

CAREER STUDIES CERTIFICATE PROGRAMS



Accounting Technician (014.01) C, N, P, VB
 Acquisition & Procurement (005) P
 Administering Programs for Young Children (061.01) C, P, VB
 American Sign Language (096) C, N, P, VB
 Associate Designer (017.01) C
 Auto Parts Management Trainee (062.02) VB
 Automotive Engine Diagnosis (062) C
 Automotive Service and Parts Specialist (062.03) C
 Aviation Pilot (006) C
 Catering (064.05) N
 Child Development (066) C, N, P, VB
 Civil Engineering Technician (077.02) VB
 Classical Cooking (064.03) N
 Controls (053.02) C
 Critical Care (085.01) VB
 Database Administrator (071.08) VB
 Developmental Disabilities Specialist (012) C
 Diesel and Industrial Machine Repair (062.01) C
 Educational Secretary (013) C, P, VB
 Educational Support Specialist (056.01) C, N, P, VB
 Electrical Wiring (053.01) C
 Electrical Wiring for Technicians (053.03) C
 Electronic Metrology, Practicing Calibrator (078.02) VB
 Electronics Technology (078.01) VB
 Emergency Medical Technician-Intermediate (085.02)
 Emergency Medical Technician-Paramedic (085.03)
 Environmental Protection (089) P
 Food Service Management Trainee (064) VB
 General Secretary (074.07) C, P, VB
 Gerontology (008.02) VB
 Greenhouse Production (018.02) C
 Industrial Maintenance (067) P
 Industrial Management (016.01) P, VB
 Industrial Supervision (007.02) P, VB
 Industrial Wastewater Treatment (068) P
 Inspections Lab Technology (077.03) VB
 Kitchen Management (064.04) N
 Landscape Design and Management (018.04) C
 Landscape Management (018.05) C
 Lodging Management Trainee (064.02) VB
 Machine Tool Operations (082) P
 Mechanical Metrology, Practicing Calibrator (081.01) VB
 Medical Office Administration (093) VB
 Medical Secretary (074.06) P
 Music (094.01) P
 Network Administration (071.12) VB
 Network Engineer – Netware 6 (071.01) N, VB
 Network Engineer – Windows 2003 (071.16) N, P, VB
 Network Engineer - Wireless System (071.13) P, VB
 Network Infrastructure Specialist (071.10) C, VB
 Network Security (071.15) C, N, VB
 Occupational Safety (050) P, VB
 Oracle Developer (071.14) VB
 Paralegal: General Practice (072.02) VB
 Paralegal: Litigation (072.03) VB
 Potable Water (058) P
 Programmer Trainee (071.02) C, N, P, VB
 Quality Assurance (051)P, VB
 Retail Operations (054.02) N, VB
 School Age Care (088) C, P, VB
 Small Business Management (015.01) P, VB
 Supervision in Ship Repair (007.03) N, P
 Supervisory Management (055) P, VB

Theatre Arts (094.02) P
 Truck Driving (057) P
 Turfgrass Management (018.06) C
 Web Development Specialist (071.05) VB
 Welding (065) P
 Campus: C - Chesapeake, N – Norfolk, P - Portsmouth, VB -
 Virginia Beach, VAC - Portsmouth Visual Arts Center

The college offers a number of Career Studies Certificate programs that are designed to provide individuals with job entry skills in a short period of time. These career studies programs will provide those individuals who are already employed new skills in specific occupational-technical fields. They also will prepare individuals for credentialing examinations. The programs have from nine to twenty-nine credits. In addition, the credits for most of the career studies programs can be applied to an associate in applied sciences degree program.

Call Tidewater Community College Information Center,
 (757) 822-1122, for information on these programs.



CAREER STUDIES: ACCOUNTING TECHNICIAN (O14.01)

ACC 211	Principles of Accounting I	(3)
ACC 212	Principles of Accounting II	(3)
ACC 221	Intermediate Accounting I	(4)
ACC 222	Intermediate Accounting II	(4)
ACC 231	Cost Accounting I	(3)
ACC 241	Auditing I	(3)
ACC 261	Principles of Federal Taxation I	(3)
BUS 241	Business Law I3	
	or	
ACC 215	Computerized Accounting ³	(3)

Minimum Credits Required: 26

CAREER STUDIES: ACQUISITION AND PROCUREMENT (O05)

ACQ 121-122	Introduction to Acquisition and Procurement Fundamentals I-II	(6)
ACQ 215	Contract Law	(3)
ACQ 221	Advanced Acquisition and Procurement Management I	(3)
ACQ 231-232	Principles of Contract Pricing and Negotiation I-II	(6)

Minimum Credits Required: 18

CAREER STUDIES: ADMINISTERING PROGRAMS FOR YOUNG CHILDREN (O61.01)

ACC 211	Principles of Accounting I	(3)
BUS 200	Principles of Management	(3)
CHD 120	Introduction to Early Childhood Education (or EDU 160)	(3)
CHD 270	Administration of Childcare Programs	(3)
CHD 290	Coordinated Internship (or EDU 290)	(3)
HLT 135	Child Health and Nutrition	(3)
ITE 115	Basic Computer Literacy	(4)

Minimum Credits Required: 22

CAREER STUDIES: AMERICAN SIGN LANGUAGE (O96)

ASL 101	American Sign Language I	(3)
ASL 102	American Sign Language II	(3)
ASL 125	History and Culture of the U.S. Deaf Community	(3)
ASL 150	Careers: Working with Deaf and Hard-of-Hearing People	(2)
ASL 201	American Sign Language III	(3)
ASL 202	American Sign Language IV	(3)
SDV 100	College Success Skills	(1)

Minimum Credits Required: 18

CAREER STUDIES: ASSOCIATE DESIGNER (O17.01)

IDS 100	Theory and Techniques of Interior Design	(3)
IDS 105	Architectural Drafting for Interior Design	(3)
IDS 106	Three Dimensional Drawing and Rendering	(3)
IDS 109	Styles of Furniture and Interiors	(3)
IDS 120	Estimation of Interior Coverings	(3)
IDS 205	Materials and Sources	(3)
IDS 206	Lighting and Furnishings	(3)
IDS 245	Computer Aided Drafting for Interior Designers	(3)

Minimum Credits Required: 24

CAREER STUDIES: AUTO PARTS MANAGEMENT TRAINEE (O62.02)

AST 205	Business Communications ¹	(3)
BUS 100	Introduction to Business	(3)
BUS 200	Principles of Management	(3)
BUS 202	Applied Management Principles	(3)
BUS 205	Human Resource Management	(3)
ENG 111	College Composition I ¹	(3)
MKT 100	Principles of Marketing	(3)
---	Electives ²	(6)

Minimum Credits Required: 27

Note: This career studies certificate is offered in partnership with Advance Auto Parts. Developed in conjunction with corporate leaders at Advance Auto Parts, this program provides Advance Auto Parts employees with an opportunity for advancement within their organization. The program is also available to persons who desire management positions at Advance Auto Parts.

- 1 Placement test or prerequisite required.
- 2 Students may select electives from the following without approval: ACC 295, AUT 101, BUS 111, BUS 297, ITE 115, MKT 110, MKT 295, MKT 271, STD 106.

CAREER STUDIES: AUTOMOTIVE ENGINE DIAGNOSIS (O62)

AUT 166	Automotive Diagnostics I	(5)
AUT 167	Automotive Diagnostics II	(5)
AUT 168	Automotive Diagnostics III	(5)
AUT 169	Automotive Diagnostics IV	(5)
AUT 297	Cooperative Education	(4)

Minimum Credits Required: 24

CAREER STUDIES: AUTOMOTIVE SERVICE AND PARTS SPECIALIST (O62.03)

ACC 220	Accounting for Small Businesses or	(3)
ACC 211	Principles of Accounting I	
AST 117	Keyboarding	(1)
AUT 101	Introduction to Automotive Systems	(3)
AUT 297	Cooperative Education in Automotive	(3)
ENG 111	College Composition or	(3)
ENG 131	Technical Report Writing	
ITE 115	Basic Computer Literacy or	(4)
SAF 125	Computer Applications for Technicians	
MTH 103	Applied Technical Mathematics	(3)
	or	
MTH 121	Fundamentals of Mathematics	
SPD 105	Oral Communications	(3)
AUT ---	Vehicle Systems Knowledge I	(3)
AUT ---	Vehicle Systems Knowledge II	(3)

Minimum Credits Required: 29

CAREER STUDIES: AVIATION PILOT (O06)

ARO 121	Private Pilot Ground School	(3)
ARO 122	Instrument Pilot Ground School	(3)
ARO 123	Commercial Pilot Ground School	(3)
ARO 140	Aviation Safety	(3)
ARO 210	Aviation Law	(3)
ARO 220	Meteorology	(3)

Minimum Credits Required: 18



CAREER STUDIES: CATERING (064.05)

HRI 145	Garde Manger	(3)
HRI 158	Sanitation and Safety	(3)
HRI 207	American Regional Cuisine	(3)
HRI 219	Menu Planning and Dining Room Service . . .	(3)
HRI 251	Food and Beverage Cost Control	(3)
HRI 256	Principles and Applications of Catering . . .	(3)

Minimum Credits Required: 18

CAREER STUDIES: CHILD DEVELOPMENT (066)

CHD 120	Introduction to Early Childhood Education .	(3)
CHD 125	Creative Activities for Young Children	(3)
CHD 205	Guiding the Behavior of Children	(3)
HLT 135	Child Health and Nutrition	(3)

Minimum Credits Required: (12)

CAREER STUDIES: CIVIL ENGINEERING TECHNICIAN (077.02)

CIV 115	Civil Engineering Drafting	(3)
CIV 116	Topographic Drafting	(3)
CIV 171-172	Surveying I-II	(6)
CIV 225	Soil Mechanics	(2)
CIV 226	Soil Mechanics Laboratory	(1)
CIV 228	Concrete Technology	(2)
CIV 229	Concrete Laboratory	(1)
CIV 235	Asphalt Technology	(2)
CIV 236	Asphalt Laboratory	(1)
DRF 201	Computer Aided Drafting and Design I . . .	(4)
MTH 115	Technical Mathematics I ¹	(3)

Minimum Credits Required: 28

¹ Placement test or prerequisite required.

CAREER STUDIES: CLASSICAL COOKING (064.03)

HRI 128	Principles of Baking	(3)
HRI 158	Sanitation and Safety	(3)
HRI 205	Fundamentals of Wine	(3)
HRI 206	International Cuisine	(3)
HRI 207	American Regional Cuisine	(3)
HRI 219	Soup, Stock and Sauce Preparation	(3)

Minimum Credits Required: 18

CAREER STUDIES: CONTROLS (053.02)

ELE 146	Electric Motor Controls	(4)
ELE 150	A.C. and D.C. Circuit Fundamentals	(3)
ELE 233	Programmable Logic Controller Systems I .	(3)
ETR 203	Electronic Devices I	(3)
ETR 281	Digital Systems	(3)
MEC 268	Fluid Power - Hydraulic Systems	(3)
MEC 269	Fluid Power - Pneumatic Systems	(3)

Minimum Credits Required: 22

CAREER STUDIES: CRITICAL CARE (085.01)

EMT 209	Pharmacology	(3)
EMT 220	Introduction to Cardiology	(2)
EMT 224	12 Lead EKG Interpretation	(2)
EMT 274	Pathophysiology	(3)
EMT 275	Concepts in Critical Care	(5)
EMT 290	Coordinated Internship	(1)

Minimum Credits Required: 16

NOTE: Program has special admission requirements. Call 822-7335 for information.

CAREER STUDIES: DATABASE ADMINISTRATOR (071.08)

ITD 132	Structure Query Language**	(4)
ITD 134	PL/SQL Programming	(4)
ITD 250	Database Architecture and Administration**	(4)
ITD 252	Database Backup and Recovery**	(3)
ITD 258	Database Performance and Tuning**	(4)
ITD 260	Data Modeling and Design	(4)
ITD 295	Database System Development**	(3)

Minimum Credits Required: 26

** These courses prepare students for the tests leading to Oracle Database Administrator OCP certification.

CAREER STUDIES: DEVELOPMENTAL DISABILITIES SPECIALIST (012)

EDU 130	Introduction to Developmental Disabilities .	(4)
	or	
CHD 210	Introduction to Exceptional Children	(3)
EDU 135	Behavior Technology for Use with Developmental Disabilities	(4)
EDU 247	Adult Independent Living and Vocational Skills for Disabled	(4)
EDU 290	Coordinated Internship in Education	(4)

Minimum Credits Required: 15-16

CAREER STUDIES: DIESEL AND INDUSTRIAL MACHINE REPAIR (062.01)

DSL 121	Diesel Engines I	(6)
DSL 122	Diesel Engines II	(5)
DSL 133	Diesel Fuel and Injection Systems	(6)
DSL 143	Diesel Truck Electrical Systems	(4)
DSL 152	Diesel Power Trains, Chassis, and Suspension	(4)

Minimum Credits Required: 25

CAREER STUDIES: EDUCATIONAL SECRETARY (013)

AST 141	Word Processing I	(4)
AST 205	Business Communications ¹	(3)
AST 234	Records and Database Management	(3)
AST 243	Office Administration I	(3)
—	Approved Electives ²	(12)

Minimum Credits Required: 25

¹ Placement test or prerequisites required.
² Students may select from the following list without approval: ACC 211, ACC 212, ACC 215, AST 240, AST 253, BUS 100, BUS 200, EDU 275, ITE 140, ITE 130, ITE 150.



CAREER STUDIES: EDUCATIONAL SUPPORT SPECIALIST (056.01)

CHD 118	Language Arts for Young Children	(3)
CHD 120	Introduction to Early Childhood Education .(3)	
CHD 126	Science and Math Concepts for Children .(3)	
CHD 205	Guiding the Behavior of Children	(3)
PSY 235	Child Psychology (or PSY 231).	(3)
— —	Approved Program Elective	(3)
	(choose from CHD 125, CHD 210, or HLT 135)	

Minimum Credits Required: (18)

CAREER STUDIES: ELECTRICAL WIRING (053.01)

ELE 127	Residential Wiring Methods	(3)
ELE 131-132	National Electrical Code I-II	(8)
ELE 145	Transformer Connections and Circuits	(2)
ELE 146	Electric Motor Controls	(4)
ELE 149	Wiring Methods in Industry	(3)
ELE 150	A.C. and D.C. Circuit Fundamentals	(3)

Minimum Credits Required: 23

CAREER STUDIES: ELECTRICAL WIRING FOR TECHNICIANS (053.03)

ELE 131-132	National Electrical Code I-II	(8)
ELE —	Approved ELE Electives*	(6)

Minimum Credits Required: 14

*The ELE electives may be ELE 150, ELE 127, ELE 149, or another course approved by the appropriate academic dean.

CAREER STUDIES: ELECTRONIC METROLOGY - PRACTICING CALIBRATOR (078.02)

ETR 116	DC and AC Circuit Analysis	(4)
ETR 141-142	Electronics I-II	(6)
ETR 168	Digital Circuit Fundamentals	(3)
ETR 199	Electronics Labs	(1,1,1)
IND 145	Introduction to Metrology	(3)
IND 146	Statistical Quality Control	(3)
MTH 115	Technical Mathematics I (or MTH 163) ¹	(3)

Minimum Credits Required: 25

Note: ETR 199 is a corequisite for ETR 141, ETR 142, and ETR 168.

¹ Placement test or prerequisite required.

CAREER STUDIES: ELECTRONICS TECHNOLOGY (078.01)

ENG 118	Writing for Business	(3)
ETR 111	Electronics Mathematics	(2)
ETR 141	Electronics I	(3)
ETR 142	Electronics II	(3)
ETR 168	Digital Circuit Fundamentals	(3)
ETR 160	Microprocessor Applications I	(4)
ETR 199	Lab for ETR 141, 142, 168	(1,1,1)

Minimum Credits Required: 21

CAREER STUDIES: EMERGENCY MEDICAL TECHNICIAN-INTERMEDIATE (085.02)

Note: Pre-requisite is current EMT/B certification

EMT 176	Introduction to Advanced Life Support	(3)
EMT 177	Assessment Based Management	(1)
EMT 181	Advanced Life Support Trauma Care	(3)
EMT 182	Advanced Life Support Medical Care	(4)
EMT 183	Advanced Life Support Skills I	(1)
EMT 220	Introduction to Cardiology	(2)
EMT 280	Advanced Life Support Specialty Care	(2)
EMT 190	Coordinated Internship	(2)
EMT 190	Coordinated Field Internship	(1)

Minimum Credits Required: 19

CAREER STUDIES: EMERGENCY MEDICAL TECHNICIAN-PARAMEDIC (085.03)

Note: Pre-requisite is completion of Career Studies: Emergency Medical Technician-Intermediate or equivalent background.

EMT 184	Advanced Life Support Skills II	(2)
EMT 185	Advanced Life Support Skills III	(2)
EMT 209	Pharmacology	(3)
EMT 216	Pre-Hospital Physiological Assessment	(2)
EMT 245	Operations	(2)
EMT 274	Pathophysiology	(3)
EMT 290	Coordinated Internship	(2)
EMT 290	Coordinated Field Internship	(3)

Minimum Credits Required: 19

CAREER STUDIES: ENVIRONMENTAL PROTECTION (089)

ENV 101-102	Introduction to Environmental Technology I-II	(6)
ENV 121	Introduction to Supervision	(3)
ENV 183	OSHA Hazardous Waste Operations and Response	(3)
ENV 215	Sampling Techniques	(3)
ENV 220	Environmental Problems	(3)
ENV 227	Environmental Law	(3)
ENV 231	Environmental Codes I	(3)

Minimum Credits Required: 24

CAREER STUDIES: FOOD SERVICE MANAGEMENT TRAINEE (064)

DIT 125	Current Concepts in Diet and Nutrition	(3)
HRI 101-102	Hotel-Restaurant Organization and Management I-II	(6)
HRI 120	Principles of Food Preparation	(4)
HRI 158	Sanitation and Safety	(3)
HRI 215	Food Purchasing	(3)
HRI 225	Menu Planning and Dining Room Service	(3)
HRI 251	Food and Beverage Cost Control I	(3)
HRI 256	Principles and Applications of Catering	(3)

Minimum Credits Required: 28



CAREER STUDIES: GENERAL SECRETARY (074.07)

AST 101 - 102	Keyboarding I - II	(6)
AST 141	Word Processing I	(4)
AST 154	Voice Recognition	(1)
AST 234	Records and Database Management	(3)
AST 236	Specialized Software	(4)
AST 243	Office Administration I	(3)

Minimum Credits Required: 21

CAREER STUDIES: GERONTOLOGY (008.02)

ENG 111	College Composition ¹	(3)
HLT 130	Nutrition and Diet Therapy	(1)
HLT 270	Health and Well Being of the Older Adult	(3)
HLT 271	Physical Care Management of the Older Adult	(3)
HLT 272	Medical Management of the Older Adult	(3)
HMS 225	Functional Family Intervention	(6)
HMS 231-232	Gerontology I-II	(3)
HMS 233	Psychological and Sociological Aspect of Older Adult Care	(3)
HMS 238	Selected Topics on Aging (Consumer Issues)	(3)

Minimum Credits Required: 28

¹ Placement test or prerequisite required.

CAREER STUDIES: GREENHOUSE PRODUCTION (018.02)

HRT 110	Principles of Horticulture	(3)
HRT 115	Plant Propagation	(3)
HRT 121-122	Greenhouse Crop Production I-II	(6)
HRT 207	Plant Pest Management	(3)
HRT 226	Greenhouse Management	(3)

Minimum Credits Required: 18

CAREER STUDIES: INDUSTRIAL MAINTENANCE (067)

DRF 160	Machine Blue Print Reading	(3)
ENV _____	Approved ENV Elective ¹	(3)
IND 115	Materials and Processes of Industry	(4)
IND _____	Approved IND Elective ¹	(3)
IND _____	Approved IND Elective ¹	(3)
SAF 120	Safety and Health Standards: Regulations and Codes	(3)
SAF 297	Cooperative Education (or Approved Technical Elective) ¹	(3)
SDV 100	College Success Skills	(1)

Minimum Credits Required: 23

¹ Consult with your academic advisor or counselor. Courses substitution and electives must be approved by the appropriate academic dean.

CAREER STUDIES: INDUSTRIAL MANAGEMENT (016.01)

IND 106	Industrial Engineering Technology	(3)
IND 115	Materials and Processes of Industry	(4)
IND 160	Introduction to Robotics	(3)
_____	Approved IND Electives ¹	(9)

Minimum Credits Required: 19

¹ Consult with your academic advisor or counselor. Courses must be approved by the appropriate academic dean.

CAREER STUDIES: INDUSTRIAL SUPERVISION (007.02)

IND 101	Quality Assurance Technology I	(3)
IND 121	Industrial Supervision I	(3)
IND 216	Plant Layout and Material Handling	(3)
IND 245	Time and Motion Study	(3)

Minimum Credits Required: 12

CAREER STUDIES: INDUSTRIAL WASTEWATER TREATMENT (068)

ENV 146	Advanced Wastewater Licensure Review	(2)
ENV 148	Water and Wastewater Treatment Computational Operations	(2)
ENV 149	Waste Water Treatment Plant Operation	(3)
ENV 217	Industrial Waste Treatment	(3)

Minimum Credits Required: 10

CAREER STUDIES: INSPECTIONS/LAB TECHNOLOGY (077.03)

CIV 225	Soil Mechanics	(2)
CIV 226	Soil Mechanics Laboratory	(1)
CIV 228	Concrete Technology	(2)
CIV 229	Concrete Laboratory	(1)
CIV 235	Asphalt Technology	(2)
CIV 236	Asphalt Laboratory	(1)

Minimum Credits Required: 9

CAREER STUDIES: KITCHEN MANAGEMENT (064.04)

DIT 125	Current Concepts in Diet and Nutrition	(3)
HRI 101	Hotel Restaurant Organization and Management I	(3)
HRI 158	Sanitation and Safety	(3)
HRI 225	Menu Planning and Dining Room Service	(3)
HRI 251	Food and Beverage Cost Control I	(3)
HRI 256	Principles and Applications of Catering	(3)

Minimum Credits Required: 18

CAREER STUDIES: LANDSCAPE DESIGN AND MANAGEMENT (018.04)

HRT 110	Principles of Horticulture	(3)
HRT 201-202	Landscape Plant Materials I-II	(6)
HRT 235	Landscape Drawing	(3)
HRT _____	Approved HRT Electives*	(6)

Minimum Credits Required: 18

* Approved HRT Electives – Choose HRT 150 Theory of Landscape Design (3) and HRT 231 Planting Design I (3) or HRT 227 Professional Landscape Management (3) and HRT 228 Turfgrass Management (3)



CAREER STUDIES: LODGING MANAGEMENT TRAINEE (064.02)

HRI 101-102	Hotel-Restaurant Organization and Management I-II	(6)
HRI 120	Principles of Food Preparation	(4)
HRI 160	Executive Housekeeping	(3)
HRI 180	Convention Management and Service (or HRI 235)	(3)
HRI 215	Food Purchasing	(3)
HRI 225	Menu Planning and Dining Room Service	(3)
HRI 251	Food and Beverage Cost Control I	(3)
HRI 265	Hotel Front Office Operations	(3)

Minimum Credits Required: 28

CAREER STUDIES: MACHINE TOOL OPERATIONS (082)

IND 101	Quality Assurance Technology I	(3)
MAC 111-112-113	Machine Trade Theory & Computation I-II-III (9)	
MAC 171-172-173	Machine Tool Operations I-II-III	(9)
MAC 181-182	Machine Blueprint Reading I-II	(6)

Minimum Credits Required: 27

CAREER STUDIES: MECHANICAL METROLOGY - PRACTICING CALIBRATOR (081.01)

IND 109	Force, Mass, and Torque Measurements	(2)
IND 145	Introduction to Metrology	(3)
IND 146	Statistical Quality Control	(3)
IND 159	Precision Dimensional Measurement	(3)
IND 175	Pressure Measurement	(2)
IND 203	Temperature and Humidity Measurement	(2)
IND 204	Opto-Mechanical Measurement of Angles and Surfaces	(2)
IND 205	Flow, Viscosity, and Specific Gravity Measurement	(2)
MTH 115	Technical Mathematics I ¹	(3)

Minimum Credits Required: 22

¹ Placement test or prerequisite required.

CAREER STUDIES: MEDICAL OFFICE ADMINISTRATION (093)

MDA 101	Medical Assistant Science I	(4)
MDA 190	Coordinated Internship in Medical Assisting	(2)
MDA 203	Medical Office Procedures	(3)
MDA 207	Medical Law and Ethics	(2)
MDA 208	Medical Office Coding	(2)
MDA 209	Medical Office Insurance	(2)
MDA 210	Medical Office Software Applications	(1)

Minimum Credits Required: 16

CAREER STUDIES: MEDICAL SECRETARY (074.06)

AST 101-102	Keyboarding I-II ¹	(6)
AST 141	Word Processing I	(4)
AST 234	Records and Database Management	(3)
AST 245	Medical Machine Transcription	(3)
AST 271	Medical Office Procedures I	(3)
AST _____	Medical Insurance and Coding	(3)
HLT 143-144	Medical Terminology I-II	(6)

Minimum Credits Required: 28

¹ Placement test or prerequisite required.

CAREER STUDIES: MUSIC (094.01)

MUS 101-102	Basic Musicianship I-II	(6)
MUS 111-112	Music Theory I-II	(8)
MUS 121-122	Music Appreciation I-II	(6)
MUS _____	Applied Music I ¹	(2-4)
MUS _____	Approved MUS Electives ²	(3-5)

Minimum Credits Required: 25-29

¹ Applied Music courses must be taken from the following: MUS 136 Voice, MUS 145 Keyboard, MUS 155 Woodwinds, MUS 165 Strings, MUS 175 Brass, MUS 185 Percussion. Applied Music courses will require additional fees/studio charges for off-campus instruction to meet proficiency requirements of this program. Contact Music Department for details.

² Approved Music Electives:
MUS 123 Organizing and Directing Choral Activities I, 3 credits
MUS 131-132 Class Voice I-II, 2 credits each
MUS 128 Organizing and Directing the Church Choir, 3 credits
MUS 159 Improvisational Techniques, 3 credits
MUS 197 Cooperative Education, 3 credits
MUS 221-222 History of Music I-II, 3 credits each

CAREER STUDIES: NETWORK ADMINISTRATION (071.12)

ITN 110	Windows 2000 Professional (PRO)**	
	or	
ITN 114	Windows XP Professional (XP)**	(4)
ITN 131	Novell Fundamentals of Networking Netware 6.x**	(4)
ITN 150	Networking Fundamentals and Introductory Routing-Cisco**	(4)
ITN 170	Linux System Administration**	(4)
ITN 171	UNIX I	(4)
ITN 260	Network Security Basics	(3)
IT _____	Approved IT Elective*	(3-4)

Minimum Credits Required: 26-27

* Approved IT Electives: ITN 115 Windows 2003 Server, ITN 120 Wireless Network Administration, ITN 151 Introductory Routing and Switching-Cisco, ITN 235 Novell Network Management, ITN 270 Advanced Linux Network Administration, ITN 297 Cooperative Education in IT.

** These courses prepare students to sit for the first of a series of tests leading to certification with a variety of vendors.



CAREER STUDIES: NETWORK ENGINEER — NETWORK 6 (071.01)

ITN 131	Novell Fundamentals of Networking Netware 6.x**	(4)
ITN 232	Novell Network Design and Implementation**	(4)
ITN 234	Novell Desktop Management with ZENworks for Desktops*	(4)
ITN 235	Novell Network Management**	(4)
ITN 236	Advanced Novell Network Management**	(4)
ITN 260	Network Security Basics	(3)

Minimum Credits Required. 23

** These courses prepare students to sit for the CNE (Certified Novell Engineer) certification exams.
 ITN 131 prepares students to sit for the CNA (Certified Novell Administrator) certification exams.

CAREER STUDIES: NETWORK ENGINEER — WINDOWS 2003 (071.16)

ITN 110	Windows 2000 Professional (PRO) or	
ITN 114	Windows XP Professional (XP)	(4)
ITN 115	Windows 2003 – Server (SER)	(4)
ITN 116	Windows 2003 Network Infrastructure Implementation, Management, and Maintenance (NI-IMM)	(4)
ITN 117	Windows 2003 Network Infrastructure Planning and Maintenance (NI-PM)	(4)
ITN 118	Windows 2003 Active Directory Infrastructure Planning (ADI-PIM)	(4)
ITN ____	ITN Approved MCSE 2003 Design Course*	(4)
ITN ____	ITN Approved MCSE 2003 Elective**	(4)

Minimum Credits Required. 28

* ITN Approved MCSE 2003 Design Course Choices (Pick one):
 ITN 240 – Windows 2003 Active Directory and Network Infrastructure Design (AD-NID)***
 ITN 241 – Windows 2003 Security Design (SD)***
 ITN 215 – Windows 2000 Network Infrastructure Design (NID)
 ITN 210 – Windows 2000 Directory Services Infrastructure Design (DSID)
 ITN 211 – Windows 2000 Network Security Design (NSD)

** ITN Approved MCSE 2003 Elective Choices (Pick one):
 ITN 240 – Windows 2003 Active Directory and Network Infrastructure Design (AD-NID)***
 ITN 241 – Windows 2003 Security Design (SD)***
 ITN 242 – Windows Microsoft Exchange 2003 Server (ES03)
 ITN 243 – Windows 2003 Security Implementation and Administration (S-IA)
 ITN 216 – Windows 2000 SQL Server
 ITN 260 – Network Security Basics

***Can be used once, either as a design course or elective course.
 These courses prepare students to sit for the MCP (Microsoft Certified Professional), MCSA (Microsoft Certified Systems Administrator), and MCSE (Microsoft Certified Systems Engineer) certification exams.

CAREER STUDIES: NETWORK ENGINEER — WIRELESS SYSTEMS (071.13)

ITN 120	Wireless – Network Administration (W-NA)	(3)
ITN 125	Wireless – Mobile Networking (W-MN)	(3)
ITN 126	Wireless – Network Operating System (W-NOS)	(3)
ITN 220	Wireless – Network Security (W-NS)	(3)
ITN 222	Wireless – Network Interoperability (W-NI)	(3)
ITN 281	Wireless – Network Field Engineering (W-NFE)	(3)
ITN ____	Wireless – Approved ITN Elective*	(3)

Minimum Credits Required. (21)

* Wireless Approved ITN electives:
 ITN 221 – Wireless Satellite Systems (W-SS)
 ITN 228 – Wireless – Network Data Communication, Instrumentation, Testing and Measuring Techniques (W-NDC)
 ITN 283 – Wireless – Network Field Site Survey (W-NFSS)

CAREER STUDIES: NETWORK INFRASTRUCTURE SPECIALIST (071.10)

ITN 150	Networking Fundamentals and Introductory Routing – Cisco*	(4)
ITN 151	Introductory Routing and Switching – Cisco*	(4)
ITN 250	Advanced Routing – Cisco**	(4)
ITN 251	Remote Access Networking – Cisco**	(4)
ITN 252	Advanced Switching – Cisco**	(4)
ITN 253	Network Troubleshooting – Cisco**	(4)
ITN 260	Network Security Basics	(3)

Minimum Credits Required. 27

* These two courses prepare students to sit for the CCNA (Cisco Certified Networking Associate) and CCDA (Cisco Certified Design Associate) certification exams.
 ** These four courses prepare students to sit for the CCNP (Cisco Certified Networking Professional) certification exams.

CAREER STUDIES: NETWORK SECURITY (071.15)

ITN 260	Network Security Basics*	(3)
ITN 261	Network Attacks, Computer Crimes, and Hacking	(4)
ITN 262	Network Communication, Security, and Authentication	(4)
ITN 263	Internet/Intranet Firewalls and E-Commerce Security	(4)
ITN 266	Network Security Layers	(4)
ITN 267	CyberLaw	(3)
ITN ____	Approved ITN Elective**	(3-4)

Minimum Credits Required. (25-26)

* This course prepares students to sit for the CompTIA Security+ certification exam.

** Approved ITN Electives:
 ITN 110 – Windows 2000 Professional;
 ITN 114 – Windows XP Professional
 ITN 131 – Novell Fundamentals of Networking NetWare 6.x
 ITN 150 – Networking Fundamentals and Introductory Routing – Cisco
 ITN 151 – Introductory Routing and Switching – Cisco
 ITN 170 – Linux System Administration
 ITN 171 – UNIX I
 ITN 270 – Advanced Linux Network Administration
 ITN 297 – Cooperative Education in IT



CAREER STUDIES: OCCUPATIONAL SAFETY (050)

SAF 120	Safety and Health Standards: Regulations and Codes(3)
SAF 125	Computer Applications for Technicians(4)
SAF 126	Principles of Industrial Safety(3)
SAF 135	Safety Program Organization and Administration(3)
SAF 205	Human Factors and Safety Psychology . . .(3)
—	SAF/ENV/FIR/IND Elective.(3)

Minimum Credits Required: 19

CAREER STUDIES: ORACLE DEVELOPER (071.14)

ITD 132	Structured Query Language(4)
ITD 134	PL/SQL Programming*(4)
ITD 150	Oracle Reports(4)
ITD 152	Oracle Forms Developer*(4)
ITD 154	Advanced Oracle Forms Developer*(4)
ITD 250	Database Architecture and Administration*(4)
ITD 260	Data Modeling and Design(4)

Minimum Credits Required: 28

*These courses prepare students for the tests leading to Oracle Developer (OCP) certification.

CAREER STUDIES: PARALEGAL GENERAL PRACTICE (072.02)

ITE 109	Information Systems for Legal Assistants . .(3)
LGL 110	Introduction to Law and the Legal Assistant (3)
LGL 115	Real Estate Law for Legal Assistants. . . .(3)
LGL 117	Family Law(3)
LGL 125	Legal Research(3)
LGL 126	Legal Writing(3)
LGL 200	Ethics for the Legal Assistant.(1)
LGL 225	Estate Planning and Probate(3)
LGL 235	Legal Aspects of Business Organizations. .(3)
LGL 238	Bankruptcy.(3)

Minimum Credits Required: 28

CAREER STUDIES: PARALEGAL LITIGATION (072.03)

ITE 109	Information Systems for Legal Assistants . .(3)
LGL 110	Introduction to Law and the Legal Assistant (3)
LGL 117	Family Law.(3)
LGL 125	Legal Research(3)
LGL 126	Legal Writing(3)
LGL 200	Ethics for the Legal Assistant.(1)
LGL 217	Trial Practice and the Law of Evidence . .(3)
LGL 218	Criminal Law(3)
LGL 230	Legal Transactions(3)
LGL 238	Bankruptcy.(3)

Minimum Credits Required: 28

CAREER STUDIES: POTABLE WATER (058)

ENV 111	Principles of Water System Operations I . .(2)
ENV 112	Principles of Water System Operations II .(2)
ENV 114	Water Quality Analysis.(1)
ENV 115	Water Purification(3)
ENV 148	Water and Wastewater Treatment Computational Operations(2)

Minimum Credits Required: 10

CAREER STUDIES: PROGRAMMER TRAINEE (071.02)

ITD 132	Structured Query Language(4)
ITE 215	Advanced Computer Literacy(4)
ITP 251	System Analysis and Design.(3)
ITP —	Introductory Programming Language*(8)
ITP —	Advanced Programming Language**(8)

Minimum Credits Required: 27

* Introductory Programming Languages to choose from:
ITP 112 – Visual Basic.Net I
ITP 120 – Java Programming I
ITP 132 – C++ Programming I
ITP 136 – C# Programming I

** Advanced Programming Languages to choose from:
ITP 212 – Visual Basic.Net II
ITP 220 – Java Programming II
ITP 232 – C++ Programming II
ITP 236 – C# Programming II

CAREER STUDIES: QUALITY ASSURANCE (051)

IND 101-102	Quality Assurance Technology I-II.(6)
IND 146	Statistical Quality Control(3)
IND 236	Total Quality Concepts.(3)
—	Approved IND/Quality Assurance Electives ³ (6)

Minimum Credits Required: 18

¹ Approved IND/Quality Assurance electives: IND 135, IND 137, IND 145, IND 237, IND 238.

CAREER STUDIES: RETAIL OPERATIONS (054.02)

BUS 111	Principles of Supervision(3)
MKT 100	Principles of Marketing(3)
MKT 110	Principles of Selling(3)
MKT	Portfolio Development.(1)
MKT 216	Retail Organization and Management(3)
MKT 295	Customer Service Management(3)
SPD 105	Oral Communications(3)
SDV 106	Preparation for Employment(1)
	Approved Electives*(9)

Minimum Credits Required: 29

* Approved Electives: BUS 205 Human Resource Management, MKT 220 Principles of Advertising, MKT 251 Front End Management and Retail Service, MKT 271 Consumer Behavior, MKT 282 Principles of E-Commerce, MKT 297 Cooperative Education.

CAREER STUDIES: SCHOOL AGE CARE (088)

CHD 220	Introduction to 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.(1)
HLT 106	First Aid and Safety(2)
PSY 235	Child Psychology (or PSY 231).(3)

Minimum Credits Required: 18



CAREER STUDIES: SMALL BUSINESS MANAGEMENT (015.01)

ACC 220	Accounting for Small Business.....(3)
AST 205	Business Communications.....(3)
BUS 111	Principles of Supervision.....(3)
BUS 160	Legal Aspects of Small Business Operations(1)
BUS 165	Small Business Management.....(3)
BUS 260	Planning for Small Business.....(2)
FIN 260	Financial Management for Small Business (2)
ITE 115	Basic Computer Literacy.....(4)
MKT 160	Marketing for Small Business.....(3)

Minimum Credits Required: 24

NOTE: Virginia Beach Campus only.

CAREER STUDIES: SUPERVISION IN SHIP REPAIR (007.03)

IND 101	Quality Assurance Technology.....(3)
IND 121	Industrial Supervision I.....(3)
IND 137	Team Concepts and Problem Solving.....(3)
IND 297	Cooperative Education.....(6)
SAF 120	Safety and Health Standards: Regulations and Codes.....(3)
SAF 125	Computer Applications for Technicians.....(4)
SAF 126	Principles of Industrial Safety.....(3)

Minimum Credits Required: 25

CAREER STUDIES: SUPERVISORY MANAGEMENT (055)

ACC 211	Principles of Accounting I.....(3)
BUS 201	Organizational Behavior.....(3)
BUS 200	Principles of Management.....(3)
BUS 205	Human Resource Management.....(3)
ENG 115	Technical Writing ¹(3)
SAF 126	Principles of Industrial Safety.....(3)

Minimum Credits Required: 18

¹ Placement test or prerequisite required.

CAREER STUDIES: THEATRE ARTS (094.02)

SPD 100	Principles of Public Speaking (or SPD 105)(3)
SPD 130	Introduction to the Theatre (or SPD 141).....(3)
SPD 131-132	Acting I-II.....(6)
SPD 200	Advanced Public Speaking.....(3)
SPD ____	SPD Electives ¹(9)

Minimum Credits Required: 24

¹ Electives must be chosen from the following courses:

SPD 135	Stage Movement, 3 credits
SPD 136	Theatre Workshop, 3 credits
SPD 137	Oral Interpretation, 3 credits
SPD 141-142	Theatre Appreciation I-II, 3 credits each
SPD 145	Stagecraft, 3 credits
SPD 233-234	Rehearsal and Performance I-II, 2 credits each
SPD 241	Introduction to Directing I, 3 credits
SPD 249	Stage Makeup, 1 credit
SPD 267	Creative Drama, 3 credits
SPD 268	Children's Theatre, 3 credits

CAREER STUDIES: TRUCK DRIVING (057)

TRK 101	DOT Safety Rules and Regulations.....(2)
TRK 102	Preventive Maintenance for Truck Drivers.....(1)
TRK 103	Tractor Trailer Driving.....(9)
TRK 110	Survey of the Trucking Industry.....(3)

Minimum Credits Required: 15

CAREER STUDIES: TURFGRASS MANAGEMENT (018.06)

HRT 110	Principles of Horticulture.....(3)
HRT 205	Soils.....(3)
HRT 206	Pesticides in Horticulture.....(2)
HRT 207	Plant Pest Management.....(3)
HRT 228-229	Turfgrass Management I-II.....(6)
HRT 297	Cooperative Education in Horticulture.....(3)
HRT ____	Chemistry for Horticulture Students.....(1)
SPA ____	Spanish for the Green Industry.....(3)
____	Approved Elective*.....(3)

Minimum Credits Required: 27

*Approved Elective may be chosen from BUS, HRT, ITE, or MTH and must be approved by your horticulture program advisor.

CAREER STUDIES: WEB DEVELOPMENT SPECIALIST (071.05)

ITD 110	Web Page Design I.....(4)
ITD 210	Web Page Design II.....(4)
ITN 100	Introduction to Telecommunications.....(4)
ITN 224	Web Server Management.....(4)
IT ____	IT Approved Elective*.....(8)

Minimum Credits Required: 24

* 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

For the AAS Degree: students should take ITN 100 in the second semester.

CAREER STUDIES: WELDING (065)

WEL 117	Oxyfuel Welding and Cutting.....(3)
WEL 123	Shielded Metal Arc Welding (Basic).....(3)
WEL 124	Shielded Metal Arc Welding (Advanced).....(3)
WEL 126	Pipe Welding I (ARC).....(3)
WEL 135	Gas Shielded Processes I.....(2)
WEL 136	Gas Shielded Processes II.....(2)
WEL 138	Pipe and Tube Welding (TIG).....(2)
WEL 141-142	Welder Qualification Test I-II.....(6)
WEL 150	Welding Drawing and Interpretation.....(2)

Minimum Credits Required: 26