant Professor—Economics (V)  
B.A., Cleveland State University  
M.A., Michigan State University

William S. Rodner  
Professor—History (V)  
B.A., Mansfield University  
M.A., Pennsylvania State University  
Ph.D., Pennsylvania State University

Sylvia T. Ross  
Associate Professor—English (N)  
B.A., University of Notre Dame  
M.A., University of Miami

Bobby G. Rowe  
Assistant Professor—  
Automotive Technology (C)  
A.A.S., Tidewater Community College  
A.A., State University of New York at Albany  
B.S., State University of New York at Albany  
M.S., Troy State University

Beno Rubin  
Associate Professor—  
Automotive Technology (C)  
A.A.S., State University of New York at Westchester Community College  
B.S., City University of New York at Herbert Lehman College  
M.S., Nova Southeastern University

Amy L. Ruedisueli  
Assistant Professor—Sociology (V)  
B.S., Eastern Michigan University  
M.A., Eastern Michigan University

Cameron L. Russell  
Instructor—Biology (N)  
B.S., Old Dominion University  
M.S., Old Dominion University

Diane N. Ryan  
Assistant Professor—Speech (V)  
B.A., Western Illinois University  
M.A., Western Illinois University

Lawrence A. Saffioti  
Assistant Professor—Counselor (P)  
B.A., University of North Carolina at Greensboro  
M.Ed., University of North Carolina at Greensboro

Patricia E. Saffioti  
Instructor—Counselor (P)  
B.S., Old Dominion University  
M.S.Ed., Old Dominion University

Carolyn D. Satz  
Assistant Professor—Accounting (C)  
A.S., Tidewater Community College  
B.S., Old Dominion University  
M.T., Old Dominion University
Mario R. Scribner  
Assistant Professor—Mathematics (V)  
B.S., Old Dominion University  
M.S., Old Dominion University

Robin L. Seymore  
Assistant Professor—Psychology (V)  
B.A., College of William and Mary  
M.A., Regent University  
M.A., Regent University

Linda L. Shackelford  
Assistant Professor—Mathematics (P)  
B.S., James Madison University  
M.Ed., Old Dominion University

Indu J. Sharma  
Assistant Professor—Diagnostic Medical Sonography (V)  
A.S., Tidewater Community College  
B.A., College of William and Mary

Peter M. Shaw  
Professor—Business Management and Administration (N)  
B.S., Old Dominion University  
M.B.A., College of William and Mary

William L. Sherrill  
Professor—Economics (N)  
A.A., Old Dominion University  
B.S., Old Dominion University  
M.A., Old Dominion University

Richard L. Shoaf  
Professor—History (P)  
A.B., University of North Carolina at Chapel Hill  
M.A., Harvard University  
Ph.D., Harvard University

Ruth H. Shumate  
Assistant Professor—Librarian (P)  
A.S., Tidewater Community College  
B.S., Old Dominion University  
M.S.L.S., Catholic University of America

David H. Sieg  
Assistant Professor—Political Science (V)  
B.A., Virginia Polytechnic Institute and State University  
M.A., Virginia Polytechnic Institute and State University

Thomas D. Siegmund  
Associate Professor—Photography (P-VAC)  
B.F.A., Old Dominion University  
M.F.A., Norfolk State University

Lawrence A. Singleton  
Assistant Professor—Mathematics (P)  
B.S., Virginia State University  
M.Ed., Virginia State University

Dania O. Sinibaldi  
Instructor—Mathematics (N)  
B.S., Old Dominion University  
M.S., Montana State University

Laura M. Smith  
Instructor—American Sign Language (C)  
C.D.I., California State University  
B.A., Gallaudet University

Thomas Smith, Jr.  
Assistant Professor—Mathematics (P)  
B.S., Norfolk State University  
M.Ed., Virginia State University

Viola A. Smith  
Assistant Professor—Nursing (P)  
B.S., Indiana University of Pennsylvania  
M.S., Indiana University of Pennsylvania

Kathryn T. Sourbeer  
Instructor—Biology (C)  
B.S., Old Dominion University  
M.S., Old Dominion University

Barbara J. Spencer  
Instructor—Information Systems Technology (P)  
A.S., Tidewater Community College  
B.S., Park University  
M.P.A., Troy State University  
MCP, MCPI, MSCE, MCT

William Ken Spencer  
Professor—Horticulture (C)  
B.A., University of North Carolina at Chapel Hill  
B.S., North Carolina State University  
M.S., Virginia Polytechnic Institute and State University
Maura J. Spreen
Instructor—Counselor (V)
B.A., St. Ambrose University
M.S.Ed., Old Dominion University

Brice E. Stegall
Associate Professor—Information Systems Technology (V)
A.S., Allegheny County Community College
B.S., Robert Morris College
M.S.Ed., Old Dominion University
CNA, CNI, Network

David A. Steinhauer
Professor—Drafting (P)
B.S., Kent State University
M.S., Old Dominion University

Frederick E. Stemple, Jr.
Assistant Professor—Biology (V)
B.S., Old Dominion University
M.S., Old Dominion University

Robert W. Sterling
Instructor—Computer Science (V)
B.A., State University of New York at Buffalo
M.S., Old Dominion University

Erika L. Stevens
Instructor—Speech (N)
B.A., University of Akron
M.A., Norfolk State University

Glynn C. Stille
Instructor—Electrical (P)
US Navy Certifications

Laetitia S. Stone
Associate Professor—French (V)
B.A., Old Dominion University
M.A., Old Dominion University

Jody A. Strausser
Assistant Professor—Modeling and Simulation (P)
B.S., Moravian College
M.S., College of William and Mary

Martha R. Sugarmeyer
Assistant Professor—Biology (V)
A.A., Pensacola Junior College
B.A., Florida State University
M.S., Old Dominion University

Tricia J. Swoope
Instructor—English (V)
B.A., Old Dominion University
M.A., Old Dominion University

Azam M. Tabrizi
Instructor—Geophysical Science (C)
B.S., Tabriz University
M.S., University of London

Michael P. Tarpey
Instructor—Philosophy (C)
B.A., Calvin College
M.A., Old Dominion University
M.A., Old Dominion University

Eugenia B. Taylor
Associate Professor—Mathematics (C)
B.S., University of South Carolina
M.A., College of William and Mary

Lara B. Tedrow
Assistant Professor—Psychology (N)
B.S., Old Dominion University
M.S., Old Dominion University
M.S.Ed., Old Dominion University

C. Gregg Tennefoss
Professor—Information Systems Technology (V)
A.A.S., Tidewater Community College
B.S., Old Dominion University
M.S., Old Dominion University

Marcia L. Tharp
Professor—Mathematics (N)
B.S., University of Illinois
M.S., University of Illinois
Ph.D., University of South Florida

Douglas M. Thiele
Instructor—English (C)
B.S., Indiana University
M.A., Indiana University

E. Phillip Thompke
Associate Professor—History (V)
B.A., Olivet College
M.A., University of Southwestern Louisiana
faculty and staff

Albert G. Thompson, Jr.
Associate Professor—Mathematics (N)
B.S., North Carolina State College
M.M., University of Tennessee

Kathleen A. Tilton
Instructor—Librarian (N)
B.A., University of Hawaii
M.S.L.S., Catholic University of America

Louis M. Tinaro III
Professor—Information Systems Technology (V)
B.S., Old Dominion University
M.B.A., Old Dominion University
Certificate in Data Processing

Rhonda C. Todoroff
Assistant Professor—Art History (P-VAC)
B.A., Wayne State University
M.A., Michigan State University

Gabriela J. Toletti
Associate Professor—Spanish (P)
B.S., University of Uruguay
E.S.L., Alianza Cultural, Uruguay
M.A., State University of New York at Buffalo
Ph.D., State University of New York at Buffalo

James M. Tomicich
Instructor—Electrical (P)
United States Navy Certifications

Suki E. Tooley
Instructor—English (N)
B.A., Christopher Newport University
M.A., University of Kansas

Felicia M. Toreno
Professor—Diagnostic Medical Sonography (V)
A.S., Butler University
B.S., Butler University
M.S.Ed., Old Dominion University
Ph.D., Old Dominion University

Leslie K. Twine
Assistant Professor—Health Information Technology (V)
A.A.S., Tidewater Community College
B.S., Christopher Newport University
M.B.A., Old Dominion University

Robert C. Tyler
Instructor—Counselor (P)
B.A., Johnson State University
M.S., City University of New York at Hunter College

Kim B. Utley
Associate Professor—Radiologic Technology (V)
A.A.S., Central Virginia Community College
B.S., Old Dominion University
M.S., Old Dominion University

David M. Vann
Instructor—Trucking (P)
Commercial Driver’s License

Nancy C. Verdirame
Assistant Professor—Nursing (P)
B.S.N., University of Virginia
M.S.N., Adelphi University Graduate School of Nursing

Bonita J. Volker
Assistant Professor—Information Systems Technology (N)
A.S., Tidewater Community College
B.S., Old Dominion University
M.B.A., Old Dominion University

Robert J. Vollbrecht
Instructor—Maritime Project (N)
B.S., United States Coast Guard Academy

Scotty E. Wade
Instructor—History (V)
A.A.S., Mountain Empire Community College
B.A., University of Virginia at Wise
M.A., George Mason University

James E. Walsh, Jr.
Associate Professor—Business Management and Administration (P)
B.S., Old Dominion University
M.B.A., Old Dominion University
Joseph F. Walton  
Assistant Professor—Funeral Services (V)  
A.S., Gupton-Jones College  
B.S., Hampton University  
M.A., Norfolk State University

Douglas D. Wardwell  
Instructor—Information Systems Technology (P)  
A.S., Liberty University  
B.S., Southern Illinois University

Jacqueline M. Warren  
Professor—Administrative Support Technology (V)  
A.A., Old Dominion University  
B.S., Old Dominion University  
M.Ed., Virginia Polytechnic Institute and State University

Richard L. Watkins  
Associate Professor—Mathematics (V)  
B.S., Davidson College  
M.A., University of Virginia

Debra A. Wells  
Associate Professor—Administrative Support Technology (P)  
B.S., Norfolk State University  
M.S.Ed., Regent University

Mark J. Wheaton  
Instructor—Chemistry (N)  
B.S., Hampden-Sydney College  
M.A., University of Arizona

Jeffrey A. White  
Associate Professor—Sociology (V)  
A.A., Greenfield Community College  
B.A., University of Massachusetts  
M.S., Florida State University  
M.A., Old Dominion University

Carole B. Whitener  
Assistant Professor—Early Childhood Development (C)  
B.M., East Carolina University  
M.S.Ed., Old Dominion University

Gordon L. Whitman  
Assistant Professor—Psychology (N)  
A.B., West Virginia University  
M.A., Ohio State University

F. Christian Widmer  
Professor—Business Management and Administration (V)  
B.S., State University of New York at Buffalo  
M.B.A., Western Michigan University  
Ed.D., North Carolina State University

Carolyn W. Williams  
Instructor—Counselor (V)  
B.S., Fayetteville State University  
M.A.Ed., East Carolina University

John T. Williams, Jr.  
Associate Professor—English (V)  
B.A., Waynesburg College  
M.A., Fitchburg State College

Judy H. Williams  
Associate Professor—Mathematics (V)  
B.A., Frostburg State College  
M.A., West Virginia University

Willie L. Williams  
Assistant Professor—Business Management and Administration (C)  
B.S., Saint Paul's College  
M.A., Webster University

Marc C. Wingett  
Instructor—Biology (N)  
B.S., Virginia Polytechnic Institute and State University  
B.S., Old Dominion University  
M.S., Old Dominion University

David L. Winters  
Associate Professor—Chemistry (V)  
B.S., West Virginia State College  
M.S., West Virginia University

James D. Wolfe  
Instructor—Mathematics (C)  
B.S., Pennsylvania State University  
M.Ed., Pennsylvania State University

Naaman K. Wood  
Assistant Professor—Speech (C)  
B.A., Evangel University  
M.A., Regent University  
Ph.D., Regent University
Nita B. Wood
Assistant Professor—English (P)
B.A., Norfolk State University
M.A., Norfolk State University

Geraldine Woodberry-Wright
Professor—Biology (P)
B.A., Lehigh University
D.P.M., New York College of Podiatric Medicine

Matthew B. Woods
Instructor—Trucking (P)

Lisa A. Wrenn
Instructor—Biology (V)
A.S., Tidewater Community College
B.S., James Madison University
M.S., Old Dominion University

Bethany Wright
Instructor—Librarian (V)
B.A., Brigham Young University
M.L.I.S., University of South Carolina

David S. Wright
Professor—Physics (V)
B.S., Brigham Young University
M.A., Brigham Young University
Ph.D., Virginia Polytechnic Institute and State University