

**Water and Wastewater Management and Technology Associate in Science Degree**      240102 WWT

Available: Shoals Campus  
 Advisor: S. McGouyrk (5246) [stevem@nwscc.edu](mailto:stevem@nwscc.edu)  
 M. Murphy (6246) [docm@nwscc.edu](mailto:docm@nwscc.edu)

\*This degree is designed as a guideline for students who plan to transfer to four-year institutions offering a degree in water and wastewater management and technology. Also see the short-term certificate program.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	<b>Semester Hours</b>
Area I: Written Composition .....	6
**ENG 101 and 102	
Area II: Humanities and Fine Arts .....	12
***Literature: ENG 271 and 272..... 6	
SPH 107..... 3	
Elective: Choose one course from among ART 100, MUS 101, PHL 106, PHL 206***, THR 120, Foreign Language* .....	
Area III: Natural Sciences and Mathematics .....	11
Science: Choose two core courses from among CHM 104, 105, 111, and 112 (Chemistry Sequence Preferred) BIO 103, 104, PHY 201, 202, 213, 214 PHS 111, 112, 120* .....	
	8
Math: Choose one from MTH 112 or above .....	
	3
Area IV: History, Social and Behavioral Science .....	12
***History: HIS 101 and 102 or HIS 201 and 202 .....	
	6
Social and Behavioral Sciences: Choose two courses from among ECO 231, GEO 100, POL 200, PSY 200, SOC 200 .....	
	6
Area V: Pre-Professional, Pre-Major Courses .....	21
WMT 290, WMT 291 or CIS Elective .....	
	3
WMT 100, WMT 101, WMT 102, WMT 120, WMT 213, WMT 214 .....	
	18
<b>Total Semester Transfer Hours .....</b>	<b>62</b>

\*This program specifically links to the Public Safety Administration program at Athens State University. Students transferring to other institutions should consult with the senior institution concerning transferability of PHS 120 and the WMT classes.

\*\*Keyboarding skills are essential for the successful completion of English 101.

\*\*\*See note 2 on page 45.

**Career, Technical and Occupational Programs**

Plans leading to the Associate in Applied Science and the Associate in Occupational Technology degrees are college-level programs of study designed to prepare students to enter occupational, semi-professional, or para-professional employment. Though many of the courses in these programs transfer to four-year colleges and universities, the primary intent is to prepare students for immediate employment after successful completion of a two-year program of courses.

Certificates are awarded to students who successfully complete the requirements of specific technical or occupational programs. These programs are offered to students who want to prepare for specific occupational employment. These programs vary in length from two to five semesters, and some do not require a high school diploma for admission.

The College offers several short certification programs at Northwest-Shoals Community College on an "as needed" basis. We refer to these short certification programs as General Certificate Programs. Many of these programs meet the minimum requirements for taking state board or other qualifying examinations.

**Associate in Applied Science Degree**

Child Development .....	190708 CHD
Computer Information Systems Technology Programming Option .....	110101 PO
Personal Computer Systems Option .....	110101 PCS
Criminal Justice .....	430107 CRJ
Design Engineering Technology .....	151301 D&D
Electronics Technology .....	470105 ILT
Biomedical Equipment Technology .....	470105 BET
(Advanced Option)	
Emergency Medical Services .....	510904 EMP
Environmental Health and Safety Technician ..	150507 EVT
Industrial Systems Technology Air Conditioning and Refrigeration Option .	470303 IAR
Electrical Option .....	470303 IMO
Mechanical Option .....	470303 IMO
Office Administration Accounting Option .....	520401 OAO
Administrative Professional Option .....	520401 OAP
Clerical Option .....	520401 OCO
Registered Nursing .....	511601 NUR

**Allied Health - Linkage Programs**<sup>2</sup>

Clinical Laboratory Technician .....	510899 CLS
Dental Assisting .....	510899 DA
Dental Hygiene .....	510899 DH
Diagnostic Imaging .....	510899 DI
Diagnostic Medical Sonography .....	510899 DMS
Electroneurodiagnostic Technology .....	510899 EMD
Health Information Technology .....	510899 HIT
Human Services .....	510899 HS
Medical Assistant .....	510899 MA
Occupational Therapist Assistant .....	510899 OTA
Physical Therapist Assistant .....	510899 PTA
Respiratory Therapy .....	510899 RT

*Allied Health Linkage Programs are to be completed at Wallace/Hanceville in order to receive degree.*

**Associate in Occupational Technology Degree**<sup>3</sup>

Accounting Technology .....	309999 ACB
	309999 AOD
Air Conditioning/Refrigeration Technology .....	309999 AET
	309999 AWT
Automotive Collision Repair .....	309999 ABW
	309999 ABA
	309999 AUB
Automotive Service Technology .....	309999 AWM
	309999 AUR
	309999 AMT
Carpentry/Cabinetmaking .....	309999 CBU
	309999 CCW
Cosmetology .....	309999 COB
	309999 COT
Electrical Technology .....	309999 EAC
Machine Shop Technology .....	309999 MWT
Welding .....	309999 WMS
	309999 AUT
	309999 WAC

**Career Certificates**<sup>4</sup>

Accounting Technology .....	520302 ACT
A/C, Heating & Refrigeration <sup>5</sup> .....	150501 ACR
Automotive Collision Repair <sup>5</sup> .....	470603 AUC
Carpentry/Cabinetmaking <sup>5</sup> .....	460201 CAR
Cosmetology <sup>5</sup> .....	120401 COS
Electrical Technology .....	460302 ELT
EMT-Paramedic .....	510904 EMS
Machine Tool/Computer Numerical Control (CNC) <sup>5</sup> .....	480503 MSP
Office Administration .....	520401 OAD
Practical Nursing (LPN) .....	511613 LPN
Welding <sup>5</sup> .....	480508 WEL

**Short-Term General Certificates**<sup>4</sup>

Basic Automotive Service Technology <sup>5</sup> .....	470604 AUM
Advanced Automotive Service Technology <sup>5</sup> .....	470604 AAS
Basic Automotive Collision Repair <sup>5</sup> .....	470603 AUC
Biomedical Equipment Technology .....	470105 BET
Basic Cabinetmaking <sup>5</sup> .....	480703 CAB
Basic Carpentry <sup>5</sup> .....	460201 BC
Chemical Laboratory Technician .....	410301 CHM
Child Development .....	190708 CHD
Computer Aided Design Engineering Technology ...	151301 DDT
Computer Technology PC Hardware Technician .....	110101 PCH
PC Software Technician .....	110101 PST
Cosmetology Esthetics <sup>5</sup> .....	120401 CES
Cosmetology/Nail Technology <sup>5</sup> .....	120401 CNT
Cosmetology Instructor Training .....	120499 CIT
EMT - Basic .....	510904 EMT
Energy Management Technology <sup>1 5</sup> .....	150503 ECT
Environmental, Health & Safety Technician .....	150507 EVT
Fire Science/Fire Services Management .....	430202 FSC
Industrial Mechanics .....	470303 INS
Nursing Assistant <sup>5</sup> .....	511614 NAS
Water & Wastewater Management .....	150506 W&M
Basic Welding Technology <sup>5</sup> .....	480508 WDT

<sup>1</sup> Program is under review for continuation. Courses will be offered as needed.

<sup>2</sup> Allied Health Linkage - Students must transfer to Wallace State-Hanceville to complete the program and receive a degree.

<sup>3</sup> Associate in Occupational Technology - Students must see an advisor for selection of approved primary and secondary technical areas of study.

<sup>4</sup> Short-Term General Certificate programs are less than 27 semester hours. Career Certificate programs are completed within one to two years.

<sup>5</sup> These programs do not require a high school diploma or GED certificate for admission.

## Associate in Applied Science Degrees

These degrees are designed for students who want to prepare for a specific career or occupational employment and who do **not** plan to transfer to four-year institutions. While most of the coursework is transferable, the degrees lack the extent of a general education which facilitates transfer.

### **General Education Core for Associate in Applied Science Degree**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	<b>Semester Hours</b>
Area I: Written Composition .....	*3-6
*A minimum of 3 hours is required from Area I.	
Area II: Humanities and Fine Arts .....	*3-6
*A minimum of 3 hours is required from Area II, but 9 hours are required from both Areas I and II.	
Area III: Natural Science and Mathematics .....	9-11
Three hours must be in Mathematics and 6 hours may be distributed in Mathematics, Science, Computer Science, Environmental Technology 101 (PHS 120)	
Area IV: History, Social, and Behavioral Sciences .....	3-6
Area V: Technical Concentration and Electives .....	39-55
CIS 146 or demonstrated equivalent computer competency skills. A student evaluated with such skills must successfully complete an additional three-hour elective from any Area in lieu of CIS 146.	
<b>General Education Core .....</b>	<b>22-30</b>
<b>Technical Concentration .....</b>	<b>30-54</b>
<b>Total Minimum .....</b>	<b>60</b>
<b>Total Maximum .....</b>	<b>76</b>

## Associate in Occupational Technology Degree (AOT)

The purpose of the Associate in Occupational Technology Degree is to provide accessible quality educational opportunities for students seeking a combination of technically - oriented courses to meet specific career objectives and the opportunity to become multi-skilled technicians. In addition to completing the general education requirements, students will also complete course work in both a primary and a secondary technical specialty (a "major" and a "minor"). Students must meet general admissions requirements for degree program prior to enrolling in core courses.

### **Core Degree Requirements for the Associate in Occupational Technology Degree**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	<b>Semester Hours</b>
Area I: Written Composition .....	3
English Composition I and/or Technical Writing	
Area II: Humanities and Fine Arts .....	3
Area III: Natural Science and Mathematics .....	9
A minimum of 3 hours in degree-creditable mathematics is required. The additional 6 hours of degree-creditable coursework may be taken from disciplines of math, biology, chemistry, physical science, physics, environmental technology and computer science.	
Area IV: History, Social and Behavioral Sciences .....	3
Courses may be taken from the disciplines of history, economics, geography, political science, psychology, and sociology.	
<b>Minimum General Requirements .....</b>	<b>18</b>

### **Programs of Study**

- Major:** Accounting Technology
- Minor(s):** Management & Supervision, Office Administration
- Major:** Air Conditioning/Refrigeration Technology
- Minor(s):** Electrical Technology, Welding
- Major:** Automotive Collision Repair
- Minor(s):** Welding, Auto Mechanics
- Major:** Carpentry
- Minor(s):** Management and Supervision, Cabinetmaking
- Major:** Cosmetology
- Minor(s):** Management and Supervision, Cosmetology Instructor Training
- Major:** Electrical Technology
- Minor(s):** Air Conditioning/Refrigeration Technology
- Major:** Machine Shop Technology
- Minor:** Welding
- Major:** Welding
- Minor(s):** Air Conditioning/Refrigeration Technology, Machine Shop Technology

**Accounting Technology****AOT Degree**

Available: Shoals Campus

Advisors: P. Hogan (5232) [hogan@nwscc.edu](mailto:hogan@nwscc.edu)D. South (5211) [dsouth@nwscc.edu](mailto:dsouth@nwscc.edu)E. Carter (5277) [cartere@nwscc.edu](mailto:cartere@nwscc.edu)

Students desiring to receive the AOT Award must complete all major certificate courses, one minor certificate course of study, and the required credit hours of general education courses in Areas I, II, III, and IV. Upon completion of all the courses listed, students are eligible to receive the Associate in Occupational Technology Degree. Students desiring to take general education courses for transfer to another institution should consult an advisor for proper general education course selection.

**Core Degree Requirements for the Associate in Occupational Technology Degree**

Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.

	<b>Semester Hours</b>
Area I: Written Composition .....	6
ENG 101 English Composition I .....	3
ENG 130 Technical Report Writing or ENG 102 English Composition II .....	3
Area II: Humanities and Fine Arts .....	3
Area III: Natural Science and Mathematics .....	9
MTH 100 Intermediate College Algebra or MTH 246 Mathematics of Finance .....	3
CIS 146 Microcomputer Applications .....	3
Math or Science Electives .....	3
Area IV: History, Social and Behavioral Sciences .....	3
ECO 231 Principles of Macroeconomics (preferred)	3

**Minimum General Requirements ..... 21**

<b>Major Requirements</b>	<b>Semester Hours</b>
ACT 104 Introduction to Business .....	3
ACT 114 Introduction to Accounting Database Resources ...	3
ACT 115 Introduction to Accounting Computer Resources ..	3
ACT 141 Basic Accounting Principles .....	3
ACT 142 Advanced Accounting Principles .....	3
ACT 246 Microcomputer Accounting .....	3
ACT 247 Advanced Accounting Applications on the Microcomputer .....	3
ACT 249 Payroll Accounting .....	3
ACT 253 Income Tax .....	3
ACT 256 Cost Accounting .....	3
ACT 262 Directed Studies .....	3
<b>Total Major Requirements .....</b>	<b>33</b>

**Minor Requirements**

<i>Business Management and Supervision</i> <b>309999</b> <b>ACB</b>	
BUS 248 Managerial Accounting .....	3
BUS 275 Principles of Management .....	3
BUS 285 Principles of Marketing .....	3
BUS 279 Small Business Management .....	3
<b>Total Minor Requirements .....</b>	<b>12</b>

**Minor Requirements**

<i>Office Administration</i> <b>309999</b> <b>AOD</b>	
OAD 101 Keyboarding .....	3
OAD 125 Word Processing .....	3
OAD 130 Electronic Calculations .....	3
OAD 138 Records/Information Management .....	3
<b>Total Minor Requirements .....</b>	<b>12</b>

**General Requirements ..... 21**  
**Total Requirements for AOT Degree ..... 66**

**Accounting Technology      520302   ACT  
Career Certificate**

Available: Shoals Campus

Advisors: P. Hogan (5232) [hogan@nwscc.edu](mailto:hogan@nwscc.edu)E. Carter (5277) [cartere@nwscc.edu](mailto:cartere@nwscc.edu)

Accounting Technology is designed to meet the need for personnel in a broad range of accounting fields, including accounting systems, recordkeeping, financial statements, payroll accounting, and other areas.

The certificate is designed for the student who does not intend to transfer to a four-year institution but intends to seek immediate employment. This certificate is appropriate for students who are employed and wish to gain a better understanding of accounting.

Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.

<b>General Education Requirements</b>	<b>Semester Hours</b>
**ENG 101 English Composition I .....	3
MTH 116 Mathematical Applications .....	3
OAD 125 Word Processing .....	3
OAD 133 or BUS 215 Business Communications .....	3
<b>Total General Education Requirement .....</b>	<b>12</b>

**Major Requirements**

ACT 104 Introduction to Business .....	3
ACT 115 Introduction to Accounting Computer Resources ...	3
ACT 141 Basic Accounting Principles .....	3
ACT 142 Advanced Accounting Principles .....	3
ACT 246 Microcomputer Accounting .....	3
ACT 253 Income Tax .....	3
ACT 247 Advanced Accounting Applications on the Microcomputer .....	3
ACT 249 Payroll Accounting .....	3
ACT 256 Cost Accounting or BUS 248 Managerial Accounting .....	3
ACT 262 Directed Studies .....	3
<b>Total Major Requirements .....</b>	<b>30</b>

**Total Semester Credit Hours ..... 42**

\*\*Keyboarding skills are essential for the successful completion of English 101.

**Air Conditioning/Refrigeration Technology  
AOT Degree**

Available: Shoals Campus  
Advisors: J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

Students desiring to receive the AOT Award must complete all major certificate courses, one minor certificate course of study, and the required credit hours of general education courses in Areas I, II, III, and IV. Upon completion of all the courses listed, students are eligible to receive the Associate in Occupational Technology Degree. Students desiring to take general education courses for transfer to another institution should consult an advisor for proper general education course selection.

**Core Degree Requirements for the Associate in Occupational Technology Degree**

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

**Semester Hours**

- Area I: Written Composition ..... 3  
English Composition I and/or Technical Writing
- Area II: Humanities and Fine Arts ..... 3
- Area III: Natural Science and Mathematics ..... 9  
A minimum of 3 hours in degree creditable mathematics is required. The additional 6 hours of degree creditable coursework may be taken from disciplines of math, biology, chemistry, physical science, physics, environmental technology and computer science.
- Area IV: History, Social and Behavioral Sciences ..... 3  
Courses may be taken from the disciplines of history, economics, geography, political science, psychology, and sociology.

**Minimum General Requirements ..... 18**

<b>Major Requirements</b>	<b>Semester Hours</b>
ACR 111 Refrigeration Principles .....	3
ACR 112 HVACR Service Procedures .....	3
ACR 113 Refrigeration Piping Practices .....	3
ACR 119 Fundamentals of Gas Heating Systems .....	3
ACR 123 HVACR Electrical Components .....	3
ACR 126 Commercial Heating Systems .....	3
ACR 132 Residential Air Conditioning .....	3
ACR 135 Mechanical/Gas/Safety Codes .....	3
ACR 148 Heat Pump Systems I .....	3
ACR 181 Parallel Refrigeration .....	3
ACR 203 Commercial Refrigeration .....	3
ACR 205 System Sizing and Air Distribution .....	3
ACR 209 Commercial Air Conditioning Systems .....	3
ACR Elective .....	6
<b>Total Major Requirements .....</b>	<b>45</b>

<b>Minor Requirements</b>	<b>309999 AET</b>
<i>Electrical Technology</i>	
ELT 111 Concepts of Direct Current .....	5
ELT 112 Concepts of Alternating Current .....	5
ELT Elective .....	2
<b>Total Minor Requirements .....</b>	<b>12</b>

<b>Minor Requirements</b>	<b>309999 AWT</b>
<i>Welding</i>	
WDT 111 Cutting Processes Theory .....	2
WDT 151 Cutting Processes Lab .....	2
WDT 112 Shielded Metal Arc Fillet Theory .....	2
WDT 152 Shielded Metal Arc Fillet Welding .....	3
WDT Elective .....	3
<b>Total Minor Requirements .....</b>	<b>12</b>

**General Requirements ..... 18**  
**Total Requirements for AOT Degree ..... 75**

\*Computer competency skills are embedded within one or more courses required in this curriculum.

**Air Conditioning/Refrigeration Technology Career Certificate** 150501 ACR

Available: Shoals Campus  
 Advisors: J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

The health, comfort, and productivity of any nation is dependent upon air conditioning and refrigeration equipment. Air conditioning has become a necessity rather than a luxury in today's homes, offices, public buildings, and industries.

Air Conditioning/Refrigeration Technology covers the practical application of planning, installing, and servicing heating, air conditioning and refrigeration equipment in residential and commercial establishments.

The increased use of air conditioning and refrigeration in homes and work environments provides growing job opportunities in transportation, food preservation, manufacturing, space programs, medical services, and many others.

Transfer Students: Students may receive up to one semester for clock hours and credit units earned at another institution.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
COM 100 Introductory Technical English I	3	0	3
MAH 101 Introductory Mathematics I	2	2	3
ACR 111 Refrigeration Principles	2	3	3
ACR 112 HVACR Service Procedures	2	3	3
ACR 113 Refrigeration Piping Practices	1	5	3
ACR 119 Fundamentals of Gas Heating Systems	1	5	3
ACR 121 Principles of Electricity for HVACR	2	3	3
ACR 122 HVACR Electrical Circuits	2	3	3
ACR 123 HVACR Electrical Components	2	3	3
ACR 126 Commercial Heating Systems	2	3	3
ACR 132 Residential Air Conditioning	2	3	3
ACR 135 Mechanical/Gas/Safety Codes	2	3	3
ACR 148 Heat Pump System I	1	5	3
ACR 181 Parallel Refrigeration	2	3	3
ACR 203 Commercial Refrigeration	1	5	3
ACR 205 System Sizing and Air Distribution	2	3	3
ACR 209 Commercial Air Conditioning	2	3	3
ACR Elective			6
<b>Total Semester Credit Hours</b>	<b>57</b>		

\*\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

**Automotive Collision Repair AOT Degree**

Available: Shoals Campus  
 Advisors: E. Reid (5231) [ereid@nwsc.edu](mailto:ereid@nwsc.edu)  
 J. Hackworth (5236/5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

Students desiring to receive the AOT Award must complete all major certificate courses, one minor certificate course of study, and the required credit hours of general education courses in Areas I, II, III, and IV. Upon completion of all the courses listed, students are eligible to receive the Associate in Occupational Technology Degree. Students desiring to take general education courses for transfer to another institution should consult an advisor for proper general education course selection.

**Core Degree Requirements for the Associate in Occupational Technology Degree**

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester Hours
Area I: Written Composition ..... English Composition I and/or Technical Writing	3
Area II: Humanities and Fine Arts .....	3
Area III: Natural Science and Mathematics ..... A minimum of 3 hours in degree creditable mathematics is required. Math must be 100 or higher. The additional 6 hours of degree creditable coursework may be taken from disciplines of math, biology, chemistry, physical science, physics, environmental technology and computer science.	9
Area IV: History, Social and Behavioral Sciences ..... Courses may be taken from the disciplines of history, economics, geography, political science, psychology, and sociology.	3

Minimum General Requirements	18
Major Requirements	Semester Hours
ABR 111 Non-Structural Repair .....	3
ABR 114 Non-Structural Panel Replacement .....	3
ABR 122 Surface Preparation .....	3
ABR 123 Paint Application & Equipment .....	3
ABR 151 Safety & Environmental Practices .....	3
ABR 154 Auto Glass and Trim .....	3
ABR 156 Auto Cutting and Welding.....	3
ABR 157 Plastic Repairs .....	3
ABR 213 Automotive Structural Analysis .....	3
ABR 214 Automotive Structural Repair .....	3
ABR 223 Automotive Mechanical Components .....	3
ABR 224 Automotive Electrical Components .....	3
ABR Electives .....	6
<b>Total Major Requirements</b>	<b>42</b>

**Minor Requirements**

*Business Management and Supervision*      **309999 ABB**  
 BUS 241 Principles of Accounting I or  
 ACT 141 Basic Accounting Principles ..... 3  
 BUS 275 Principles of Management ..... 3  
 BUS 285 Principles of Marketing ..... 3  
 BUS 279 Small Business Management ..... 3  
**Total Minor Requirements ..... 12**

**Minor Requirements**

*Welding*      **309999 ABW**  
 WDT 111 Cutting Processes Theory ..... 2  
 WDT 151 Cutting Processes Lab ..... 2  
 WDT 112 Shielded Metal Arc Fillet Theory ..... 2  
 WDT 152 Shielded Metal Arc Fillet Welding ..... 3  
 WDT Elective ..... 3  
**Total Minor Requirements ..... 12**

**Minor Requirements**

*Auto Mechanics*      **309999 ABA**  
 AUM 101 Fundamentals of Automotive Technology ..... 3  
 AUM 110 Electrical and Electronic Systems I ..... 3  
 AUM 121 Braking Systems ..... 3  
 AUM Elective ..... 3  
**Total Minor Requirements ..... 12**

**General Requirements ..... 18**

**Total Requirements for AOT Degree ..... 75**

\*Computer competency skills are embedded within one or more courses required in this curriculum.

**Automotive Collision Repair      470603 ABR**  
**Career Certificate**

Available: Shoals Campus  
 Advisors: E. Reid (5231) [ereid@nwsc.edu](mailto:ereid@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

Automotive collision repair has expanded throughout the country to become a major field of automotive work. Repairing damages and restoring the original beauty of an automobile requires the work of a master craftsman. Working conditions and employment opportunities are excellent and will continue to grow.

This Automotive Collision Repair program is designed to train students to repair an automobile correctly, economically, and safely. The program includes technology, welding, mathematics, shop safety, metal straightening, panel replacement, interior trim and body refinishing, auto electricity, glass replacement, frame straightening, fiber glass repair, and damage estimations. The student will learn how to become an automobile repair person with skills that include all phases of auto collision repair.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
COM 100 Introductory Technical English I	3	0	3
MAH 101 Introductory Mathematics I	2	2	3
ABR 111 Non-Structural Repair	1	4	3
ABR 114 Non-Structural Panel Replacement	1	4	3
ABR 122 Surface Preparation	1	4	3
ABR 123 Paint Application and Equipment	1	4	3
ABR 151 Safety and Environmental Practices	1	4	3
ABR 154 Automotive Glass and Trim	1	4	3
ABR 156 Cutting and Welding	1	4	3
ABR 157 Automotive Plastic Repairs	1	4	3
ABR 213 Automotive Structural Analysis	1	4	3
ABR 214 Automotive Structural Repair	1	4	3
ABR 223 Automotive Mechanical Components	1	4	3
ABR 224 Automotive Electrical Components	1	4	3
ABR 255 Steering & Suspension	1	4	3
ABR 258 Heating and AC in Collision Repair	1	4	3
ABR 261 Restraint Systems	1	4	3
ABR 265 Paint Defects and Final Repairs	1	4	3
ABR 266 MIG Welding in Collision Repair (Aluminum)	1	4	3

**Total Semester Credit Hours ..... 57**

\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

\*\* Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

**Basic Automotive Collision Repair Short-Term Certificate**

470603 AUC

Available: Shoals Campus  
 Advisors: E. Reid (5231) [ereid@nwsc.edu](mailto:ereid@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

This short-term certificate prepares students with technical knowledge and skills that allow them to become employed as automotive collision repairers. The students learn to straighten bent bodies, remove dents, and replace crumpled parts that are beyond repair. Most of the work is on cars and small trucks.

This career offers variety and challenges. Automotive Collision repairers use special equipment to restore damaged metal frames and body sections. They may specialize in one type of repair, such as frame straightening, door and fender repair and glass installation.

Good reading and basic math skills and computer skills are essential to becoming a fully skilled automotive collision repairer. Automotive parts, body materials, and electronics continue to change and become more complex and technologically advanced. Gaining new skills, reading technical manuals, and attending seminars and classes are important for keeping up with these technological advances.

This short-term certificate does not require a high school diploma or GED certificate for admission. Students must be at least 16 years of age to enroll.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
ABR 111 Non-Structural Repair	1	4	3
ABR 122 Surface Preparation	1	4	3
ABR 123 Paint Application & Equip.	1	4	3
ABR 151 Safety & Environmental Practices	1	4	3
ABR 154 Auto Glass Trim	1	4	3
ABR 156 Automotive Cutting and Welding	1	4	3
ABR 213 Automotive Structural Analysis	1	4	3
ABR 214 Automotive Structural Repair	1	2	3

**Total Semester Credit Hours ..... 24**

\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

**Automotive Service Technology Career Certificate**

470604 AST

Available: Shoals Campus  
 Advisors: A. Austin (5449) [austin@nwsc.edu](mailto:austin@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

The Automotive Service Technology program offers students a curriculum that reflects current industry standards. The curriculum will provide students with the necessary experiences, including knowledge of all automatic systems, tools, and equipment, as well as proper troubleshooting and repair techniques, to become enjoyable in the automatic repair industry.

The Automotive Service Technology program will provide students the knowledge of workplace hazards so students will be able to work safely in the automatic industry, and will strive to instill in students in a professional work ethic so that employers will have the personnel who have the character quality and soft skills to meet their needs.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
COM 100 Introductory Technical English I	3	0	3
MAH 101 Introductory Mathematics I	2	2	3
AUM 101 Fundamentals of Automotive Technology	1	4	3
AUM 110 Electrical and Electronic Systems I	1	4	3
AUM 121 Braking Systems	1	4	3
AUM 122 Steering, Suspension and Alignment	1	4	3
AUM 124 Engine Repair I	1	4	3
AUM 130 Drive Train and Axles	1	4	3
AUM 133 Motor Vehicle Air Conditioning	1	4	3
AUM 182 Special Topics	0	4	2
AUM 210 Electrical and Electronic Systems II	1	4	3
AUM 224 Manual Transmission and Transaxle	1	4	3
AUM 230 Auto Transmission and Transaxle	1	4	3
AUM 239 Engine Performance	1	4	3
AUM 246 Automotive Emissions	1	4	3
AUM 244 Engine Performance II	1	4	3
AUM Electives			12

**Total Semester Credit Hours ..... 59**

\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another school.

\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

**Basic Automotive Service Technology Short-Term Certificate**

470604 AUM

Available: Shoals Campus  
 Advisors: A. Austin (5449) [aaustin@nwsc.edu](mailto:aaustin@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

This short-term certificate is designed to prepare students for employment in the automotive service industry. Emphasis is placed upon developing competency in diagnosing problems, inspecting, maintaining and repairing automobiles and light trucks. The increasing sophistication of automotive technology now requires workers who can use computerized shop equipment and work with electronic components, while maintaining their skills with traditional handtools.

Basic scientific principles and technical information are taught to give the student a better understanding of the cause of mechanical and electrical failures. The successful student will become skilled in making scientific diagnosis and performing necessary repairs and adjustments to the various systems of the automobile. Employers look for people with strong communication and analytical skills. Good reading, mathematics, and computer skills are needed to study technical manuals and keep abreast of new technology.

Graduates of Basic Auto Mechanics will be prepared to enter the automotive service industry as an entry level automotive technician.

This short-term certificate does not require a high school diploma or a GED certificate for admission. Students must be at least 16 years of age to enroll.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
AUM 101 Fundamentals of Automotive Technology	1	4	3
AUM 110 Electrical and Electronic Systems I	1	4	3
AUM 121 Braking Systems	1	4	3
AUM 122 Steering, Suspension and Alignment	1	4	3
AUM 124 Engine Repair	1	4	3
AUM 130 Drive Train and Axles	1	4	3
AUM 133 Motor Vehicle Air Conditioning	1	4	3
AUM 181 Special Topics	1	0	1
AUM 182 Special Topics	0	4	2

**Total Semester Credit Hours ..... 24**

\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another school.

\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

**Advanced Automotive Service Technology Short-Term Certificate**

470604 AAS

Available: Shoals Campus  
 Advisors: A. Austin (5449) [aaustin@nwsc.edu](mailto:aaustin@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

This short-term certificate prepares students to use electronic service equipment and investigate the areas of specialization. A more intensive career preparation is provided through a combination of classroom instruction and hands-on practice. Curriculum is updated frequently to reflect changing technology and equipment. Knowledge of the basic principles of electronics and electrical systems is included in the program design for automotive service technicians. Successful graduates may become certified by Automotive Service Excellence (ASE) in specific service areas after 2 years of experience and passing a written examination. Completion of an automotive mechanic program in high school, vocational or community college may substitute for 1 year of experience.

Completion of Basic Auto Mechanics is recommended prior to enrollment in Advanced Auto Mechanics. A high school diploma or GED is not required for admission to this program. Students must be at least 16 years of age to enroll.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
AUM 210 Electrical and Electronics Systems II	1	4	3
AUM 220 Engine Repair II	1	4	3
AUM 224 Manual Transmission & Transaxle	1	4	3
AUM 230 Auto Transmission & Transaxle	1	4	3
AUM 239 Engine Performance I	1	4	3
AUM 244 Engine Performance II	1	4	3
AUM 246 Automotive Emissions I	1	4	3
AUM 281 Special Topics	1	4	3

**Total Semester Credit Hours ..... 24**

\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another school.

\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

**Carpentry/Cabinetmaking****AOT Degree**

Available: Shoals Campus

Advisors: Charles Hardy (5236) [charles.hardy@nwsc.edu](mailto:charles.hardy@nwsc.edu)  
J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

Students desiring to receive the AOT Award must complete all major certificate courses, one minor certificate course of study, and the required credit hours of general education courses in Areas I, II, III, and IV. Upon completion of all the courses listed, students are eligible to receive the Associate in Occupational Technology Degree. Students desiring to take general education courses for transfer to another institution should consult an advisor for proper general education course selection.

**Core Degree Requirements for the Associate in Occupational Technology Degree**

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

**Semester Hours**

Area I:	Written Composition ..... 3 English Composition I and/or Technical Writing
Area II:	Humanities and Fine Arts ..... 3
Area III:	Natural Science and Mathematics ..... 9 A minimum of 3 hours in degree creditable mathematics is required. The additional 6 hours of degree creditable coursework may be taken from disciplines of math, biology, chemistry, physical science, physics, environmental technology and computer science.
Area IV:	History, Social and Behavioral Sciences ..... 3 Courses may be taken from the disciplines of history, economics, geography, political science, psychology, and sociology.

**Minimum General Requirements ..... 18**

**Major Requirements ..... Semester Hours**

CAB 101 Introduction to Cabinetmaking ..... 3
CAB 104 Cabinet Shop Operation ..... 3
CAB 142 Wood Finishing and Spraying ..... 5
CAB 204 Cabinetmaking/Millwork ..... 5
CAB 230 Estimating Costs in Cabinetmaking ..... 2
CAR 112 Floors, Walls, Site Prep ..... 3
CAR 113 Floors, Walls, Site Prep Lab ..... 3
CAR 121 Introduction to Blueprint ..... 3
CAR 131 Roof and Ceiling Systems ..... 3
CAR 133 Roof and Ceiling Systems Lab ..... 3
CAR 211 Construction Specialties or
CAR 226 Metal Framing ..... 3
CAR 217 Estimating Materials ..... 3
CAR/CAB Electives ..... 6
<b>Total Major Requirements ..... 45</b>

**Minor Requirements**

<b>Business Management and Supervision 309999 CBU</b>
BUS 241 Principles of Accounting I or ACT 141 Basic Accounting Principles ..... 3
BUS 275 Principles of Management ..... 3
BUS 285 Principles of Marketing ..... 3
BUS 279 Small Business Management ..... 3
<b>Total Minor Requirements ..... 12</b>

**Minor Requirements**

<b>Welding 309999 CCW</b>
WDT 108 SMAW Fillet/OFC ..... 3
WDT 109 SMAW Fillet/PAC/CAC ..... 3
WDT 122 SMAW Fillet/OFC Lab ..... 3
WDT 123 SMAW Fillet/PAC/CAC Lab ..... 3
<b>Total Minor Requirements ..... 12</b>

**General Requirements ..... 18**

**Total Requirements for AOT Degree ..... 75**

\*Computer competency skills are embedded within one or more courses required in this curriculum.

**Carpentry/Cabinetmaking**      460201   CAR  
**Career Certificate**

Available: Shoals Campus  
 Advisors: Charles Hardy (5236) [charles.hardy@nwsc.edu](mailto:charles.hardy@nwsc.edu)  
 Joe Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

Carpentry/Cabinetmaking, using wood for construction and repair, has been an important craft for centuries. These skills are so important and versatile that they make up the largest group of building trade workers.

Students are exposed to various areas of carpentry/cabinetmaking such as safety, hand tools, blueprint reading, metric measures, stair construction, floor framing, wall and ceiling framing, exterior finish and various types of cabinet building.

Emphasis is placed on learning the true value of good craftsmanship and how to apply this knowledge to benefit the employee and employer. One of the main objectives of the program is to develop the skills, attitudes and ethics needed to become successfully employed.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
COM 100 Introductory Technical English I	3	0	3
MAH 101 Introductory Mathematics I	2	2	3
CAB 101 Introduction to Cabinetmaking	1	4	3
CAB 102 Introduction to Lumber	1	6	3
CAB 103 Sizes and Dimensions	1	4	3
CAB 104 Cabinet Shop Operations	3	0	3
CAB 110 Basic Safety and Equipment	1	4	4
CAR 111 Construction Basics or CAR 211 Construction Specialties	3	0	3
CAB 142 Woodfinishing and Spraying	0	4	5
CAB 204 Cabinetmaking/Millwork	1	4	5
CAB 230 Estimating Costs in Cabinetmaking or CAR 217 Estimating	1	2	2
CAR 112 Floors, Walls, Site Prep	3	0	3
CAR 113 Floors, Walls, Site Prep Lab	0	9	3
CAR 121 Introduction to Blueprint	3	0	3
CAR 131 Roof and Ceiling Systems	3	0	3
CAR 133 Roof and Ceiling Systems Lab	0	9	3
CAR 226 Metal Framing	0	6	3
CAR 228 Stairs, Trim, and Moldings or CAR 134 Stairs, Moldings, and Trim	1	4	3
<b>Total Semester Credit Hours .....</b>			<b>59</b>

\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

\*\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

**Basic Cabinetmaking**      480703   CAB  
**Short-Term Certificate**

Available: Shoals Campus  
 Advisors: Charles Hardy (5236) [charles.hardy@nwsc.edu](mailto:charles.hardy@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

The Cabinetmaking short-term certificate prepares students with the skills and related technical knowledge necessary for employment as a woodworking craftsman. Topics include basic materials and processes, uses and care of tools and equipment, safety, job planning and execution, and wood finishing techniques. Students are taught how to design, construct and install interior casework.

Eye-hand coordination, manual dexterity and physical fitness, and a good sense of balance are important to have. The ability to solve math problems quickly and accurately is also helpful. To advance, cabinetmakers should be able to estimate, with accuracy, long a job should take to complete, and its cost.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
CAB 101 Introduction to Cabinetmaking	1	4	3
CAB 102 Introduction to Lumber	1	6	3
CAB 103 Sizes and Dimensions	1	4	3
CAB 104 Cabinet Shop Operations	3	0	3
CAB 110 Basic Safety Tools and Equipment	2	5	4
CAB 142 Woodfinishing and Spraying	2	8	5
CAB 204 Cabinetmaking/Millwork	1	10	5
<b>Total Semester Credit Hours .....</b>			<b>26</b>

## **Basic Carpentry Short-Term Certificate**

460201 BC

Available: Shoals Campus  
 Advisors: Charles Hardy (5236) [charles.hardy@nwscc.edu](mailto:charles.hardy@nwscc.edu)  
 J. Hackworth 5335) [joehackworth@nwscc.edu](mailto:joehackworth@nwscc.edu)

This short-term certificate is designed to prepare students with carpentry skills and related technical knowledge needed for immediate employment in the carpentry profession. Emphasis is placed on safety, employability skills and requirements for successful employment. Students learn to work from blueprints and instructions preparing a layout by measuring, marking, and arranging materials. Hand and power tools are used to cut and shape various materials. The materials are joined with nails, screws, staples, or adhesives.

Carpenters may be involved in various kinds of construction activity, maintenance and installation work, repair work, manufacturing firms, government agencies, wholesale and retail establishments, and schools. Many carpenters are self-employed. It is important to acquire skills in all aspects of carpentry and to have flexibility to perform any kind of carpentry work.

Skilled carpenters need manual dexterity, eye-hand coordination, physical fitness, and a good sense of balance. Carpenters must be able to estimate how long a job should take to complete and its cost.

**Entering students are required to complete ORT 100.  
 Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
CAR 112 Floors, Walls, Site Prep	3	0	3
CAR 113 Floors, Walls, Site Prep Lab	0	9	3
CAR 121 Introduction to Bluepring Reading	3	0	3
CAR 131 Roof and Ceiling Systems	3	0	3
CAR 133 Roof and Ceiling Systems Lab	0	9	3
CAR 134 Stairs, Molding and Trim	2	5	4
CAR 211 Construction Specialities	3	0	3
CAR 217 Estimating Materials	1	5	3

**Total Semester Credit Hours ..... 25**

\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

## **Chemical Laboratory Technician Short-Term Certificate**

410301 CHM

Available: Phil Campbell and Shoals Campuses  
 Advisors: C. Sockwell (5378) [sockwell@nwscc.edu](mailto:sockwell@nwscc.edu)  
 M. Murphy (6246) [docm@nwscc.edu](mailto:docm@nwscc.edu)

The Chemical Laboratory Technician short-term emphasizes chemistry and mathematics. The holder of this certificate will have completed 8 semester hours of chemistry and will be exposed to many different areas of chemistry. These areas include fundamental concepts of chemistry, chemical equations and reaction, stoichiometry, thermochemistry, atomic structure, general concepts of chemical bonding, Valence Bond Theory, Molecular Orbital Theory, chemistry of gases and kinetic theory, acids and bases, chemical equilibrium, and chemical thermodynamics. The material covered in the courses, along with skills developed in the laboratory, prepares the student for a wide range of employment possibilities, from industrial laboratories to environmental testing.

For those students who wish to continue their education, these courses are transferable.

**Entering students are required to complete ORI 101.  
 Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
BIO 103 Principles of Biology I	3	2	4
CHM 111 College Chemistry I	3	3	4
CHM 112 College Chemistry II	3	3	4
**ENG 101 English Composition I	3	0	3
ENG 130 Technical Report Writing	3	0	3
MTH 112 Precalculus Algebra	3	0	3
MTH 265 Elementary Statistics	3	0	3
<b>Total Semester Credit Hours .....</b>			<b>24</b>

\*\*Keyboarding skills are essential for the successful completion of English 101.

**Child Development** 190708 CHD  
**Associate in Applied Science Degree**

Available: Phil Campbell and Shoals Campuses  
 Advisors: D. Durdunji (5450) [durdunji@nwscc.edu](mailto:durdunji@nwscc.edu)  
 D. Pace (5352) [pace@nwscc.edu](mailto:pace@nwscc.edu)

This degree is designed to prepare students for employment as teachers or directors in public or private preschool programs, as Head Start teachers or teacher aides, or as teacher assistants in Alabama Pre-K programs, public or private schools. Courses in this program extend beyond the Alabama State Minimum Standards qualifications for directors, program directors, and preschool teachers in licensed child care facilities.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

General Education Requirements	Semester Hours
BIO 103 Principles of Biology I .....	4
BIO 104 Principles of Biology II or Physical Science .....	4
CIS 146 Microcomputer Applications .....	3
**ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 116 Mathematical Applications or MTH 110 or MTH 112 .....	3
PSY 200 General Psychology .....	3
SOC 200 Introduction to Sociology .....	3
SOC 247 Marriage and the Family .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Fine Arts Elective .....	3
<b>Total Education Requirements .....</b>	<b>35</b>

**Major Requirements**

CHD 100 Introduction to Early Care and Education of Children .....	3
CHD 201 Child Growth and Development .....	3
CHD 202 Creative Experiences for Young Children .....	3
CHD 203 Children's Language Development and Literature .....	3
CHD 204 Methods and Materials for Teaching Young Children .....	3
CHD 206 Health, Safety and Nutrition .....	3
CHD 205 Program Planning for Young Children .....	3
CHD 208 Administration of Child Development Programs .....	3
CHD 209 Infant and Toddler Education Programs .....	3
CHD 210 Educating Exceptional Young Children .....	3
CHD 215 Supervised Practical Experience .....	3
<b>Total Major Requirements .....</b>	<b>33</b>

**Total Semester Credit Hours .....** 68

\*\*Keyboarding skills are essential for the successful completion of English 101.

**Child Development** 190708 CHD  
**Short-Term Certificate**

Available: Phil Campbell and Shoals Campuses  
 Advisors: D. Durdunji (5450) [durdunji@nwscc.edu](mailto:durdunji@nwscc.edu)  
 D. Pace (5352) [pace@nwscc.edu](mailto:pace@nwscc.edu)

This short-term certificate is designed to prepare students for employment in preschool programs. Emphasis is upon developing competency in guiding the experience of preschool children. Graduates may be employed as teachers or directors in private and public preschool programs; and as aides in Head Start.

Classes in this plan are designed to meet the Alabama state minimum standard qualifications for a director, program director, and teacher in a licensed child care center.

This certificate program offers the student background knowledge of all stages of child growth and development; training and practical experience in conducting all types of learning activities with children; knowledge and application of techniques in positive guidance and discipline, health, safety, and first aid practices, and a basic knowledge of the state minimum standards for daycare centers and homes.

Any person who has an interest in or a desire to upgrade his or her knowledge in child care work and has a high school diploma or GED will be eligible for this short-term certificate.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
CHD 201 Child Growth and Development Principles	3	0	3
CHD 202 Children's Creative Experiences	2	2	3
CHD 203 Children's Literature and Language Development	2	2	3
CHD 204 Methods and Materials for Teaching Children	2	2	3
CHD 206 Children's Health and Safety	3	0	3
CHD 205 Program Planning for Educating Young Children	3	0	3
CHD 215 Supervised Practical Experience in Early Childhood Education	0	6	3
**CHD Electives	6	0	6

**Total Semester Credit Hours .....** 27

**\*\*CHD Electives**

- CHD 100 Introduction to Early Care and Education
- CHD 208 Administration of Child Development Programs
- CHD 209 Infant and Toddler Education Programs
- CHD 210 Educating Exceptional Young Children
- CHD 214 Families and Communities in Early Care

## **Computer Information Systems Technology Associate in Applied Science Degree**

Available: Shoals Campus  
 Advisors: T. James (6281) [timmy.james@nwsc.edu](mailto:timmy.james@nwsc.edu)  
 T. Roberson (5276) [roberson@nwsc.edu](mailto:roberson@nwsc.edu)  
 E. Carter (5277) [cartere@nwsc.edu](mailto:cartere@nwsc.edu)  
 S. Chandler (5234) [schandler@nwsc.edu](mailto:schandler@nwsc.edu)  
 J. James (6234/5346) [jamesje@nwsc.edu](mailto:jamesje@nwsc.edu)  
 P. Peters (6326) [ppeters@nwsc.edu](mailto:ppeters@nwsc.edu)

The CIS Technology degree is designed to prepare students for employment in the field of Data and Information Processing. Graduation from high school or the equivalent qualifies a prospective student for enrollment in CIS Technology. The two-year suggested curriculum is designed to develop computer personnel capable of planning, writing and installing commercial software on modern database computers. Students pursuing the Personal Computer Systems Option will receive training in electronics and networking technology used on common PC systems. Students pursuing the Programming Option are trained on the IBM AS/400 and/or personal computers.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

### **Programming Option** **110101 PO**

<b>General Education Requirements</b>	<b>Semester Hours</b>
BUS 241 Principles of Accounting I or ACT 141 Basic Accounting Principles .....	3
BUS 242 Principles of Accounting II or ACT 142 Advanced Accounting Principles .....	3
**ENG 101 English Composition I .....	3
ENG 130 Technical Report Writing or ENG 102 English Composition II .....	3
MTH 100 Intermediate Algebra .....	3
SPH 226 Business and Professional Speech or SPH 107 Fundamentals of Public Speaking .....	3
Humanities or Fine Arts Elective .....	3
Social Science Elective .....	3
<b>Total General Education Requirements .....</b>	<b>24</b>

#### **Major Requirements**

CIS 110 Intro to Computer Logic and Programming .....	3
***CIS 146 Microcomputer Applications .....	3
*CIS 205 Control Language and Utilities Applications .....	3
CIS 147 Advanced Microcomputer Applications .....	3
CIS 249 Microcomputer Operating Systems .....	3
*CIS 281 System Analysis and Design .....	3
*CIS 199 Network Communications or ILT 135 Local Area Networks .....	3
CIS 268 Software Support or ILT 130 Software Installation and Maintenance .....	3
CIS 269 Hardware Support or ILT 129 Personal Computer Hardware .....	3
CIS Electives/CIS Programming Electives .....	21
<b>Total Major Requirements .....</b>	<b>48</b>

**Total Semester Credit Hours .....** **72**

\*Courses offered during summer semester only.

\*\*Keyboarding skills are essential for the successful completion of English 101.

\*\*\*Students without prior computer knowledge or keyboarding should enroll in CIS 096.

## **Personal Computers Systems Option**

110101 PCS

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

<b>General Education Requirements</b>	<b>Semester Hours</b>
BUS 241 Principles of Accounting I or ACT 141 Basic Accounting Principles .....	3
BUS 242 Principles of Accounting II or ACT 142 Accounting Principles II .....	3
**ENG 101 English Composition I .....	3
ENG 130 Technical Report Writing or ENG 102 English Composition II .....	3
MTH 246 Mathematics of Finance .....	3
SPH 226 Business and Professional Speech or SPH 107 Fundamentals of Public Speaking .....	3
Humanities or Fine Arts Elective .....	3
Social Science Elective .....	3
General Elective .....	3-5
<b>Total General Education Requirements .....</b>	<b>27-29</b>

#### **Major Requirements**

***CIS 146 Microcomputer Applications .....	3
CIS 147 Advanced Microcomputer Applications .....	3
CIS 148 Post Advanced Microcomputer Applications .....	3
CIS 249 Microcomputer Operating Systems .....	3
CIS 191 Intro to Computer Programming Concepts .....	3
*CIS 199 Network Communications or ILT 135 Local Area Networks .....	3
CIS 268 Software Support or ILT 130 Software Installation and Maintenance .....	3
CIS 269 Hardware Support or ILT 129 Personal Computer Hardware .....	3
CIS 110 Intro to Computer Logic and Programming .....	3
ILT 101 Survey of Electronics .....	3
ILT 131 Personal Computer Problem Determination .....	3
*CIS 281 System Analysis and Design .....	3
CIS Electives/CIS Programming Electives .....	9
<b>Total Major Requirements .....</b>	<b>45</b>

**Total Semester Credit Hours .....** **72-74**

\* Courses offered during summer semester only.

\*\*Keyboarding skills are essential for the successful completion of English 101.

\*\*\*Students without prior computer knowledge or keyboarding should enroll in CIS 096.

**Computer Technology  
PC Hardware Technician  
Short-Term Certificate** 110101 PCH

Available: Shoals Campus  
 Advisors: S. Harrison (5250) [sam@nwsc.edu](mailto:sam@nwsc.edu)  
 S. Chandler (5234) [schandler@nwsc.edu](mailto:schandler@nwsc.edu)  
 T. James (6281) [timmy.james@nwsc.edu](mailto:timmy.james@nwsc.edu)  
 T. Roberson (5276) [roberson@nwsc.edu](mailto:roberson@nwsc.edu)  
 J. James (6234/5346) [jamesje@nwsc.edu](mailto:jamesje@nwsc.edu)  
 P. Peters (6326) [ppeters@nwsc.edu](mailto:ppeters@nwsc.edu)

Almost all businesses today utilize microcomputers in their operations, whether they are large or small businesses. The investment they have made in microcomputers requires ongoing maintenance and service. The need for qualified technicians is continually expanding. These technicians need to know how to diagnose, configure, install, upgrade, and service industry standard microcomputers. This program is designed to provide the skills to become employed as a PC Hardware Technician.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
CIS 249 Microcomputer Operating Systems	3	0	3
ILT 101 Survey of Electronics	3	0	3
ILT 112 Concepts of Digital Circuits	3	6	5
ILT 131 Personal Computer Problem Determination	2-3	3-0	3
CIS 110 Intro to Computer Logic and Programming	3	0	3
*CIS 199 Network Communications or ILT 135 Local Area Networks	3	0	3
CIS 268 Software Support or ILT 130 Software Installation and Maintenance	3	0	3
CIS 269 Hardware Support or ILT 129 Personal Computer Hd.	3	0	3
**CIS 146 Microcomputer Applications or ILT 175 Computer Fundamentals for Technology Students	3	0	3
<b>Total Semester Credit Hours .....</b>			<b>29</b>

\* Course offered during summer semester only.  
 \*\*Students without prior computer knowledge or keyboarding should enroll in CIS 096.

**Computer Technology  
PC Software Technician  
Short-Term Certificate** 110101 PST

Available: Shoals Campus  
 Advisors: E. Carter (5277) [cartere@nwsc.edu](mailto:cartere@nwsc.edu)  
 T. James (6281) [timmy.james@nwsc.edu](mailto:timmy.james@nwsc.edu)  
 S. Chandler (5234) [schandler@nwsc.edu](mailto:schandler@nwsc.edu)  
 T. Roberson (5276) [roberson@nwsc.edu](mailto:roberson@nwsc.edu)  
 J. James (6234/5346) [jamesje@nwsc.edu](mailto:jamesje@nwsc.edu)  
 P. Peters (6326) [ppeters@nwsc.edu](mailto:ppeters@nwsc.edu)

The rapid expansion of microcomputer systems in all phases of business operations has generated a demand for knowledgeable technicians who can install, upgrade, service, and support industry standard software for microcomputers. This program will train the student to use PC operating systems, word processing, spreadsheets, database, and other related software tools which are commonly used in business.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
**CIS 146 Microcomputer Applications	3	0	3
CIS 147 Advanced Microcomputer Applications	3	0	3
*CIS 148 Post Advanced Microcomputer Applications	3	0	3
CIS 249 Microcomputer Operating Systems	3	0	3
CIS Elective	3	0	3
MTH 246 Mathematics of Finance or MTH 116 Mathematical Appl.	3	0	3
CIS 268 Software Support or ILT 130 PC Software Installation and Maintenance	2-3	3-0	3
OAD 133 Business Communications or BUS 215 Business Communications	3	0	3
<b>Total Semester Credit Hours .....</b>			<b>24</b>

\* Course offered during summer semester only.  
 \*\*Students without prior computer knowledge or keyboarding should enroll in CIS 096.

**Cosmetology****AOT Degree**

Available: Shoals Campus

Advisors: C. Bankston (5265) [bankstonc@nwsc.edu](mailto:bankstonc@nwsc.edu)

T. Sharp (5420) [tsharp@nwsc.edu](mailto:tsharp@nwsc.edu)

J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

Students desiring to receive the AOT Award must complete all major certificate courses, one minor certificate course of study, and the required credit hours of general education courses in Areas I, II, III, and IV. Upon completion of all the courses listed, students are eligible to receive the Associate in Occupational Technology Degree. Students desiring to take general education courses for transfer to another institution should consult an advisor for proper general education course selection.

**Core Degree Requirements for the Associate in Occupational Technology Degree**

Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.

	Semester Hours
Area I: Written Composition .....	3
English Composition I and/or Technical Writing	
Area II: Humanities and Fine Arts .....	3
Area III: Natural Science and Mathematics .....	9
A minimum of 3 hours in degree creditable mathematics is required. The additional 6 hours of degree creditable coursework may be taken from disciplines of math, biology, chemistry, physical science, physics, environmental technology and computer science.	
Area IV: History, Social and Behavioral Sciences .....	3
Courses may be taken from the disciplines of history, economics, geography, political science, psychology, and sociology.	

**Minimum General Requirements ..... 18**

Major Requirements .....	Semester Hours
COS 111 Cosmetology Science and Art .....	3
COS 112 Cosmetology Science and Art Lab .....	3
COS 113 Chemical Methodology .....	3
COS 114 Chemical Methodology .....	3
COS 121 Colorimetry .....	3
COS 122 Colorimetry Applications .....	3
COS 123 Cosmetology Salon Practices .....	3
COS 124 Salon Management .....	3
COS 131 Esthetics .....	3
COS 132 Esthetics Applications .....	3
COS 143 Hair Designs .....	3
COS 181 Special Topics .....	3
COS Electives .....	6
<b>Total Major Requirements .....</b>	<b>42</b>

**Minor Requirements**

<b>Business Management and Supervision 309999 COB</b>	
BUS 241 Principles of Accounting I or	
ACT 141 Basic Accounting Principles .....	3
BUS 275 Principles of Management .....	3
BUS 285 Principles of Marketing .....	3
BUS 279 Small Business Management .....	3
<b>Total Minor Requirements .....</b>	<b>12</b>

**Minor Requirements**

<b>Cosmetology Instructor Training 309999 COT</b>	
CIT 211 Teaching and Curriculum Development .....	3
CIT 212 Teacher Mentorship .....	3
CIT 213 Lesson Plan Development .....	3
CIT 221 Lesson Plan Implementation .....	3
CIT 222 Instructional Materials and Methods .....	3
CIT 223 Instructional Materials and Methods Applications ....	3
COS 167 State Board Review .....	3
COS 168 Bacteriology and Sanitation .....	3
<b>Total Minor Requirements .....</b>	<b>24</b>

**General Requirements ..... 18**

**Total Requirements for AOT Degree with Minor in Business Management and Supervision 72**

**Total Requirements for AOT Degree with Minor in Cosmetology Instructor Training ..... 84**

\*Computer competency skills are embedded within one or more courses required in this curriculum.

**Cosmetology  
Career Certificate**

120401 COS

Available: Shoals Campus  
 Advisors: C. Bankston (5265) [bankstonc@nwsc.edu](mailto:bankstonc@nwsc.edu)  
 T. Sharp (5420) [tsharp@nwsc.edu](mailto:tsharp@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

Cosmetology is the art and science of beauty care. A student in cosmetology learns basic skills and related knowledge in hairstyling, nail care, chemical services and skin care. Personal development and professional ethics are included in the curriculum. The curriculum is designed for students to meet the needs of a changing society by helping the individual acquire skills, knowledge, understanding, and attitudes which will contribute to his/her proficiency and competency in the occupation.

When the student has completed the curriculum outline of three semesters, he/she is eligible to make application for examination by the Alabama Board of Cosmetology. After passing the written and practical examination, the student becomes licensed and is eligible for employment.

A part time program is designed to meet the needs of anyone who cannot attend the full time program. Skills and related theory are included. Students wishing to practice cosmetology must meet licensing requirements set by the Alabama State Board of Cosmetology.

**TRANSFER STUDENTS:** Students may receive credit up to one semester for clock hours and credit units earned at another school.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
COM 100 Intro. Technical English I	3	0	3
MAH 101 Introductory Mathematics I	2	2	3
COS 111 Cos. Science and Art	3	0	3
COS 112 Cos. Science and Art Lab	0	9	3
COS 113 Chemical Methodology	1	5	3
COS 114 Chemical Methodology Lab	0	9	3
COS 121 Colorimetry	3	0	3
COS 122 Colorimetry Applications	0	9	3
*COS 123 Cosmetology Salon Practices	0	9	3
COS 124 Salon Management	3	0	3
COS 131 Esthetics	3	0	3
COS 132 Esthetics Applications	0	9	3
*COS 143 Hair Designs	1	5	3
COS 181 Special Topics	X	X	3

**Total Semester Credit Hours ..... 42**

\*COS 146 Hair Additions 2-5-4 may be substituted.

\*COS 291B Co-op Lab may be substituted.

\*\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

\*\*\*\* Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

**Cosmetology Esthetics  
Short-Term Certificate**

120401 CES

Available: Shoals Campus  
 Advisor: C. Bankston (5265) [bankstonc@nwsc.edu](mailto:bankstonc@nwsc.edu)  
 T. Sharp (5420) [tsharp@nwsc.edu](mailto:tsharp@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

This short-term certificate is designed for the student desiring a career in skin care services as a licensed Esthetician. Courses include lab and theory classes with emphasis on facial treatments. After successful completion of three semesters and a designated number of credit unit tasks, students are eligible to make application for examination.

**All entering students are required to complete ORT 100 unless transferred from another university or college.**

	Semester		
	Theory	Lab	Hours
COS 131 Esthetics	3	0	3
COS 132 Esthetics Applications	0	9	3
COS 160 Image Projection	0	9	3
COS 163 Facial Treatment	3	0	3
COS 164 Facial Machine	0	9	3
COS 165 Related Subjects Estheticians	0	9	3
COS 168 Bacteriology and Sanitation	3	0	3
COS 169 Skin Functions	0	9	3
*COS 291B Co-op	0	5-15	3

**Total Semester Credit Hours ..... 27**

\*A student desiring to qualify for state board licensing will be required to take an additional semester (co-op) to meet these requirements. The student may work a minimum of 15 contact hours each week with a college approved employer in an area related to esthetics or in the esthetic lab. Student state licensing requires 1500 clock hours or 1200 credit units. Instructor approval is required for registration.

\*\*Students may receive course specific credit for courses completed at another institution.

\*\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

**Cosmetology Services**

The Cosmetology Program offers salon services to the public on selected days. Students perform hairstyling as well as chemical, facial and nail services for a minimum charge. For further information on scheduling an appointment contact the instructors at: Nail Technology (256) 331-5220, Skin Care/Facials (256) 331-5295, and Hairstyling Services (256) 331-5304.

**Cosmetology/Nail Technology 120401 CNT**  
**Short-Term Certificate**

Available: Shoals Campus  
 Advisors: C. Bankston (5265) [bankstonc@nwsc.edu](mailto:bankstonc@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

Nail Technology is a short-term certificate of instruction for students seeking licensing as a Nail Technician. Topics include personal development, employability skills, professionalism, sanitation, nail diseases and disorders, nail structure, anatomy, massage, and product knowledge. Related technical knowledge, including salon business management, is included with job skills taught during lab instruction on manicuring and pedicuring nail care procedures. The student is taught to perform procedures for application of nail wraps, artificial nails using acrylic, gel, and fiberglass systems, and techniques in air brush nail art. Students acquire real-work experience providing nail services to clientele in a lab setting that simulates a nail salon.

After successful completion of the required courses and a designated number of skills, the student is eligible to make application for state board examinations required for licensing. This training is transferable to other states for licensing through the State Boards of Cosmetology reciprocity agreement.

Licensed Nail Technicians may work in salons, nail shops, spas, department stores, as sales representatives, management, beauty supply distributors, instructors, examiners for State licensing boards, or become self-employed.

This short-term certificate does not require a high school diploma or GED certificate. A student must be at least 16 years old to enroll.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
COS 124 Salon Management	3	0	3
COS 125 Career and Personal Development	1	5	3
COS 151 Nail Care	3	0	3
COS 152 Nail Care Applications	0	9	3
COS 153 Nail Art	3	0	3
COS 154 Nail Art Applications	0	9	3
COS 191B Co-op Lab	0	5-15	3
COS 167 State Board Review	0	9	3
COS 168 Bacteriology and Sanitation	3	0	3
COS 181 or 182 Special Topics in Nail Science	0	3	3

**Total Semester Credit Hours ..... 30**

\*\*An elective course providing work experience as a Nail Technician. The student works a minimum of 15 contact hours each week in an area related to the student's program of study.

\*\*\*Students may receive course specific credit for courses completed at another institution.

\*\*\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

**Cosmetology 120499 CIT**  
**Instructor Training**  
**Short-Term Certificate**

Available: Shoals Campus  
 Advisor: C. Bankston (5265) [bankstonc@nwsc.edu](mailto:bankstonc@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)

Cosmetology Instructor training is a teacher training program for licensed managing nails or estheticians. The student is introduced to curriculum development principles and methods of teaching through independent study. The courses include application of learning principles, methods, and techniques in a classroom and laboratory environment. Required record keeping, classroom management and methods of evaluation are included in this short-term certificate.

The full time program consists of two semesters. The part time program consists of four semesters. After completion of the prescribed curriculum, the student is eligible to take the Alabama state exam for an instructor's license. Completed courses and hours are transferable to other states for licensing. Requirements for admission:

- . Application with Northwest-Shoals Community College
- . Interview with Cosmetology Instructor
- . Student must have current Managing Nails or Estheticians License
- . Student must meet Alabama Board of Cosmetology requirements
- . Student instructors will furnish their books and materials necessary for the course
- . Associate Degree or higher is required

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
CIT 211 Teaching and Curriculum Development	3	0	3
CIT 212 Teacher Mentorship	0	9	3
CIT 213 Lesson Plan Development	3	0	3
CIT 221 Lesson Plan Implementation	0	9	3
CIT 222 Instructional Materials and Methods	3	0	3
CIT 223 Instructional Materials and Methods Applications	0	9	3

**Total Semester Credit Hours ..... 18**

**Criminal Justice** 430107 CRJ  
**Associate in Applied Science Degree**

Available: Phil Campbell and Shoals Campuses  
 Advisor: E. Bowen (5303) [eddie.bowen@nwscc.edu](mailto:eddie.bowen@nwscc.edu)  
 K. Brackins (6242) [kbrackins@nwscc.edu](mailto:kbrackins@nwscc.edu)

This degree is designed for students entering into Criminal Justice careers, particularly for those interested in law enforcement. Although many of the courses in this career program may transfer to four-year institutions, this program is not designed for transfer. This program does not include many courses that four-year institutions require in their general education program.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

General Education Requirements	Semester Hours
CIS 146 Microcomputer Applications .....	3
**ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
HED 231 First Aid .....	3
MTH 246 Mathematics of Finance or MTH 116 Mathematical Applications .....	3
PSY 200 General Psychology .....	3
POL 211 American Government or U.S. History .....	3
SOC 200 Introduction to Sociology .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Humanities or Fine Arts Elective .....	3
<b>Total Education Requirements .....</b>	<b>30</b>

Major Requirements	
CRJ 100 Introduction to Criminal Justice .....	3
*CRJ 110 Introduction to Law Enforcement .....	3
CRJ 140 Criminal Law and Procedure .....	3
CRJ 146 Criminal Evidence .....	3
CRJ 216 Police Organization and Administration .....	3
CRJ 220 Criminal Investigation .....	3
Criminal Justice Elective .....	12
<b>Total Major Requirements .....</b>	<b>30</b>

**Total Semester Credit Hours .....** 60

Criminal Justice Courses are offered on the Phil Campbell campus depending on student demand.

\*Students who have successfully completed the Police Academy (as established by the Alabama Police Officers and Training Commission) may be given credit for CRJ 110 and CRJ 116 with the approval of the CRJ advisor.

\*\*Keyboarding skills are essential for the successful completion of English 101.

**Design Engineering** 151301 D&D  
**Technology**  
**Associate in Applied Science Degree**

Available: Shoals Campus  
 Advisors: A. Rice (5257) [rice@nwscc.edu](mailto:rice@nwscc.edu)  
 M. Hubka (5270) [hubka@nwscc.edu](mailto:hubka@nwscc.edu)

Design Engineering prepares students for the manufacturing and construction industry. Today, the drafter is a highly skilled technician with an ability to visualize objects three dimensionally before they are physically created. By using traditional manual tools or computer assisted methods, the drafter creates drawings that describe the shape and size of the product or project.

Design Engineering instruction at the College is offered in fundamental, intermediate, and advanced levels of drafting and design. Advanced courses train students for the development of drawings in mechanical and architectural design. Related studies prepare the student academically in mathematics, physics, psychology, and English.

A graduate of the program will generally be qualified to enter the industry as an entry level draftsman, detailer, or apprentice designer. Graduates are encouraged to continue education toward a professional degree in engineering or architecture.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

General Education Requirements	Theory	Lab	Semester Hours
***ENG 101 English Composition I	3	0	3
*ENG 130 Technical Report Writing	3	0	3
MTH 103 Intro to Technical Mathematics	3	0	3
MTH 118 Technical Mathematics	3	0	3
PHY 115 Technical Physics	3	2	4
PSY 200 General Psychology	3	0	3
Humanities or Fine Arts Elective	3	0	3
<b>Total General Education Requirements .....</b>	<b>22</b>		

**Major Requirements**

DDT 104 Basic Computer Aided Drafting and Design	1	4	3
DDT 111 Fundamentals of Drafting and Design	1	4	3
DDT 117 Manufacturing Processes	1	4	3
DDT 122 Advanced Technical Drawing	1	4	3
DDT 124 Basic Technical Drawing	1	4	3
DDT 127 Intermediate Computer Aided Drafting and Design	1	4	3
DDT 128 Intermediate Technical Drawing	1	4	3
DDT 131 Machine Drafting Basics	1	4	3
DDT 132 Architectural Drafting	1	4	3
DDT 134 Descriptive Geometry	1	4	3
DDT 181E Special Topics - Work Ethics	3	0	3
DDT 211 Intermediate Machine Drafting	1	4	3

DDT 231 Advanced CAD	2	3	3
DDT 233 Three-Dimensional Modeling	1	4	3
DDT 227 Strengths of Material	4	0	4
Drafting and Design Electives	X	X	8
<b>Total Major Requirements</b> .....			<b>54</b>
<b>Total Semester Credit Hours</b> .....			<b>76</b>

**Design Engineering Technology Electives**

DDT 114	Industrial Blueprint Reading
DDT 115	Blueprint Reading for Machinists
DDT 116	Blueprint Reading for Construction
DDT 118	Basic Electrical Drafting
DDT 125	Surface Development
DDT 126	Sections and Conventional Practice
DDT 130	Fundamentals of Drafting for Related Trades
DDT 133	Basic Surveying
DDT 139	Fundamentals of Drafting for Related Trades Lab
DDT 150	Theory of Residential Drawing and Design
DDT 155	Drawing for Residential Construction
DDT 182	Special Topics in Design Engineering Technology
DDT 191	Drafting Internship (1 cr)
DDT 192	Drafting Internship (2 cr)
DDT 193	Drafting Internship (3 cr)
DDT 212	Intermediate Architectural Drafting
DDT 213	Civil Drafting, Plat Maps
DDT 214	Pipe Drafting
DDT 215	Geometric Dimensioning and Tolerancing
DDT 217	Building Codes, Ordinances, Zoning Restrictions and the A.D.A.
DDT 220	Intermediate Technical and Mechanical Drawing
DDT 221	Advanced Machine Drafting
DDT 222	Advanced Architectural Drafting
DDT 223	Advanced Civil Drafting
DDT 224	Structural Concrete Drafting
DDT 225	Structural Steel Drafting
DDT 226	Technical Illustration
DDT 228	Geographic Information Systems
DDT 229	Inter. Technical and Mechanical Drawing Lab
DDT 232	CAD Customization
DDT 234	3D Graphics and Animation
DDT 235	Specialized CAD
DDT 236	Design Project
DDT 237	Current Topics in CAD
DDT 238	Special Topics in CAD
DDT 239	Independent Studies
DDT 250	Theory of Commercial Drawing and Design
DDT 255	Drawing for Commercial Construction
DDT 267	Co-op Elective
DDT 268	Co-op Elective
DDT 271	Co-op Elective (2-6 cr)
DDT 290	Survey of Aerospace Technology

**Note:** Three Drafting Electives totaling 8 semester hours are required. Students should consult advisor concerning other possible electives from other program areas.

\*Students who have completed ENG 130 prior to Spring 2000, and students substituting ENG 102 must take Speech.

\*\*Computer competency skills are embedded within one or more courses required in this curriculum.

\*\*\*Keyboarding skills are essential for the successful completion of English 101.

**Computer Aided Design Engineering Technology Short-Term Certificate** 151301 DDT

Available: Shoals Campus  
 Advisor: A. Rice (5257) [rice@nwsc.edu](mailto:rice@nwsc.edu)  
 M. Hubka (5270) [hubka@nwsc.edu](mailto:hubka@nwsc.edu)

This short-term certificate is open to drafting and design industry personnel with a minimum of one year experience in manual drafting, design, or engineering. The program provides upgrade training in the use of computer aided drafting and design (CADD) technology.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
DDT 104 Basic Computer Aided Drafting and Design	1	4	3
DDT 127 Intermediate Computer Aided Drafting and Design	1	4	3
DDT 231 Advanced CAD	2	3	3
Drafting and Design Elective	X	X	6

**Total Semester Credit Hours** ..... 15

NOTE: Two Drafting electives totaling 6 semester hours is required. Students should consult advisor concerning other possible electives from other program areas.

**Electrical Technology  
AOT Degree**

309999

Available: Shoals Campus  
 Advisors: J. Bonner (5244) [ndt1@nwscc.edu](mailto:ndt1@nwscc.edu)  
 J. Hackworth (5335) [joehackworth@nwscc.edu](mailto:joehackworth@nwscc.edu)

Students desiring to receive the AOT Award must complete all major certificate courses, one minor certificate course of study, and the required credit hours of general education courses in Areas I, II, III, and IV. Upon completion of all the courses listed, students are eligible to receive the Associate in Occupational Technology Degree. Students desiring to take general education courses for transfer to another institution should consult an advisor for proper general education course selection.

**Core Degree Requirements for the Associate in Occupational Technology Degree**

Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.

	<b>Semester Hours</b>
Area I: Written Composition .....	3
English Composition I and/or Technical Writing	
Area II: Humanities and Fine Arts .....	3
Area III: Natural Science and Mathematics .....	9
A minimum of 3 hours in degree creditable mathematics is required. The additional 6 hours of degree creditable coursework may be taken from disciplines of math, biology, chemistry, physical science, physics, environmental technology and computer science.	
Area IV: History, Social and Behavioral Sciences .....	3
Courses may be taken from the disciplines of history, economics, geography, political science, psychology, and sociology.	

**Minimum General Requirements ..... 18**

	<b>Semester Hours</b>
<b>Major Requirements</b>	
ELT 114 Residential Wiring Methods .....	3
ELT 117 AC/DC Machines .....	3
ELT 118 Commercial/Industrial Wiring I .....	3
ELT 119 Concepts of Solid State .....	5
ELT 121 Concepts of Digital Electronics .....	5
ELT 122 Advanced AC/DC Machines .....	3
ELT 132 Commercial/Industrial Wiring II .....	3
ELT 209 Motor Control I .....	3
ELT 212 Motor Control II .....	3
ELT 219 Fluid Power Systems .....	3
ELT 231 Programmable Controls I .....	3
ELT 232 Programmable Controls II .....	3
ELT 242 Journeyman Master Prep Exam .....	3
<b>Total Major Requirements .....</b>	<b>43</b>

**Minor Requirements 309999 EAC**

**Air Conditioning/Refrigeration Technology**

ACR 111 Refrigeration Principles .....	3
ACR 121 Principles of Electricity for HVACR (or ELT 111) .....	3-5
ACR 122 HVACR Electrical Circuits (or ELT 112) .....	3-5
ACR Elective .....	1-3
<b>Total Minor Requirements .....</b>	<b>12</b>

**General Requirements ..... 18**  
**Total Requirements for AOT Degree ..... 73**

\*Computer competency skills are embedded within one or more courses required in this curriculum.

**Electrical Technology  
Career Certificate**

460302 ELT

Available: Shoals Campus  
 Advisors: J. Bonner (5244) [ndt1@nwscc.edu](mailto:ndt1@nwscc.edu)  
 J. Hackworth (5335) [joehackworth@nwscc.edu](mailto:joehackworth@nwscc.edu)

The increased use of electricity and society's dependence upon it has created a vast number of occupational opportunities for the trained electrical technician. Great strides have been made in every line of electrical development. The increased use of automation in industrial plants has increased the need for trained industrial electricians. The Electrical Technology Program is designed to fulfill the needs of a demanding industry. The course includes electrical fundamentals, equipment and machine installation, maintenance and troubleshooting of motors, transformers and industrial controls, wiring methods, modern control methods, hydraulic, pneumatic, and electro-mechanical systems. The future brings increased demand for electricians who possess the skills of the trade and a working knowledge of the principles of electricity. The length of the curriculum is 4 semesters full-time day, or full-time night.

**All entering students are required to complete ORT 100 unless transferred from another university or college.**

	<b>Semester</b>		
	<b>Theory</b>	<b>Lab</b>	<b>Hours</b>
COM 100 Introductory Technical English I	3	0	3
MAH 101 Introductory Mathematics I	2	6	3
ELT 111 Concepts of Direct Current	3	6	5
ELT 112 Concepts of Alter. Current	3	6	5
ELT 114 Residential Wiring Methods	2	3	3
ELT 115 Residential Wiring Mehtods II	2	3	3
ELT 117 AC/DC Machines	1	6	3
ELT 118 Commercial/Industrial Wiring I	1	6	3
ELT 119 Concepts of Solid State Electronics	3	6	5
ELT 121 Concepts of Digital Electronics	3	6	5
ELT 122 Advanced AC/DC Machines	2	3	3
ELT 132 Commercial/Industrial Wiring II	2	3	3
ELT 209 Motor Control I	1	6	3
ELT 212 Motor Control II	2	3	3
ELT 231 Programmable Controls I	2	3	3
ELT 232 Programmable Controls II	2	3	3
ELT 242 Journeyman Master Prep Exam	3	0	3
ELT 206 OSHA Safety Standards	3	0	3

**Total Semester Credit Hours ..... 62**

\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

**ELECTRICAL ELECTIVES**

ELT 104 Distribution Systems
ELT 200 Special Projects
ELT 206 OSHA Safety Standards
ELT 214 Hydraulics
ELT 215 Pneumatics
ELT 219 Fluid Power Systems
ELT 223 Cable Splicing and Installation
ELT 233 Applied Programmable Controls
ELT 244 Conduit Bending and Installation

Contact hours are not shown for electives since they may vary and combine both theory and lab.

**Electronics Technology** 470105 ILT  
**Associate in Applied Science Degree**

Available: Shoals Campus  
 Advisors: S. McGouyrk (5246) [stevem@nwsc.edu](mailto:stevem@nwsc.edu)  
 R. Reaves (5201) [rgr@nwsc.edu](mailto:rgr@nwsc.edu)  
 S. Harrison (5250) [sam@nwsc.edu](mailto:sam@nwsc.edu)

This degree is designed to provide the student with proficiency in electronic devices and equipment. Theory and laboratory courses in basic electronics, electronic circuits, communications, computers, and industrial electronics, as well as general education courses in math, English, physics, psychology, and humanities provide the knowledge and skills necessary to gain employment in electronics with opportunities to advance to positions of greater responsibility.

The degree prepares the student to observe necessary safety precautions; assemble, install, operate, troubleshoot, repair, maintain, calibrate, and modify electronic circuitry, equipment and systems; construct breadboards, and mock-ups; set up test apparatus, conduct tests, and analyze test results; prepare reports, sketches, graphs, and schematic drawings; and perform necessary mathematical calculations.

**All entering students are required to complete ORI 101 unless transferred from another university or college.**

General Education Requirements	Semester		
	Theory	Lab	Hours
***ENG 101 English Composition I	3	0	3
*ENG 130 Technical Report Writing	3	0	3
MTH 103 Introduction to Technical Mathematics	3	0	3
MTH 118 Technical Mathematics	3	0	3
PHY 115 Technical Physics	3	2	4
PSY 200 General Psychology	3	0	3
Humanities or Fine Arts Elective	3	0	3
<b>Total General Education Requirements</b>	<b>22</b>		

Major Requirements	Theory	Lab	Hours
ILT 106 Concepts of Direct Current	3	6	5
ILT 107 Concepts of Alternating Current	3	6	5
ILT 112 Concepts of Digital Circuits	3	6	5
ILT 113 Concepts of Electronic Circuits	3	6	5
ILT 125 Digital Communications	3	0	3
ILT 126 Digital Communications Lab	0	6	2
ILT 133 Electronic Drafting	0	3	1
ILT 164 Circuit Fabrication I	0	3	1
ILT 194 Programmable Logic Controllers I	2	3	3
ILT 201 Industrial Electronics	3	0	3
ILT 202 Industrial Electronics Lab	0	6	2
ILT 205 Microprocessors	3	0	3
ILT 206 Microprocessors Lab	0	6	2
ILT 234 Microprocessor Systems Troubleshooting	1	3	2
ILT 267 RF Communications	3	0	3
ILT 268 RF Communications Lab	0	6	2
Electronics Electives	X	X	6
<b>Total Major Requirements</b>	<b>53</b>		
<b>Total Semester Credit Hours</b>	<b>75</b>		

**Electronics Electives**

- ILT 129 Personal Computer Hardware
- ILT 130 Personal Computer Software Installation and Maint.
- ILT 131 Personal Computer Problem Determination I L T
- 132 Programming Survey for Technicians
- ILT 135 Local Area Networks
- ILT 169 Hydraulics/Pneumatics
- ILT 175 Computer Fundamentals for Technology Students
- ILT 180 Special Topics
- ILT 196 Programmable Logic Controllers II
- ILT 203 Biomedical Electronics I
- ILT 204 Biomedical Electronics II
- ILT 216 Industrial Robotics
- ILT 228 FCC General Radiotelephone License Prep I L T
- 232 PC Repair Clinical
- ILT 239 Certification Preparation
- ILT 271 Independent Study
- ILT 272 Independent Study
- ILT 273 Independent Study
- ILT 274 Independent Study
- ILT 280 Special Topics
- ILT 280A A+ Certification Preparation
- ILT 280B Network+ Certification Preparation
- ILT 280E EEI Test Preparation
- ILT 294 Biomedical Electronics Clinical I
- ILT 295 Biomedical Electronics Clinical II

NOTE: Two Electronics Electives totaling 6 sem. hours are required.

Student should consult advisor concerning possible electives from other program areas.

\*Students who have completed ENG 130 prior to Spring 2000, and students substituting ENG 102 must take Speech.

\*\*Computer competency skills are embedded within one or more courses required in this curriculum.

\*\*\*Keyboarding skills are essential for the successful completion of English 101.

**Biomedical Equipment Technology 470105 BET**  
**Advanced Option for AAS Degree or**  
**Short-Term Certificate**

Available: Shoals Campus  
 Advisor: R. Reaves (5201) [rgr@nwscce.edu](mailto:rgr@nwscce.edu)

This advanced option, in addition to the Electronics Technology Associate in Applied Science Degree, will prepare the student for employment in both the medical and industrial settings as biomedical equipment technicians. The increasing complexity of biomedical equipment demands the availability of highly skilled technicians, knowledgeable in the theory of application, underlying physiological principles, and safe application of biomedical equipment. To enter this certificate program, the student must have program advisor approval and have satisfactorily completed the requirements for the Electronics Technology AAS Degree at the College.

	Semester		
	Theory	Lab	Hours
BIO 103 Principles of Biology I	3	2	4
ILT 169 Hydraulics/Pneumatics	3	0	3
ILT 203 Biomedical Electronics I	3	0	3
ILT 204 Biomedical Electronics II	3	0	3
ILT 226 BMET Certification Preparation or Certification Preparation Elect.	3	0	3
ILT 294 Biomedical Electronics Clinical I	0	10	3
ILT 295 Biomedical Electronics Clinical II	0	10	3
<b>Total Semester Credit Hours</b>			<b>22</b>

**Emergency Medical Services 510904 EMP**  
**Associate in Applied Science Degree**

Available: Shoals Campus  
 Advisors: M. Simpson (5435) [msimpson@nwscce.edu](mailto:msimpson@nwscce.edu)  
 T. Oyen (5437) [oyen@nwscce.edu](mailto:oyen@nwscce.edu)

**NOTICE: The EMS admission criteria, the progression guidelines, and the curriculum are currently being revised. Please see an EMS advisor.**

The Emergency Medical Services degree is designed to prepare qualified applicants in basic and advanced emergency care in clinical and in field environments. Graduates qualify for employment with fire and rescue departments, ambulances services, industries and emergency departments within medical facilities. EMS education spans three levels of competency: First Responder, EMT-Basic, and Paramedic. Each level of competency meets or exceeds standards set forth by the Department of Transportation (DOT) National Standard Training Curriculum, and by the State of Alabama Department of Public Health. Students may enroll in the EMS program with the intention of completing only the courses required for each level of EMS education: EMT-Basic or Paramedic. Upon successful completion of either level, the student will be eligible to apply for registration with the National Registry of EMTs. Graduation from the program, however, does not guarantee Alabama Department of Public Health Office of EMS and Trauma or National Registry of EMTs approval to take the NREMT licensing examination.

Emergency Medical Services supports the Philosophy and Purpose of the College and serves its community by preparing entry level Emergency Medical Services personnel in varied health settings. The EMS Program Director and the EMS faculty have the responsibility for administering and evaluating the Emergency Medical Services Program according to policies and guidelines established by the College, the Alabama Department of Public Health, and the Commission on Accreditation of Allied Health Education Programs in association with the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

To receive an Associate of Applied Science Degree in Emergency Medical Services, the student must complete the EMT certificate levels and all academic core curriculum course requirements. All EMS students must take all parts of the ASSET or COMPASS placement test. Students completing the test should see the Program Director for placement into the English and math classes. Because EMS programs contain a clinical component, students are required to meet additional health requirements as well as the "Essential Functions of the EMT." Questions regarding the EMS program should be directed to the Program Director at (256) 331-5435.

The Purpose of the Emergency Medical Services Program is to:

1. Prepare entry level Emergency Services Personnel who utilize appropriate knowledge and skills to deliver safe, competent care to clients of all ages.
2. Foster learning as a life-long process to remain competent.

3. Prepare entry level Emergency Services Personnel who contribute to society as citizens and members within the discipline of EMS.
4. Provide education at the certificate and the Associate Degree level, which forms a basis for entry into baccalaureate EMS education.

### APPROVALS AND ACCREDITATION

The Emergency Medical Services is state approved by the Alabama Department of Public Health Office of EMS and Trauma and nationally accredited by the Commission on Accreditation of Allied Health Education Programs in association with the Committee on Accreditation of Education Programs for the Emergency Medical Services Professions (CoAEMSP).

#### Alabama Department of Public Health, EMS Division

201 Monroe Street, Montgomery, Alabama 36104  
Telephone: 1-800-962-9234 Fax: (334)-206-5260  
www.adph.org/EMS

#### Commission on Accreditation of Allied Health Education Program

35 East Wacker Drive, Suite 1970, Chicago, IL 60601  
Telephone: (312)-553-9355  
www.coaemsp.org

### ADMISSION PROCEDURES AND REQUIREMENTS

Admission to EMS is competitive, and the number of students is limited by the number of faculty and clinical facilities available. **Meeting minimal requirements does not guarantee acceptance.** Preference will be given to graduates of Northwest-Shoals Community College. Applicants will be notified in writing by the EMS office of acceptance into the EMS program. The College reserves the right to adjust requirements or use additional criteria to determine admission.

#### General Admission Requirements

To be eligible to enroll in the EMS Program, a student must complete the following:

1. Meet all admission requirements of the College and Alabama Department of Public Health;
2. Be a high school graduate or hold a GED;
3. Attain the prescribed scores on the ASSET or COMPASS placement test;
4. Be at least 18 years old (younger students who meet certain conditions may be able to enroll with the permission of the Program Director);
5. Possess a valid driver's license;
6. Hold current BCLS - CPR course completion at the provider level. American Red Cross course equivalent is Professional Rescuer. "Community CPR is not acceptable." Students will be allowed to enter the EMT-Basic program without CPR completion provided they enroll in a CPR class prior to beginning clinical rotations. The CPR course is provided by the EMS Department;
7. Present evidence of health insurance or sign a waiver;

8. EMS 107 Emergency Vehicle Operator Course is required to qualify for licensure as an ambulance driver in the State of Alabama. Students must successfully complete this course and meet additional requirements by the Alabama Department of Public Health Office of EMS and Trauma. The EVOC course is provided by the EMS Department;
9. Enrollment into the Paramedic Program requires documentation of completion of an approved EMT-Basic course. Students without college credit for the EMT-Basic Program must meet with the Program Director to successfully complete an assessment test prior to acceptance into the Paramedic Program.

Upon admission, an individual who discloses a disability can request reasonable accommodations. Individuals will be asked to provide documentation of the disability in order to assist with the provision of appropriate reasonable accommodations. The respective College will provide reasonable accommodations but is not required to substantially alter the requirements or nature of the program or provide accommodations that inflict an undue burden on the respective College. In order to be admitted one must be able to perform all of the essential functions with or without reasonable accommodations. If an individual's health changes during the program of learning, so that the essential functions cannot be met with or without reasonable accommodations, the student will be withdrawn from the EMS program. The EMS faculty reserves the right at any time to require an additional medical examination at the student's expense in order to assist with the evaluation of the student's ability to perform the essential functions. Requests for reasonable accommodations should be directed to the ADA Coordinator, Linda Waide, at 331-5321 or lwaide@nwsc.edu

Upon successful completion of either level, the student will be eligible to apply for registration with the National Registry of EMTs. Completion of the courses, however, does not guarantee Alabama Department Public Health Office of EMS and Trauma or National Registry of EMTs approval to take the NREMT licensing examination.

Paramedic Program students also can complete additional requirements for a Certificate or AAS Degree.

**CERTIFICATE OPTION:** In addition to the general admission requirements, students admitted to the Paramedic certificate program must:

1. Complete ENG 101 and MTH 100 or MTH 116 with a grade of "C" or higher prior to completion of the Paramedic Program;
2. Complete EMP 189 or BIO 201 & BIO 202 prior to starting the 3rd semester of the Paramedic Program.

**AAS DEGREE OPTION:** In addition to the general admission requirements, students admitted to the degree tract must:

1. Complete ENG 101 and MTH 100 or MTH 116 with a grade of "C" or higher prior to completion of the Paramedic Program;
2. Complete BIO 201 & BIO 202 prior to completion of the Paramedic Program;
3. Complete additional General Education Requirements: ENG 102, PSY 200, Humanities Elective.

**PROGRAM CONTINUATION**

In order to continue in the Basic or Paramedic courses, the student must complete the following:

1. Complete and submit physical examination form and required data PRIOR to attendance at clinical. The student must present written documentation on College forms of a physical examination within the last 12 months by a licensed practicing physician. In addition, the student must:
  - a. Be free from any communicable disease;
  - b. Possess eyesight in a minimum of one eye correctable to 20/20 vision, approximately one hundred and eighty (180) degrees peripheral vision capability and have adequate color perception;
  - c. Complete a health history, verifying such information as immunization and disease history and special medical needs;
  - d. Receive (at student expense) necessary immunizations/ tests including hepatitis vaccine;
  - e. Demonstrate the ability to send and receive messages.
2. Meet "Essential Functions of the EMT" with or without accommodations by assigned date. A copy of these functions is available upon request.
3. Purchase professional liability insurance through the College.
4. Complete drug testing and/or background checks as directed by the Health Studies Division or clinical agency.
5. The EMS Program grading scale is:
  - 100 – 90 = A
  - 89 – 80 = B
  - 79 – 75 = C
  - 74 – 60 = D
  - 59 and below = F
6. Receive a grade of "C" in each EMS or EMP course in order to continue.
7. Earn a satisfactory clinical evaluation on the clinical component of any course with a clinical component.
4. Earn a satisfactory clinical evaluation in all EMS courses with a clinical component.
5. Maintain ability to meet essential functions for EMS with or without reasonable accommodations.
6. Maintain current CPR at the health care provider level.
7. Maintain an adequate level of health including but not limited to annual PPD, and freedom from chemical dependency and/or mental disorder.
8. Successfully complete the EMS education program:
  - a. Within one year of initial entry for the EMT-Basic (otherwise all EMT-Basic courses must be repeated).
  - b. Within two years of initial entry for the Paramedic program (otherwise all Paramedic courses must be repeated).

A student that has an unsuccessful attempt in an EMS course (W, D, or F) cannot progress until the course is completed successfully. Course repetition will be based on instructor availability and program resources. Withdrawal and/or a D or F in one or more EMS courses in a term is considered one unsuccessful attempt.

**REINSTATEMENT (READMISSION) POLICY**

1. Students whose progression through EMS is interrupted and who desire to be reinstated in the program must schedule an appointment with an EMS faculty advisor to discuss reinstatement. In order to be eligible for reinstatement, the following criteria must be met:
  - a. Apply for readmission to the college if not currently enrolled.
  - b. Submit application requesting reinstatement to the EMS program.
  - c. Request reinstatement within one year from the term of withdrawal or failure.
  - d. Demonstrate competency in previous EMS courses. This may be evaluated by testing and/or skills validation.
  - e. Adhere to EMS curriculum and/or program policies and procedures effective at the point of reinstatement.
2. Reinstatement to the EMS program is not guaranteed.
3. Reinstatement will be denied due to, but not limited to any of the following circumstances;
  - a. Grade point average is less than 2.0 from courses completed at the current institution.
  - b. Refusal by clinical agencies to accept the student for clinical experiences.
  - c. Twelve months have elapsed since the student was enrolled in an EMS course.
  - d. Student has been dismissed from the program. Students dismissed from the program for disciplinary reasons and/or unsafe/unsatisfactory client care.
4. Students who are unsuccessful on the third (3rd) admission will be dismissed from the EMS program.

**TRANSFER STUDENTS**

Students who wish to transfer into any EMS program from another college must meet the same requirements as resident students. Additional requirements may need to be met if courses were taken out-of-state. Transfer students should contact the Program Director to discuss these matters.

**PROGRAM PROGRESSION POLICY**

In order to continue in EMS, the student must:

1. Complete all required general education courses according to The Alabama College System EMS Education curriculum.
2. Maintain a grade of "C" or better in all required EMS courses and maintain a 2.0 GPA at NW-SCC.
3. Be accepted by clinical agencies for clinical experiences.

5. Students who have three unsuccessful attempts in any EMS program course may apply for admission as a new student provided:
  - a. the student meets current entry requirements
  - b. at least two years have elapsed since the student's dismissal from the last program and
  - c. the student was not dismissed from the previous program for disciplinary reasons or for unsafe/unsatisfactory client care in the clinical area.

**STANDARDS OF CONDUCT**

The EMS student shall comply with the standards that determine acceptable behavior of a healthcare professional in accordance with the Alabama Department of Public Health Office of EMS and Trauma, National Registry of EMTs, and EMS Program. **FAILURE TO COMPLY WITH ANY OF THESE STANDARDS WHILE IN THE EMS PROGRAM CONSTITUTES GROUNDS FOR DISMISSAL FROM THE PROGRAM.**

The following examples of behavior may be grounds for dismissal from the EMS program or for licensure application review by the Alabama Department of Public Health Office of EMS and Trauma. Any individual who:

1. Is guilty of fraud or deceit in procuring or attempting to procure a license.
2. Is guilty of a crime involving moral turpitude or of gross immorality that would tend to bring reproach upon the EMS profession.
3. Is unfit or incompetent due to the use of alcohol, or is addicted to the use of habit-forming drugs to such an extent as to render the licensee unsafe or unreliable.
4. Is mentally incompetent.
5. Is guilty of unprofessional conduct of a character likely to deceive, defraud, or injure the public in matters pertaining to health.
6. Has willfully or repeatedly violated any of the provisions of this act.
7. Has been convicted of a felony.
8. Has been convicted of any violation of a Federal or State law relating to controlled substances.
9. Has any other reasons authorized by law.
10. Has been placed on a State and/or Federal abuse registry.
11. Has been court martialled or disciplined or administratively discharged by the military.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

<b>General Education Requirements</b>	<b>Semester Hours</b>
BIO 201 Human Anatomy and Physiology I .....	4
BIO 202 Human Anatomy and Physiology II .....	4
ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 100 or MTH 116 .....	3
PSY 200 General Psychology .....	3
Humanities Elective .....	3
<b>Total General Education Requirements .....</b>	<b>23</b>

<b>Major Requirements</b>	
EMS 116 EMS Basic Theory and Lab .....	9
EMS 117 EMS Basic Clinical Competencies I .....	1
EMP 189 Applied Anatomy & Physiology for the Paramedic .....	4
EMP 191 Paramedic Preparatory .....	2
EMP 192 Paramedic Operations .....	3
EMP 193 Patient Assessment Management .....	3
EMP 194 Paramedic General Pharmacology .....	2
EMP 195 Advanced Trauma Management .....	6
EMP 198 Medical Patient Management I .....	3
EMP 199 Cardiovascular Electrophysiology .....	3
EMP 200 Medical Patient Management IIA .....	6
EMP 203 Cardiovascular Patient Management .....	3
EMP 204 Transition to Paramedic Practice .....	3
EMP 205 Paramedic Terminal Competencies .....	2
EMP 206 Paramedic Field Preceptorship .....	6
EMP 207 Paramedic Team Leader Preceptorship .....	1
<b>Total Major Requirements .....</b>	<b>48</b>

**Total Semester Credit Hours .....** 71

\*\*Computer competency skills are embedded within one or more courses required in this curriculum.

**EMT-Paramedic Career Certificate**

510904 EMS

All entering students are required to complete ORI 100 unless transferred from another university or college.

	Semester		
	Theory	Lab	Hours
ENG 101 English Composition I	3	0	3
MTH 100 or MTH 116	3	0	3
EMP 189 Applied Anatomy and Physiology for the Paramedic	4	0	4
EMP 191 Paramedic Preparatory	2	0	2
EMP 192 Paramedic Operations	2	2E	3
EMP 193 Patient Assessment and Management	2	2E	3
EMP 194 Paramedic General Pharmacology	1	2E	2
EMP 195 Advanced Trauma Management	2	9P3	6
EMP 198 Medical Patient Management I	2	2E	3
EMP 199 Cardiovascular Electrophysiology	2	2E	3
EMP 200 Medical Patient Management II	2	9P3	6
EMP 203 Cardiovascular Patient Management	2	2E	3
EMP 204 Transition to Paramedic Practice	2	2E	3
EMP 205 Paramedic Terminal Competencies	1	2E	2
EMP 206 Paramedic Field Preceptorship	1	15P3	6
EMP 207 Paramedic Team Leader Preceptorship	0	3P3	1
<b>Total Semester Credit Hours</b>	<b>53</b>		

**EMT-Basic Short-Term Certificate**

510904 EMT

	Semester		
	Theory	Lab	Hours
EMS 116 EMS Basic Theory and Lab	6	3 (1E)	9
EMS 117 EMS Basic Clinical Competencies I	0	3 (P3)	1
<b>Total Semester Credit Hours</b>	<b>10</b>		

EMS 100 and EMS 107 are not required for graduation but, are required by the State of Alabama to obtain licensures as an EMT Basic Driver.

EMS 106 Medical Terminology not required but highly recommended.

**Energy Management Technology Short-Term Certificate**

150503 ECT

Available: Shoals Campus  
 Advisor: J. Hackworth (5335) [joehackworth@nwscc.edu](mailto:joehackworth@nwscc.edu)

The Energy Management certificate is offered to students in Heating and Air Conditioning, Industrial Electricity, and Industrial Electronics and in-field personnel who have a high school diploma or GED. This certificate would enable a student to enhance his/her career potential in the area of energy control and use technology. Students should contact advisor for further information.

Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.

	Semester		
	Theory	Lab	Hours
ECT 241 Introduction to Energy Management	1	6	3
ECT 242 Audit-Accounting Conservation	2	6	3
ECT 243 Basic Energy Management Systems (ELT 231 Programmable Controls I)	2	6	3
ECT 244 Energy Management Systems (ELT 232 Programmable Controls II)	2	6	3
ECT 252 Advanced Energy Management (ELT 222 Advanced Electronics for the Electrician)	2	6	3
ECT 253 Direct Digital Control (ELT 221 Electronics for Electricians I)	2	6	3
ECT 254 Test and Balance Instrumentation (ACR 205 System Sizing and Air Distribution)	2	6	3
Electives			3
<b>Total Semester Credit Hours</b>	<b>24</b>		

- Electives:
- FSC 211 Building Construction and Related Codes
  - FSC 270 Fire Protection Systems
  - ACR 115 Heating Systems
  - ACR 123 HVACR Electrical Components
  - ACR 138 Customer Relation in HVAC
  - ACR 143 HVAC Industry Codes
  - ACR 182 Parallel Refrigeration
  - ACR 203 Commercial A/C
  - ACR 204 Commercial Air Conditioning
  - ELT 121 Basic AC/DC Machines
  - ELT 122 Advanced AC and DC Machines
  - ELT 131 Commercial/Industrial Wiring I
  - ELT 211 Motor Control I
  - ELT 212 Motor Control II
  - ELT 233 Applied Programmable Controls

**Environmental Health and Safety Technician**      150507    EVT  
**Associate in Applied Science Degree**

Available: Shoals Campus  
 Advisors: S. McGouyrk (5246) [stevem@nwsc.edu](mailto:stevem@nwsc.edu)  
 C. Eubanks (5293) [eubanks@nwsc.edu](mailto:eubanks@nwsc.edu)

This degree is designed to prepare students for employment as Environmental, Health and Safety Technicians. Students will be trained in the use and application of environmental technology, as well as the management and support of industrial safety processes. Also see the A.S. degree program.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

<b>General Education Requirements</b>	<b>Semester Hours</b>
BIO 103 Principles of Biology I .....	4
BIO 201 Human Anatomy and Physiology I .....	4
CHM 104 Introduction to Inorganic Chemistry .....	4
CHM 105 Introduction to Organic Chemistry .....	4
CIS 146 Microcomputer Applications .....	3
**ENG 101 English Composition I .....	3
*ENG 130 Technical Report Writing .....	3
MTH 103 Introduction to Technical Mathematics .....	3
Fine Arts Elective .....	3
Social Science Elective .....	3
*Speech Elective .....	3
<b>Total General Education Requirements .....</b>	<b>37</b>

**Major Requirements**

EVT 101 Introduction to Environmental Science and Technology or PHS 120 Environmental Science ..	4
EVT 105 Introduction to Occupational Safety and Health ...	3
EVT 107 Environmental Health and Safety Assessments and Reporting .....	3
EVT 110 Introduction to Environmental Laws and Regulations .....	3
EVT 201 Environmental Internship I .....	3
EVT 210 Environmental Sampling and Analysis .....	4
EVT 220 Toxicology .....	3
EVT 250 Hazardous Waste Operations and Emergency Response .....	4
EVT 260 Introduction to Industrial Hygiene .....	3
EVT 280 Hazardous Materials Management .....	3
<b>Total Major Requirements .....</b>	<b>33</b>

**Total Semester Credit Hours .....**      **70**

\*Students planning to transfer should take ENG 102 and SPH 107.

\*\*Keyboarding skills are essential for the successful completion of English 101.

**Environmental, Health & Safety Technician**      150507    EHS  
**Short-Term Certificate**

Available: Shoals Campus  
 Advisor: S. McGouyrk (5246) [stevem@nwsc.edu](mailto:stevem@nwsc.edu)  
 C. Eubanks (5293) [eubanks@nwsc.edu](mailto:eubanks@nwsc.edu)

This short-term certificate is designed to prepare students for employment as Environmental, Health and Safety Technicians. Also, see the A.S. & A.A.S. Degree Programs.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	<b>Semester</b>		
	<b>Theory</b>	<b>Lab</b>	<b>Hours</b>
CHM 104 Introduction to Inorganic Chemistry	3	3	4
EVT 101 Introduction to Environmental Science and Technology or PHS 120 Environmental Science	3	2	4
EVT 105 Introduction to Occupational Safety and Health	3	0	3
EVT 107 Environmental Health and Safety Assessments and Reporting	3	0	3
EVT 110 Introduction to Environmental Laws and Regulations	3	0	3
EVT 250 Hazardous Waste Operations and Emergency Response	4	0	4
EVT 260 Introduction to Industrial Hygiene	3	0	3
<b>Total Semester Credit Hours .....</b>			<b>24</b>

**Fire Science/Fire Services Management Short-Term Certificate** 430202 FSC

Available: Shoals Campus  
 Advisors: S. McGouyrk (5246) [stevem@nwscce.edu](mailto:stevem@nwscce.edu)

This short-term certificate is designed to prepare students for employment in fire science or related business fields. Also, see the A.S. Degree Program.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
FSC 101 Introduction to Fire Science	3	0	3
FSC 200 Fire Combat Tactics and Strategy	3	0	3
FSC 210 Building Construction for the Fire Service	3	0	3
FSC 240 Fire Cause Determination	3	0	3
FSC 292 Elements of Supervision/ Fire Service Supervision	3	0	3
<b>Total Semester Credit Hours .....</b>			<b>15</b>

**Industrial Mechanics Short-Term Certificate** 470303 INS

Available: Shoals Campus  
 Advisors: R. Garner (5254) [wgarner@nwscce.edu](mailto:wgarner@nwscce.edu)  
 T. Maupin (5247) [tmaupin@nwscce.edu](mailto:tmaupin@nwscce.edu)

The Industrial Mechanics program is designated to give students entry-level skills to be employed in the field of plant maintenance. In today's industry plant maintenance requires multi-skilled workers. These skills include: Programming PLC, working on manual motor controls, installation and maintenance of hydraulics system, and working on and maintaining various types of pumps as well as all mechanical drives. The classes are both theory and lab-based in order to produce a well-rounded mechanic.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
INT 106 Elements of Industrial Mechanics or MSP 136 Machine Repair	1	6	3
INT 117 Principles of Industrial Mechanics or MSP 135 Millwright	2	6	4
INT 134 Principles of Industrial Maintenance Welding and Metal Cutting Techniques or WDT 157 Consumable Welding Processes	3	0	3
INT 102 Industrial Maintenance Cutting/Welding or WDT 158 Consumable Welding Processes	0	3	3
MTH 103 Intro to Technical Math	3	0	3
INT 118 Fundamentals of Industrial Hydraulics and Pneumatics	1	2	3
INT 121 Industrial Hydraulics Troubleshooting	1	2	3
INT 127 Principles of Industrial Pumps and Piping Systems	2	1	3
INT 161 Blueprint Reading for Industrial Technicians	3	0	3
<b>Total Semester Credit Hours .....</b>			<b>28</b>

## **Industrial Systems Technology** **Associate in Applied Science Degree**

### **Air Conditioning and Refrigeration Option** **470303 IAR**

Available: Shoals Campus  
 Advisors: R. Garner (5254) [wgarner@nwscce.edu](mailto:wgarner@nwscce.edu)  
 S. Harrison (5250) [sam@nwscce.edu](mailto:sam@nwscce.edu)

This degree is designed to offer students entry level skills in the field of Industrial Systems Technology. A student who graduates in the program should be able to install and maintain all types of HVAC units.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

<b>General Education Requirements</b>	<b>Semester Hours</b>
ENG 101 English Composition I .....	3
ENG 130 Technical Report Writing or SPH107 Fundamentals of Public Speaking .....	3
MTH 103 Introduction to Technical Mathematics .....	3
MTH 118 Technical Mathematics .....	3
PHY 115 Technical Physics .....	4
HIS 201 United States History I .....	3
ART 100 Art Appreciation or MUS 101 Music Appreciation .....	3
<b>Total General Education Requirements .....</b>	<b>22</b>

#### **Major Requirements**

INT 120 Concepts of Direct Current .....	5
INT 122 Concepts of Alternating Current .....	5
INT 130 Concepts of Digital Electronics .....	5
ILT 175 Computer Fundamentals .....	3
INT 158 Industrial Wiring I .....	3
INT 206 Industrial Motors I .....	3
INT 184 Introduction to Programmable Logic Controllers ..	3
ACR 111 Principles of Refrigeration .....	3
ACR 119 Fundamentals of Gas Heating Systems .....	3
ACR 126 Commercial Heating Systems .....	3
ACR 127 HVACR Electric Motors .....	3
ACR 148 Heat Pump Systems I .....	3
ACR 149 Heat Pump Systems II .....	3
ACR 203 Commercial Refrigeration .....	3
ACR 209 Commercial Air Conditioning Systems .....	3
ACR 210 Troubleshooting Air Conditioning Systems .....	3
<b>Total Major Requirements .....</b>	<b>54</b>
<b>Total Semester Credit Hours .....</b>	<b>76</b>

## **Industrial Systems Technology** **Associate in Applied Science Degree**

### **Electrical Option** **470303 IMO**

Available: Shoals Campus  
 Advisors: R. Garner (5254) [wgarner@nwscce.edu](mailto:wgarner@nwscce.edu)  
 S. Harrison (5250) [sam@nwscce.edu](mailto:sam@nwscce.edu)

This degree is designed to offer students entry level skills in the field of Industrial Systems Technology with a total focus on electrical. A student who graduates in the program should be able to install and maintain all types of plant electrical systems.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

<b>General Education Requirements</b>	<b>Semester Hours</b>
ENG 101 English Composition I .....	3
ENG 130 Technical Report Writing or SPH107 Fundamentals of Public Speaking .....	3
MTH 103 Introduction to Technical Mathematics .....	3
MTH 118 Technical Mathematics .....	3
PHY 115 Technical Physics .....	4
HIS 201 United States History I .....	3
ART 100 Art Appreciation or MUS 101 Music Appreciation .....	3
<b>Total General Education Requirements .....</b>	<b>22</b>

#### **Major Requirements**

INT 120 Concepts of Direct Current .....	5
INT 122 Concepts of Alternating Current .....	5
INT 123 Concepts of Solid State Electronics .....	5
INT 130 Concepts of Digital Electronics .....	5
ILT 175 Computer Fundamentals .....	3
INT 158 Industrial Wiring I .....	3
INT 161 Blueprint Reading for Industrial Technicians .....	3
INT 118 Intro to Hydraulics and Pneumatics .....	3
INT 184 Introduction to Programmable Logic Controllers ..	3
INT 206 Industrial Motors I .....	3
INT 207 Industrial Automatic Controls .....	3
INT 211 Industrial Motors II .....	3
INT 212 Industrial Motor Control I .....	3
INT 213 Industrial Motor Control II .....	3
INT 284 Advanced Programmable Logic Controllers .....	3
<b>Total Major Requirements .....</b>	<b>53</b>
<b>Total Semester Credit Hours .....</b>	<b>75</b>

**Industrial Systems Technology**  
**Associate in Applied Science Degree**

**Mechanical Option** **470303 IMO**

Available: Shoals Campus  
 Advisors: R. Garner (5254) [wgarner@nwsc.edu](mailto:wgarner@nwsc.edu)  
 S. Harrison (5250) [sam@nwsc.edu](mailto:sam@nwsc.edu)

This degree is designed to offer students entry level skills in the field of Industrial Systems Technology. A student who graduates in the program should be able to install and maintain all types of plant equipment.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

<b>General Education Requirements</b>	<b>Semester Hours</b>
ENG 101 English Composition I .....	3
ENG 130 Technical Report Writing or SPH107 Fundamentals of Public Speaking .....	3
MTH 103 Introduction to Technical Mathematics .....	3
MTH 118 Technical Mathematics .....	3
PHY 115 Technical Physics .....	4
HIS 201 United States History I .....	3
ART 100 Art Appreciation or MUS 101 Music Appreciation .....	3
<b>Total General Education Requirements .....</b>	<b>22</b>
<b>Major Requirements</b>	
INT 102 Industrial Maintenance Cutting/Welding .....	3
INT 106 Elements of Industrial Mechanics .....	3
INT 113 Industrial Motor Control I .....	3
INT 117 Principles of Industrial Mechanics .....	3
INT 118 Intro to Industrial Hydraulics and Pneumatics .....	3
INT 120 Concepts of Direct Current .....	5
INT 121 Industrial Hydraulics Troubleshooting .....	3
INT 122 Concepts of Alternating Current .....	5
INT 127 Principles of Industrial Pumps and Piping Systems .....	3
INT 130 Concepts of Digital Electronics .....	5
INT 134 Principles of Industrial Maintenance Welding and Metal Cutting Techniques .....	3
INT 158 Industrial Wiring I .....	3
INT 161 Blueprint Reading for Industrial Technicians .....	3
INT 184 Introduction to Programmable Logic Controllers ..	3
INT 206 Industrial Motors I .....	3
ILT 175 Computer Fundamentals .....	3
<b>Total Major Requirements .....</b>	<b>54</b>
<b>Total Semester Credit Hours .....</b>	<b>76</b>

**Industrial Systems Technology**  
**Career Certificate**

**Mechanical Certificate** **470303 IMC**

Available: Shoals Campus  
 Advisors: R. Garner (5254) [wgarner@nwsc.edu](mailto:wgarner@nwsc.edu)  
 S. Harrison (5250) [sam@nwsc.edu](mailto:sam@nwsc.edu)

This certificate is designed to offer students entry level skills in the field of Industrial Systems Technology. A student who graduates in the program should be able to install and maintain all types of plant equipment.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

<b>General Education Requirements</b>	<b>Semester Hours</b>
ENG 101 English Composition I .....	3
MTH 103 Introduction to Technical Mathematics .....	3
INT 106 Elements of Industrial Mechanics .....	3
INT 113 Industrial Motor Control I .....	3
INT 117 Principles of Industrial Mechanics .....	3
INT 118 Intro to Industrial Hydraulics and Pneumatics .....	3
INT 120 Concepts of Direct Current .....	5
INT 121 Industrial Hydraulics Troubleshooting .....	3
INT 122 Concepts of Alternating Current .....	5
INT 127 Principles of Industrial Pumps and Piping Systems .....	3
INT 130 Concepts of Digital Electronics .....	5
INT 134 Principles of Industrial Maintenance Welding and Metal Cutting Techniques .....	3
INT 158 Industrial Wiring I .....	3
INT 161 Blueprint Reading for Industrial Technicians .....	3
INT 184 Introduction to Programmable Logic Controllers ..	3
INT 206 Industrial Motors I .....	3
INT 266 .....	3
ILT 175 Computer Fundamentals .....	3
<b>Total Major Requirements .....</b>	<b>60</b>
<b>Total Semester Credit Hours .....</b>	<b>76</b>

**Machine Shop Technology** 309999 MWT  
**AOT Degree**

Available: Shoals Campus  
 Advisors: T. Maupin (5247) [tmaupin@nwscc.edu](mailto:tmaupin@nwscc.edu)  
 J. Hackworth (5335) [joehackworth@nwscc.edu](mailto:joehackworth@nwscc.edu)

Students desiring to receive the AOT Award must complete all major certificate courses, one minor certificate course of study, and the required credit hours of general education courses in Areas I, II, III, and IV. Upon completion of all the courses listed, students are eligible to receive the Associate in Occupational Technology Degree. Students desiring to take general education courses for transfer to another institution should consult an advisor for proper general education course selection.

**Core Degree Requirements for the Associate in Occupational Technology Degree**

Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.

	Semester Hours
Area I: Written Composition ..... 3 English Composition I and/or Technical Writing	3
Area II: Humanities and Fine Arts ..... 3	3
Area III: Natural Science and Mathematics ..... 9 A minimum of 3 hours in degree creditable mathematics is required. The additional 6 hours of degree creditable coursework may be taken from disciplines of math, biology, chemistry, physical science, physics, environmental technology and computer science.	9
Area IV: History, Social and Behavioral Sciences ..... 3 Courses may be taken from the disciplines of history, economics, geography, political science, psychology, and sociology.	3

**Minimum General Requirements ..... 18**

Major Requirements	Semester Hours
MSP 101 Basic Machining Technology ..... 5	5
MSP 102 Intermediate Machining Technology ..... 5	5
MSP 103 Advanced Machining Technology ..... 5	5
MSP 104 Basic Machining Calculations ..... 2	2
MSP 105 Lathes ..... 3	3
MSP 107 Milling Machines ..... 3	3
MSP 115 Advanced Milling Machines ..... 5	5
MSP 121 Basic Blueprint Reading for Machinists ..... 2	2
MSP 131 Introduction to Metrology ..... 2	2
MSP 142 Advanced Machining Calculations ..... 2	2
MSP 181 Special Topics ..... 2	2
MSP 221 Advanced Blueprint Reading ..... 2	2
MSP Electives ..... 7	7
<b>Total Major Requirements</b> .....	<b>45</b>

**Minor Requirements**

**Welding**

WDT 108 SMAW Fillet/OFC ..... 3	3
WDT 109 SMAW Fillet/PAC/CAC ..... 3	3
WDT 122 SMAW Fillet/OFC Lab ..... 3	3
WDT 123 SMAW Fillet/PAC/CAC Lab ..... 3	3
<b>Total Minor Requirements</b> .....	<b>12</b>

<b>General Requirements</b> .....	<b>18</b>
<b>Total Requirements for AOT Degree</b> .....	<b>75</b>

\*Computer competency skills are embedded within one or more courses required in this curriculum.

**Machine Shop/** 480503 MSP  
**Computer Numerical Control (CNC)**  
**Career Certificate**

Available: Shoals Campus  
 Advisors: T. Maupin (5247) [tmaupin@nwscc.edu](mailto:tmaupin@nwscc.edu)  
 D. Vandiver (5247) [dvandiver@nwscc.edu](mailto:dvandiver@nwscc.edu)  
 J. Hackworth (5335) [joehackworth@nwscc.edu](mailto:joehackworth@nwscc.edu)

This certificate is designed to prepare students to enter the machine tool industry. Students entering this plan should have good manual dexterity to operate equipment, spatial comprehension, and math skills to interpret part shape and size from blueprints and a good mechanical aptitude. No high school diploma or GED is required, but students must be at least 16 years of age to enroll. Students without GED's are encouraged to use the College facilities to obtain a diploma while in the program.

The five-semester day plan (nine semester extended plan) exposes the student to most machine shop equipment. The student will operate drills, lathes, milling machines, and grinders. During the fourth semester, the student has the opportunity to learn the basics of CNC (Computer Numerical Control) programming, setup, and operation. An extensive study of CAM (Computer Aided Machining) is available through an elective course.

Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.

	Semester		
	Theory	Lab	Hours
COM 100 Introductory Technical English I or ENG 101 English Composition I	3	0	3
MAH 101 Introductory Mathematics or MTH 100 College Mathematics	3	0	3
MSP 101 Basic Machining Technology	1	11	5
MSP 102 Intermediate Machining Tech.	1	11	5
MSP 103 Adv. Machining Technology	1	11	5
MSP 104 Basic Machining Calculations	1	2	2
MSP 105 Lathes	1	4	3
MSP 107 Milling Machines	1	6	3
MSP 111 Introduction to Computer Numerical Control	1	3	2
MSP 112 Basic CNC Turning	1	6	3
MSP 113 Basic CNC Milling	1	6	3
MSP 115 Advanced Milling Machines	2	9	5
MSP 121 Basic Blueprint Reading for Machinists	1	2	2
MSP 127 CAM	2	12	6
MSP 131 Introduction to Metrology	1	2	2
MSP 142 Adv. Machining Calculations	1	2	2
MSP 181 Special Topics	1	2	2
MSP 221 Advanced Blueprint Reading	1	2	2
MSP Elective	X	X	1

**Total Semester Credit Hours ..... 59**

\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

\*\*\* Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

## **Registered Nursing Associate in Applied Science Degree**

Available: Phil Campbell Campus

Advisors: A. Bales (6298) [abales@nwsc.edu](mailto:abales@nwsc.edu)  
 A. Butler (8033) [abutler@nwsc.edu](mailto:abutler@nwsc.edu)  
 C. Dabbs (6250) [carole.dabbs@nwsc.edu](mailto:carole.dabbs@nwsc.edu)  
 P. Ford (5306) [pford@nwsc.edu](mailto:pford@nwsc.edu)  
 S. Holcomb (6244) [susan.holcomb@nwsc.edu](mailto:susan.holcomb@nwsc.edu)  
 B. Humphres (6237) [bhumphres@nwsc.edu](mailto:bhumphres@nwsc.edu)  
 S. Logan (6252) [logans@nwsc.edu](mailto:logans@nwsc.edu)  
 S. Oliver (6293) [soliver@nwsc.edu](mailto:soliver@nwsc.edu)  
 M. Rogers (6220) [mrogers@nwsc.edu](mailto:mrogers@nwsc.edu)  
 S. Smith (6207) [shelia.smith@nwsc.edu](mailto:shelia.smith@nwsc.edu)  
 D. Sykes (6249) [d.sykes@nwsc.edu](mailto:d.sykes@nwsc.edu)  
 A. Tedford (6256) [atedford@nwsc.edu](mailto:atedford@nwsc.edu)  
 C. Tice (6221) [ctice@nwsc.edu](mailto:ctice@nwsc.edu)  
 C. Tidwell (5305) [cindy@nwsc.edu](mailto:cindy@nwsc.edu)

### **GENERAL INFORMATION**

The Division of Health Studies offers a five-semester Associate Degree Nursing (ADN) program. Upon satisfactory completion, the Associate of Applied Science Degree is awarded, and the graduate is eligible to apply to take the National Council Licensure Examination (NCLEX-RN) for licensure as a Registered Nurse. Graduation from the program however, does not guarantee Board of Nursing approval to take the NCLEX-RN licensing examination. See Standards of Conduct section.

The Associate Degree Nursing Program supports the Philosophy and Purpose of the College and serves its community by preparing associate degree nurses for a beginning level of practice in varied health settings. The Nursing Program Director and the nursing faculty have the responsibility for administering and evaluating the Associate Degree Nursing Program according to policies and guidelines established by the College and the Alabama Board of Nursing.

The Purpose of the Associate Degree Nursing Program is to:

1. Prepare entry level Registered Nurses who utilize the nursing process to deliver safe, competent care to clients of all ages who have common health problems.
2. Foster learning as a life-long process to remain competent.
3. Prepare entry level Registered Nurses who contribute to society as citizens and members within the discipline of nursing.
4. Provide education at the Associate Degree level, which forms a basis for entry into baccalaureate nursing education.

### **APPROVALS AND ACCREDITATION**

The Associate Degree Nursing Program is state approved by the Alabama Board of Nursing and nationally accredited by the National League for Nursing Accrediting Commission. Each agency's address is provided:

Alabama Board of Nursing  
 RSA Plaza, Ste. 250  
 770 Washington Ave.  
 Montgomery, Alabama 36104  
 phone: (334) 242-4060, Fax: (334) 242-4360  
 Website: <http://www.abn.state.al.us>

National League for Nursing Accrediting Commission  
 3343 Peachtree Road NE  
 Suite 500  
 Atlanta, Georgia 30326  
 phone: (404) 975-5000  
 Fax: (404) 975-5020, Website: <http://www.nlnac.org>

All agencies utilized for students' clinical experiences are accredited or licensed by their governing body.

### **ADMISSION PROCEDURES AND REQUIREMENTS**

A generic option and a mobility option are offered. The generic option is for students without previous nursing education. Students are admitted in the fall semester and complete five semesters of nursing.

The mobility option is for Licensed Practical Nurses who graduated from a state-approved school of practical nursing and hold a current, active, and unencumbered Alabama Practical Nursing license. This license must be maintained throughout the program. **Proof of licensure must be on file.**

Students are admitted according to the following priority:

1. First time generic students.
2. Mobility LPNs.
3. Second year readmissions.
4. First year readmissions.
5. Transfer applicants

**NOTICE: The Alabama College System Standardized Curriculum is continuing to be reviewed and analyzed. Modifications will be made as needed.**

**The admission criteria is currently under review and is subject to change.**

### **GENERIC OPTION**

**Minimum admission standards for the Associate Degree Nursing Program include:**

1. Unconditional admission to the College.
2. Good standing with the College.
3. Receipt of completed application for the Associate Degree Nursing Program by April 1<sup>st</sup> for fall admission annually.
4. Have a minimum of 2.50 cumulative grade point average based on the most recent 24 credit hours of college work.
5. Eligibility for:
  - a. English 101 and MTH 100 (Intermediate College Algebra) or higher level as determined by college policy, and
  - b. BIO 201 during the first term of nursing courses. NW-SCC is currently in a state-wide pilot program to give students the option to waive BIO 103 and take BIO 201 and BIO 202 without having BIO 103.
6. A score of 76 or higher on the COMPASS Reading Examination (or related ACT Reading Score of 17 or higher) current within three years of application deadline.
7. Meeting the essential functions required for nursing. (See Essential Functions)

Admission to the Associate Degree Nursing Program is competitive, and the number of students is limited by the number of faculty and clinical facilities available.

**Meeting minimal requirements does not guarantee acceptance.**

The Associate Degree Nursing Program is developed as a combined sequence of nursing and general education courses. The general education courses are offered on both the Shoals and Phil Campbell campuses. The general education courses can be taken before or during the program but taken no later than the semester specified in the curriculum plan. If a student has major responsibilities such as family or work; been away from school for several years; or do not have a strong academic record, taking the general education courses prior to entry is recommended. Successful completion of science and other courses prior to application may result in higher ranking score and improve the chance of being admitted. Prior credit for general education courses does not shorten the length of the nursing curriculum due to sequencing of the nursing courses.

**NOTICE: Your ability to comply with the ESSENTIAL FUNCTIONS listed may be evaluated by the nursing faculty at any time that your ability to do so is in question.**

#### **THE ALABAMA COLLEGE SYSTEM NURSING PROGRAM ESSENTIAL FUNCTIONS**

The Alabama College System endorses the Americans with Disabilities Act. In accordance with College policy, when requested, reasonable accommodations may be provided for individuals with disabilities.

Physical, cognitive, psychomotor, affective and social abilities are required in unique combinations to provide safe and effective nursing care. The applicant/student must be able to meet the essential functions with or without reasonable accommodations throughout the program of learning. Admission, progression and graduation are contingent upon one's ability to demonstrate the essential functions delineated for the nursing programs with or without reasonable accommodations. The nursing programs and/or its affiliated clinical agencies may identify additional essential functions. The nursing programs reserve the right to amend the essential functions as deemed necessary.

In order to be admitted and to progress in the nursing program one must possess a functional level of ability to perform the duties required of a nurse. Admission or progression may be denied if a student is unable to demonstrate the essential functions with or without reasonable accommodations.

The essential functions delineated are those deemed necessary by the Alabama College System nursing programs. No representation regarding industrial standards is implied. Similarly, any reasonable accommodations made will be determined and applied to the respective nursing program and may vary from reasonable accommodations made by healthcare employers.

The essential functions delineated below are necessary for nursing program admission, progression and graduation and for the provision of safe and effective nursing care. The essential functions include but are not limited to the ability to:

1. Sensory Perception
  - a) Visual
    - i) Observe and discern subtle changes in physical conditions and the environment
    - ii) Visualize different color spectrums and color changes
    - iii) Read fine print in varying levels of light
    - iv) Read for prolonged periods of time
    - v) Read cursive writing
    - vi) Read at varying distances
    - vii) Read data/information displayed on monitors/equipment
  - b) Auditory
    - i) Interpret monitoring devices
    - ii) Distinguish muffled sounds heard through a stethoscope
    - iii) Hear and discriminate high and low frequency sounds produced by the body and the environment
    - iv) Effectively hear to communicate with others
  - c) Tactile
    - i) Discern tremors, vibrations, pulses, textures, temperature, shapes, size, location and other physical characteristics
  - d) Olfactory
    - i) Detect body odors and odors in the environment
2. Communication/ Interpersonal Relationships
  - a) Verbally and in writing, engage in a two-way communication and interact effectively with others, from a variety of social, emotional, cultural and intellectual backgrounds
  - b) Work effectively in groups
  - c) Work effectively independently
  - d) Discern and interpret nonverbal communication
  - e) Express one's ideas and feelings clearly
  - f) Communicate with others accurately in a timely manner
  - g) Obtain communications from a computer
3. Cognitive/Critical Thinking
  - a) Effectively read, write and comprehend the English language
  - b) Consistently and dependably engage in the process of critical thinking in order to formulate and implement safe and ethical nursing decisions in a variety of health care settings
  - c) Demonstrate satisfactory performance on written examinations including mathematical computations without a calculator
  - d) Satisfactorily achieve the program objectives
4. Motor Function
  - a) Handle small delicate equipment/objects without extraneous movement, contamination or destruction
  - b) Move, position, turn, transfer, assist with lifting or lift and carry clients without injury to clients, self or others
  - c) Maintain balance from any position
  - d) Stand on both legs
  - e) Coordinate hand/eye movements
  - f) Push/pull heavy objects without injury to client, self or others
  - g) Stand, bend, walk and/or sit for 6-12 hours in a clinical setting performing physical activities requiring energy without jeopardizing the safety of the client, self or others

- h) Walk without a cane, walker or crutches
  - i) Function with hands free for nursing care and transporting items
  - j) Transport self and client without the use of electrical devices
  - k) Flex, abduct and rotate all joints freely
  - l) Respond rapidly to emergency situations
  - m) Maneuver in small areas
  - n) Perform daily care functions for the client
  - o) Coordinate fine and gross motor hand movements to provide safe effective nursing care
  - p) Calibrate/use equipment
  - q) Execute movement required to provide nursing care in all health care settings
  - r) Perform CPR and physical assessment
  - s) Operate a computer
5. Professional Behavior
- a) Convey caring, respect, sensitivity, tact, compassion, empathy, tolerance and a healthy attitude toward others
  - b) Demonstrate a mentally healthy attitude that is age appropriate in relationship to the client
  - c) Handle multiple tasks concurrently
  - d) Perform safe, effective nursing care for clients in a caring context
  - e) Understand and follow the policies and procedures of the College and clinical agencies
  - f) Understand the consequences of violating the student code of conduct
  - g) Understand that posing a direct threat to others is unacceptable and subjects one to discipline
  - h) Meet qualifications for licensure by examination as stipulated by the Alabama Board of Nursing
  - i) Not to pose a threat to self or others
  - j) Function effectively in situations of uncertainty and stress inherent in providing nursing care
  - k) Adapt to changing environments and situations
  - l) Remain free of chemical dependency
  - m) Report promptly to clinicals and remain for 6-12 hours on the clinical unit
  - n) Provide nursing care in an appropriate time frame
  - o) Accepts responsibility, accountability, and ownership of one's actions
  - p) Seek supervision/consultation in a timely manner
  - q) Examine and modify one's own behavior when it interferes with nursing care or learning

Upon admission, an individual who discloses a disability can request reasonable accommodations. Individuals will be asked to provide documentation of the disability in order to assist with the provision of appropriate reasonable accommodations. The respective College will provide reasonable accommodations but is not required to substantially alter the requirements or nature of the program or provide accommodations that inflict an undue burden on the respective College. In order to be admitted one must be able to perform all of the essential functions with or without reasonable accommodations. If an individual's health changes during the program of learning, so that the essential functions cannot be met with or without reasonable accommodations, the student will be withdrawn from the nursing program. The nursing faculty reserves the right at any time to require an additional medical examination at the student's expense in

order to assist with the evaluation of the student's ability to perform the essential functions. Requests for reasonable accommodations should be directed to: ADA Coordinator, Linda Waide, at 331-5321 or [lwaide@nwscc.edu](mailto:lwaide@nwscc.edu)

#### MOBILITY OPTION

In addition to the general admission requirements, students applying to the mobility option **must**:

1. Have completed BIO 201, BIO 202, ENG 101 and MTH 100 (Intermediate College Algebra) or higher with a grade of "C" or higher.
2. Possess and maintain a current, active, and unencumbered Alabama LPN license. Proof must be on file.
3. Be a graduate of a state approved school of practical nursing. Proof must be on file.
4. Must have documentation of employment as an LPN for a minimum of 500-clock hours within the 12 months prior to admission. Proof must be on file.
5. Graduates of the approved Alabama College System PN standardized curriculum may be eligible to enter the ADN program during the third semester without taking NUR 200 if graduation occurred within the previous two years. All other Licensed Practical Nurses' must successfully complete NUR 200.
6. **MEET THE ADN APPLICATION DEADLINE:** For the mobility option the deadlines are:  
 Spring Admission - October 15 (NUR 200 required)  
 Summer Admission - February 15 (NUR 200 exempted)

Applications received after the deadline will not be considered unless space is available.

Admission to the Associate Degree Nursing Program is competitive, and the number of students is limited by the number of faculty and clinical facilities available. **Meeting minimal requirements does not guarantee acceptance.**

Preference will be given to graduates of Northwest-Shoals Community College LPN program.

Applicants will be notified in writing by the ADN office of acceptance into the ADN program.

The College reserves the right to adjust requirements or use additional criteria to determine admission.

#### TRANSFER POLICY

Students wishing to transfer must:

1. Must meet minimum admission and progression requirements for NW-SCC and the Nursing program.
2. Must possess a grade of C or better in all general education taken at another institution and possess a minimum of a 2.50 cumulative GPA or higher in the last 24 hours at the time of transfer
3. Students must successfully complete the program:
  - a. Within 48 months from initial enrollment in courses with an NUR prefix for ADN students; or
  - b. Within 24 months from initial enrollment in courses with an NUR prefix for PN & LPN to RN Mobility students.

4. Must be a student in good standing and eligible to return to the previous nursing program.
5. Provide a letter of recommendation from the Dean/Director of the previous program.
6. Must complete the last three semesters in the ADN (RN) Program at NW-SCC.
7. Must complete the last two semesters in the PN Program at NW-SCC.

Acceptance of transfer students into nursing programs is limited by the number of faculty and clinical facilities available. Meeting minimal standards does not guarantee acceptance.

Transfer deadline for Fall Semester - May 15

Transfer deadline for Spring Semester - October 15

Transfer deadline for Summer Semester - February 15

#### PROGRAM REQUIREMENTS:

After acceptance each student must:

1. Submit completed medical examination forms (at student expense) that provide evidence the student is free of communicable disease and chemical dependency, and is physically and psychologically able to participate fully in both classroom and clinical aspects of the program. The nursing faculty reserves the right to require at any time (at student expense) an additional medical examination in order to evaluate the student's state of physical, mental, and/or emotional health such as during pregnancy, infectious diseases, interference with mobility, emotional instability, chemical dependence, etc. When an examination or treatment is required, written proof must be provided by the physician attesting to the student's ability to carry out both classroom and clinical requirements of the program.
 

**NOTE: Northwest-Shoals Community College reserves the right to remove from the program any student who is refused use of facilities by clinical agencies.**
2. Meet the Essential Functions with or without reasonable accommodations. These functions relate to physical, mental, and emotional capabilities of prospective students and are available in writing from the Nursing Department. Additional health criteria are required by clinical agencies.
3. Purchase regulation uniforms and specified accessories.
4. Possess current certification in cardiopulmonary resuscitation at the health care provider level (BCLS). Community CPR is not acceptable. If a student is not certified with the appropriate CPR, the student may take EMS 100 Cardiopulmonary Resuscitation I. This course meets the CPR requirement for two years.
5. Receive certain immunizations at the student's expense.
6. Purchase professional liability insurance through the College.
7. Participate in and pay for periodic standardized tests.
8. Participate in and pay for drug testing as directed by Health Studies Division.
9. Participate in and pay for background checks as directed by Health Studies Division.

It is recommended that each student carry health insurance because neither the College nor affiliated clinical agencies provide health care for students.

**NOTICE: The Alabama College System Standardized Curriculum is continuing to be reviewed and analyzed. Modifications will be made as needed.**

#### PROGRAM PROGRESSION POLICY:

In order to continue in the nursing program, the student must:

1. Complete all required general education courses according to The Alabama College System Nursing Education curriculum.
2. Maintain a grade of "C" or better in all required general education and nursing courses and maintain a 2.0 cumulative GPA at NW-SCC.

**Please note:** The Grading Scale for all Nursing Courses in the Nursing Program is:

A = 90-100  
 B = 80-89  
 C = 75-79  
 D = 60-74  
 F = 59 and below.

3. Be accepted by clinical agencies for clinical experiences.
4. Earn a satisfactory clinical evaluation in all nursing courses with a clinical component.
5. Maintain ability to meet essential functions for nursing with or without reasonable accommodations.
6. Maintain current CPR at the health care provider level.
7. Maintain an adequate level of health including but not limited to annual PPD, and freedom from chemical dependency and/or mental disorder.
8. Successfully complete the nursing education program:
  - a) Within 48 months from initial enrollment in courses with an NUR prefix for ADN students, or
  - b) Within 24 months from initial enrollment in courses with an NUR prefix for PN & LPN to RN Mobility students.

A student that has an unsuccessful attempt in a nursing course (W, D, or F) cannot progress until the course is completed successfully. Course repetition will be based on instructor availability and program resources. Withdrawal and/or a D or F in one or more nursing courses in a term is considered one unsuccessful attempt.

If a student has been unsuccessful in the associate degree nursing program, the student may apply for admission to the practical nursing program. If a student has been unsuccessful in the mobility program, the student may apply for admission to the generic program.

**REINSTATEMENT POLICY: (Readmission)**

In order to continue in the nursing program, the student must:

1. Students whose progression through the nursing program is interrupted and who desire to be reinstated in the program must schedule an appointment with a nursing faculty advisor to discuss reinstatement. In order to be eligible for reinstatement, the following criteria must be met:
  - a) Apply for readmission to the college if not currently enrolled.
  - b) Submit application requesting reinstatement to the nursing program by the following deadlines:  
Fall Semester - May 15  
Spring Semester - October 15  
Summer Semester - February 15
  - c) Request reinstatement within one year from the term of withdrawal or failure;
  - d) Demonstrate competency in previous nursing courses. This may be evaluated by testing and/or skills validation.
  - e) Adhere to nursing curriculum and/or program policies and procedures effective at the point of reinstatement.
2. Reinstatement to the nursing program is not guaranteed.
3. Reinstatement will be denied due to, but not limited to, any of the following circumstances:
  - a) Grade point average is less than 2.0 from courses completed at the current institution;
  - b) Refusal by clinical agencies to accept the student for clinical experiences;
  - c) Twelve months have elapsed since the student was enrolled in a nursing course;
  - d) Student has been dismissed from the program. Students dismissed from the previous program for disciplinary reasons and/or unsafe/unsatisfactory client care in the clinical area will not be allowed reinstatement to the nursing program.
4. A total of two unsuccessful attempts (D, F, or withdrawal) in the nursing program will result in dismissal.
5. Students who have two unsuccessful attempts in any nursing program (ADN/PN/Mobility) or combination of nursing programs may apply for admission as a new student to any nursing program within the Alabama College System, provided:
  - a) the student meets current entry requirements;
  - b) the student was not dismissed from the previous program for disciplinary reasons or for unsafe/unsatisfactory client care in the clinical area.

**STANDARDS OF CONDUCT:**

The nursing student shall comply with the standards that determine acceptable behavior of a nurse in accordance with the Alabama Board of Nursing Administrative Code. FAILURE TO COMPLY WITH ANY OF THESE STANDARDS WHILE IN THE NURSING PROGRAM CONSTITUTES GROUNDS FOR DISMISSAL FROM THE PROGRAM.

The following examples of behavior may be grounds for dismissal from the nursing program or for licensure application review by the Alabama Board of Nursing. Any individual who:

1. Is guilty of fraud or deceit in procuring or attempting to procure a license.
2. Is guilty of a crime involving moral turpitude or of gross immorality that would tend to bring reproach upon the nursing profession.
3. Is unfit or incompetent due to the use of alcohol, or is addicted to the use of habit-forming drugs to such an extent as to render the licensee unsafe or unreliable.
4. Is mentally incompetent.
5. Is guilty of unprofessional conduct of a character likely to deceive, defraud, or injure the public in matters pertaining to health.
6. Has willfully or repeatedly violated any of the provisions of this act.
7. Has been convicted of a felony.
8. Has been convicted of any violation of a Federal or State law relating to controlled substances.
9. Has any other reasons authorized by law.
10. Has been placed on a State and/or Federal abuse registry.
11. Has been court martialled or disciplined or administratively discharged by the military.

Students who have demonstrated any of the behaviors prior to or during attendance of the nursing program will have to provide appropriate explanatory documentation with their state board license application. Any concerns related to the above should be discussed with the nursing advisor.

For additional information or a copy of the complete Code, contact the Alabama Board of Nursing. Website: <http://www.abn.state.al.us/main/downloads/admin-code/contents.html>

**ANTICIPATED EXPENSES:**

As a student in the ADN program, you can anticipate certain necessary expenses. First of all, the tuition rate is the same as that for other NW-SCC students, but nursing program students will incur other expenses, which are listed below. Note that the amounts listed are approximations and that they are subject to change without notice.

Textbooks	\$ 1,600.00
Standardized Tests	\$ 400.00
Physical Exam, TB Test & Shots	\$ 350.00
Uniforms and Small Equipment	\$ 345.00
Clinical Kit	\$ 55.00
Clinical ID Badges	\$ 10.00
Drug Screening	\$ 70.00
Liability Insurance	\$ 40.00
Graduation Fee	\$ 35.00
Graduation Pictures	\$ 25.00
Graduation Pin	\$40.00 - \$ 200.00
RN Licensure Application Fee	\$ 85.00
RN Temporary Permit (AL)	\$ 50.00
NCLEX	\$ 200.00
Background Check	\$ 45.00
<b>Total =</b>	<b>\$3,350.00 - \$3,5105.00</b>

**NOTICE:** In addition to the expenses listed, you are responsible for transportation, meals, health care expenses, any liability incurred during and while traveling to and/or from educational experiences.

**Registered Nursing** 511601 NUR  
**Associate in Applied Science Degree**

Available: Phil Campbell Campus

- Advisors: A. Bales (6298) [abales@nwscc.edu](mailto:abales@nwscc.edu)  
 A. Butler (8033) [abutler@nwscc.edu](mailto:abutler@nwscc.edu)  
 C. Dabbs (6250) [carole.dabbs@nwscc.edu](mailto:carole.dabbs@nwscc.edu)  
 P. Ford (5306) [pford@nwscc.edu](mailto:pford@nwscc.edu)  
 S. Holcomb (6244) [susan.holcomb@nwscc.edu](mailto:susan.holcomb@nwscc.edu)  
 B. Humphres (6237) [bhumphres@nwscc.edu](mailto:bhumphres@nwscc.edu)  
 S. Logan (6252) [logans@nwscc.edu](mailto:logans@nwscc.edu)  
 S. Oliver (6293) [soliver@nwscc.edu](mailto:soliver@nwscc.edu)  
 M. Rogers (6220) [mrogers@nwscc.edu](mailto:mrogers@nwscc.edu)  
 S. Smith (6207) [shelia.smith@nwscc.edu](mailto:shelia.smith@nwscc.edu)  
 D. Sykes (6249) [d.sykes@nwscc.edu](mailto:d.sykes@nwscc.edu)  
 A. Tedford (6256) [atedford@nwscc.edu](mailto:atedford@nwscc.edu)  
 C. Tice (6221) [ctice@nwscc.edu](mailto:ctice@nwscc.edu)  
 C. Tidwell (5305) [cindy@nwscc.edu](mailto:cindy@nwscc.edu)

The Associate in Applied Science Degree in Nursing is a five semester program, which prepares the graduate to sit for the Registered Nurse licensure examination. Candidates for the Associate in Applied Science in Nursing must complete the prescribed general education course requirements, plus 42 hours in nursing for a total of 72 hours. See your advisor for program completion options.

<b>Semester I</b>	<b>Semester Hours</b>
+MTH 100(Intermediate College Algebra)	
or Higher Level* .....	3
+BIO 201 Human Anatomy and Physiology I .....	4
NUR 102 Fundamentals of Nursing .....	6
NUR 103 Health Assessment .....	1
NUR 104 Introduction to Pharmacology .....	1
	15
<b>Semester II</b>	
+ENG 101 English Composition I** .....	3
+BIO 202 Human Anatomy and Physiology II .....	4
NUR 105 Adult Nursing .....	8
NUR 106 Maternal and Child Nursing .....	5
	20
<b>Semester III</b>	
+PSY 200 Psychology .....	3
+BIO 220 Microbiology .....	4
NUR 201 Nursing Through the Lifespan I .....	5
	12
<b>Semester IV</b>	
SPH 106 or 107 or 116 Speech .....	3
PSY 210 Human Growth and Development .....	3
NUR 202 Nursing Through the Lifespan II .....	6
	12
<b>Semester V</b>	
+++Humanities Elective .....	3
NUR 203 Nursing Through the Lifespan III .....	6
NUR 204 Role Transition for the Registered Nurse .....	4
(Preceptor 3:1)	13
<b>Total Semester Credit Hours</b> .....	<b>72</b>

**Registered Nursing  
Mobility (LPN-RN)  
Associate in Applied Science Degree**

511601 MOB

Available: Phil Campbell Campus

**PREREQUISITES:**

MTH 100 (Intermediate College Algebra) or Higher Level (3 credit hours)\*  
 BIO 201 Human Anatomy and Physiology I (4 credit hours)  
 BIO 202 Human Anatomy and Physiology II (4 credit hours)  
 ENG 101 English Composition I (3 credit hours)\*\*

Total Prerequisites: 14 credit hours

**Must have documentation of employment as an LPN for a minimum of 500-clock hours within the 12 months prior to admission.**

**Semester II (Spring)  
(1<sup>st</sup> semester for mobility students) Semester Hours**

NUR 200 Nursing Career Mobility Assessment ..... 6

**NOTE: Students that graduated from the Alabama College System Practical Nursing Curriculum within 2 years will not be required to take NUR 200.**

**Semester III (Summer)**

+PSY 200 Psychology ..... 3  
 +BIO 220 Microbiology ..... 4  
 NUR 201 Nursing Through the Lifespan I ..... 5  
 12

**Semester IV**

SPH 106 or 107 or 116 Speech ..... 3  
 PSY 210 Human Growth and Development ..... 3  
 NUR 202 Nursing Through the Lifespan II ..... 6  
 12

**Semester V**

+++Humanities Elective ..... 3  
 NUR 203 Nursing Through the Lifespan III ..... 6  
 NUR 204 Role Transition for the Registered Nurse ..... 4  
 (Preceptor 3:1) 13

Skills Validations required for NUR 200. Upon successful completion of NUR 200, students are eligible to progress into NUR 201. Upon successful completion of the Mobility Program, students will receive 15 to 21 non-traditional credit hours.

**Total Semester Credits ..... 72**

\*May choose from MTH 110, MTH 112, MTH 265, or equivalent.

\*\*Keyboarding skills are essential for the successful completion of English 101.

+Must be completed with a grade of "C" or higher before or during the semester noted above. All other general education courses must be completed with a grade of "C" or higher in order to graduate.

+++Choose from ART (for transfer program - ART 100); Music (for transfer program - MUS 101); Foreign Language; Philosophy; Religion; Theater; Literature

Computer competency skills are embedded within one or more courses required in this curriculum.

**Practical Nursing  
Career Certificate**

511613 LPN

Available: Shoals Campus

Advisors: A. Butler (8033) abutler@nwsc.edu  
 P. Ford (5306) pford@nwsc.edu  
 S. Smith (6207/5337) shelia.smith@nwsc.edu  
 C. Tidwell (5305) cindy@nwsc.edu

This certificate is designed for training capable individuals who desire to become Licensed Practical Nurses (LPN). The Practical Nursing program enables the student to obtain the skills and knowledge leading to employment in the health care field. Topics related to safe, knowledgeable, and efficient nursing care are included. The certificate is approved by the Alabama Board of Nursing. Graduates are eligible to apply to take the state licensing examination (NCLEX-PN) for licensure as Practical Nurses. Graduation from the program however, does not guarantee Board of Nursing approval to take the NCLEX-PN licensing examination. See Standards of Conduct in the Registered Nursing section of the catalog.

The Practical Nursing Plan is three semesters in length. Students are admitted in the Fall Semester.

**The admission criteria is currently under review and is subject to change.**

Students are admitted according to the following priority:

1. First time students
2. Readmissions
3. Transfer students with previous nursing education

**PRACTICAL NURSING GENERAL ADMISSION REQUIREMENTS:**

Minimum admission standards for Practical Nursing include:

1. Unconditional admission to the college.
2. Receipt of completed application for the Practical Nursing Program by April 1 for the fall admission annually.
3. Have a minimum of 2.50 cumulative grade point average based on the most recent 24 credit hours of college work.
4. Eligibility for English 101 and Math 116, MTH 100 (Intermediate College Algebra) or higher as determined by college policy.
5. Good standing with the college.
6. A score of 76 or higher on the COMPASS Reading Examination (or related ACT Reading Score of 17 or higher) current within three years of application deadline.
7. Meeting the essential functions or technical standards required for nursing. (See Essential Functions in Registered Nursing section of the catalog.)

Admission to the PN program is competitive. Meeting minimum requirements does not guarantee acceptance.

The College reserves the right to adjust requirements or use additional criteria to determine admission.

**PROGRAM REQUIREMENTS**

After acceptance each student must:

1. Submit completed medical examination forms (at student expense) that provide evidence the student is free of communicable disease and chemical dependency, and is physically and psychologically able to participate fully in both classroom and clinical aspects of the program. The nursing faculty reserves the right to require at any time (at student expense) an additional medical examination in order to evaluate the student's state of physical, mental, and/or emotional health such as during pregnancy, infectious diseases, interference with mobility, emotional instability, chemical dependence, etc. When an examination or treatment is required, written proof must be provided by the physician attesting to the student's ability to carry out both classroom and clinical requirements of the program.

**NOTE: Northwest-Shoals Community College reserves the right to remove from the program any student who is refused use of facilities by clinical agencies.**

2. Meet the Essential Functions with or without reasonable accommodations. These standards relate to physical, mental, and emotional capabilities of prospective students and are available in writing from the Nursing Department. Additional health criteria are required by clinical agencies.
3. Purchase regulation uniforms and specified accessories.
4. Possess current certification in cardiopulmonary resuscitation at the health care provider level (BCLS). Community CPR is not acceptable. If a student is not certified with the appropriate CPR, the student may take EMS 100 Cardiopulmonary Resuscitation I. This course meets the CPR requirement for two years.
5. Receive certain immunizations at the student's expense.
6. Purchase professional liability insurance through the College.
7. Participate in and pay for periodic standardized testing.
8. Participate in and pay for drug testing as directed by Health Studies Division.
9. Participate in and pay for background checks as directed by Health Studies Division.

It is recommended that each student carry health insurance because neither the College nor affiliated clinical agencies provide health care for students.

**NOTICE: The Alabama College System Standardized Curriculum is continuing to be reviewed and analyzed. Modifications will be made as needed.**

**Refer to the Registered Nursing sections for the following information which applies to both the RN and LPN programs: Essential Functions and Standards of Conduct.**

**Progression Policy:** Please refer to the Progression Policy for Nursing Programs for the Alabama College System found in the Registered Nursing Section.

**Transfer Policy:** Please refer to the Transfer Policy for Nursing Programs for the Alabama College System found in the Registered Nursing Section.

The following are specific policies for the PN Program for students wishing to transfer:

1. You will receive no credit for any nursing education that was acquired more than one (1) year prior to the transfer.
2. You must complete two semesters of the program at NW-SCC.
3. You must have attended a comparable nursing program approved by the appropriate State Board of Nursing.

**EXPENSES:**

The tuition rate is the same as that for other NW-SCC students, but nursing program students will incur other expenses, which are listed below. Note that the amounts listed are approximations and that they are subject to change without notice.

Textbooks and course outlines .....	\$1,000.00
Professional liability insurance .....	\$20.00
Drug Screening .....	\$35.00
Laboratory kit .....	\$55.00
Uniforms(s) and necessary equipment .....	\$345.00
(stethoscope, watch with second hand, pen light, etc.)	
Physical examination .....	\$350.00
(Immunizations, if needed)	
Standardized Exams .....	\$250.00
Background Check .....	\$45.00

Additional expenses anticipated during the final semester of the PN program are approximate. These are as follows:

ABN application .....	\$85.00
NCLEX application .....	\$200.00
NW-SCC graduation fee .....	\$35.00
Temporary permit (optional) .....	\$50.00
Nursing Pin (optional) .....	\$35.00
NCLEX review course (optional) .....	\$200.00

**NOTICE: In addition to the expenses listed above, you are responsible for transportation, meals, health care expenses, any liability incurred during and while traveling to and/or from educational experiences.**

**Practical Nursing  
Career Certificate**

511613 LPN

	Semester Hours
<b>Semester I</b>	
+MTH 116 Mathematical Applications or Higher Level	3
+BIO 201 Human Anatomy and Physiology I	4
NUR 102 Fundamentals of Nursing	6
NUR 103 Health Assessment	1
NUR 104 Introduction to Pharmacology	1
	15
<b>Semester II</b>	
+ENG 101 English Composition I	3
+BIO 202 Human Anatomy and Physiology II	4
NUR 105 Adult Nursing	8
NUR 106 Maternal and Child Nursing	5
	20
<b>Semester III</b>	
NUR 107 Adult/Child Nursing	8
NUR 108 Psychosocial Nursing	3
NUR 109 Role Transition for the Practical Nurse	3
	14

**Total Semester Credit Hours ..... 49**

+Must be completed with a grade of "C" or higher before or during semester noted above.

**Nursing Assistant**

511614 NAS

Available: Shoals Campus  
 Advisors: S. Smith (6207/5337) [shelia.smith@nwscc.edu](mailto:shelia.smith@nwscc.edu)  
 C. Tidwell (5305) [cindy@nwscc.edu](mailto:cindy@nwscc.edu)

The Nurse Assistant course includes instruction in theory, nursing skills lab and a clinical rotation in a health care facility.

After successful completion of the 80-hour nurse assistant course, NAS 100, the student will meet requirements to take the State Nurses Aide Certification Test. This certificate enables the Nursing Assistant to obtain employment in nursing homes, hospitals or home health care agencies. A basic introduction to the health field and home health care is provided. This program does not require a high school diploma or GED certificate for admission. Students must be at least 18 years of age in order to take the State Nurse's Aide Certification Test.

Tuition .....	\$ 384.00
Textbook .....	\$ 48.75
Liability Insurance .....	\$ 20.00
TB Skin Test .....	varies
Background Check .....	\$ 45.00
Certification Exam .....	\$ 95.00

**Office Administration  
Associate in Applied Science Degree**

This degree is designed for students who wish to seek employment upon completing the prescribed curriculum. However, many of these courses may be used in transfer to four-year institutions with business programs.

**Accounting Option** 520401 OAO

Available: Phil Campbell and Shoals Campuses  
 Advisors: K. Swinney (6254/5235) [kswinney@nwscc.edu](mailto:kswinney@nwscc.edu)  
 T. McClinton (5212) [mcclinton@nwscc.edu](mailto:mcclinton@nwscc.edu)  
 D. South (5211) [dsouth@nwscc.edu](mailto:dsouth@nwscc.edu)

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

General Education Requirements	Semester Hours
CIS 146 Microcomputer Applications .....	3
OAD 110 Computer Navigation or CIS 249 Microcomputer Operating systems .....	3
ECO 231 Principles of Macroeconomics or ECO 232 Principles of Microeconomics .....	3
***ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 116 Mathematical Applications .....	3
Humanities or Fine Arts Elective .....	3
<b>Total General Education Requirements .....</b>	<b>21</b>

**Major Requirements**

ACT 249 Payroll Accounting .....	3
BUS 241 Principles of Accounting I or ACT 141 Basic Accounting Principles .....	3
BUS 242 Principles of Accounting II or ACT 142 Advanced Accounting Principles .....	3
*OAD 101 Beginning Keyboarding .....	3
OAD 103 Intermediate Keyboarding .....	3
OAD 104 Advanced Keyboarding .....	3
OAD 126 Advanced Word Processing .....	3
OAD 130 Electronic Calculations .....	3
OAD 133 Business Communications .....	3
OAD 134 Career and Professional Development .....	3
OAD 135 Financial Record Keeping .....	3
OAD 138 Records/Information Management .....	3
OAD 217 Office Management .....	3
OAD 218 Office Procedures .....	3
<b>Total Major Requirements .....</b>	<b>42</b>

**OAD Electives**

Choose four courses from among:  
 OAD 125, 131, 200, 231, 233, 242 ..... **12**

**Total Semester Credit Hours ..... 75**

\*OAD 100 prerequisite required unless student has had at least one course of high school keyboarding. OAD elective may be substituted for OAD 101 if student has two years of high school keyboarding and a working knowledge of Microsoft Word or permission of instructor.

\*\*\*Keyboarding skills are essential for the successful completion of English 101.

**Administrative Professional Option 520401 OAP**

Available: Phil Campbell and Shoals Campuses  
 Advisors: K. Swinney (6254/5235) [kswinney@nwscc.edu](mailto:kswinney@nwscc.edu)  
 T. McClinton (5212) [mcclinton@nwscc.edu](mailto:mcclinton@nwscc.edu)  
 D. South (5211) [dsouth@nwscc.edu](mailto:dsouth@nwscc.edu)

Entering students are required to complete ORI 101.  
 Transfer students are exempt from this requirement.

General Education Requirements	Semester Hours
CIS 146 Microcomputer Applications .....	3
OAD 110 Computer Navigation or CIS 249 Microcomputer Operating systems .....	3
ECO 231 Principles of Macroeconomics or ECO 232 Principles of Microeconomics .....	3
**ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 116 Mathematical Applications .....	3
Humanities or Fine Arts Elective .....	3
<b>Total General Education Requirements .....</b>	<b>21</b>

**Major Requirements**

*OAD 101 Beginning Keyboarding .....	3
OAD 103 Intermediate Keyboarding .....	3
OAD 104 Advanced Keyboarding .....	3
OAD 125 Word Processing .....	3
OAD 126 Advanced Word Processing .....	3
OAD 130 Electronic Calculations .....	3
OAD 131 Business English .....	3
OAD 133 Business Communications .....	3
OAD 134 Career and Professional Development .....	3
OAD 135 Financial Record Keeping .....	3
OAD 138 Records/Information Management .....	3
OAD 200 Machine Transcription .....	3
OAD 217 Office Management .....	3
OAD 218 Office Procedures .....	3
<b>Total Major Requirements .....</b>	<b>42</b>

**OAD Electives**

Choose four courses from among:  
 OAD 110, 202, 203, 211, 212, 214, 231,  
 233, 242, BUS 263 .....

**Total Semester Credit Hours .....** 75

\*OAD 100 prerequisite required unless student has had at least one course of high school keyboarding. OAD elective may be substituted for OAD 101 if student has two years of high school keyboarding and a working knowledge of Microsoft Word or permission of instructor.

\*\*Keyboarding skills are essential for the successful completion of English 101.

**Clerical Option 520401 OCO**

Available: Phil Campbell and Shoals Campuses  
 Advisors: K. Swinney (6254/5235) [kswinney@nwscc.edu](mailto:kswinney@nwscc.edu)  
 T. McClinton (5212) [mcclinton@nwscc.edu](mailto:mcclinton@nwscc.edu)  
 D. South (5211) [dsouth@nwscc.edu](mailto:dsouth@nwscc.edu)

Entering students are required to complete ORI 101.  
 Transfer students are exempt from this requirement.

General Education Requirements	Semester Hours
CIS 146 Microcomputer Applications .....	3
OAD 110 Computer Navigation or CIS 249 Microcomputer Operating systems .....	3
ECO 231 Principles of Macroeconomics or ECO 232 Principles of Microeconomics .....	3
**ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 116 Mathematical Applications .....	3
Humanities or Fine Arts Elective .....	3
<b>Total General Education Requirements .....</b>	<b>21</b>

**Major Requirements**

*OAD 101 Beginning Keyboarding .....	3
OAD 103 Intermediate Keyboarding .....	3
OAD 104 Advanced Keyboarding .....	3
OAD 126 Advanced Word Processing .....	3
OAD 130 Electronic Calculations .....	3
OAD 131 Business English .....	3
OAD 133 Business Communications .....	3
OAD 134 Career and Professional Development .....	3
OAD 135 Financial Record Keeping .....	3
OAD 138 Records/Information Management .....	3
OAD 200 Machine Transcription .....	3
OAD 217 Office Management .....	3
OAD 218 Office Procedures .....	3
<b>Total Major Requirements .....</b>	<b>39</b>

**OAD Electives**

Choose two courses from among:  
 OAD 110, 125, 231, 233, 242 .....

**Total Semester Credit Hours .....** 66

\*OAD 100 prerequisite required unless student has had at least one course of high school keyboarding. OAD elective may be substituted for OAD 101 if student has two years of high school keyboarding and a working knowledge of Microsoft Word or permission of instructor.

\*\*Keyboarding skills are essential for the successful completion of English 101.

**Office Administration** 520401 OAD  
**Career Certificate**

Available: Phil Campbell and Shoals Campuses  
 Advisors: K. Swinney (6254/5235) [kswinney@nwsc.edu](mailto:kswinney@nwsc.edu)  
 T. McClinton (5212) [mcclinton@nwsc.edu](mailto:mcclinton@nwsc.edu)  
 D. South (5211) [dsouth@nwsc.edu](mailto:dsouth@nwsc.edu)

This certificate is designed to teach students the skills necessary to acquire and maintain secretarial and clerical positions in the business community. A high school diploma or GED certificate for admission is required.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

General Education Requirements	Semester Hours
**ENG 101 English Composition I	3
MTH 116 Mathematical Applications .....	3
<b>Total General Education Requirements .....</b>	<b>6</b>

Major Requirements	Semester Hours
*OAD 101 Beginning Keyboarding .....	3
OAD 103 Intermediate Keyboarding .....	3
OAD 104 Advanced Keyboarding .....	3
OAD 126 Advanced Word Processing .....	3
OAD 130 Electronics Calculations .....	3
OAD 131 Business English .....	3
OAD 133 Business Communications .....	3
OAD 134 Career and Professional Development .....	3
OAD 135 Financial Record Keeping .....	3
OAD 138 Records/Information Management .....	3
OAD 200 Machine Transcription .....	3
OAD 217 Office Management .....	3
OAD 218 Office Procedures .....	3
<b>Total Major Requirements .....</b>	<b>39</b>

**OAD Electives**  
 Choose three courses from among:  
 OAD 110, 125, 202, 203, 211, 212, 214, 231, 233,  
 and BUS 263 .....

	9
<b>Total Semester Credit Hours .....</b>	<b>54</b>

\*OAD 100 prerequisite required unless student has had at least one course of high school keyboarding. OAD elective may be substituted for OAD 101 if student has two years of high school keyboarding and a working knowledge of Microsoft Word or permission of instructor.

\*\*Keyboarding skills are essential for the successful completion of English 101.

**Water and Wastewater** 150506 W&M  
**Management and Technology**  
**Short-Term Certificate**

Available: Shoals Campus  
 Advisors: S. McGouyrk (5246) [stevem@nwsc.edu](mailto:stevem@nwsc.edu)  
 M. Murphy (6246) [docm@nwsc.edu](mailto:docm@nwsc.edu)

This short-term certificate is designed to prepare students for employment in positions related to water and wastewater. Also, see the A.S. Degree program.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	Semester		
	Theory	Lab	Hours
WMT 100 Water Supply and Wastewater Control	3	0	3
WMT 101 Introduction to Water Treatment Processes	3	0	3
WMT 102 Introduction to Wastewater Treatment Processes	3	0	3
WMT 120 Sanitary Chemistry and Biology	3	0	3
WMT 213 Water and Wastewater Instrumentation and Controls	3	0	3
WMT 214 Basic Hydraulics for Water and Wastewater Technology	3	0	3
WMT 290 Industrial Internship I or WMT 291 Municipal Internship I or CIS Elective	0	15	3
<b>Total Semester Credit Hours .....</b>	<b>21</b>		

**Welding****AOT Degree**

Available: Shoals Campus

Advisors: W. Garner (5254) [wgarner@nwsc.edu](mailto:wgarner@nwsc.edu)J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)L. Liles (8072) [lliles@nwsc.edu](mailto:lliles@nwsc.edu)B. Keeton (5254) [bkeeton@nwsc.edu](mailto:bkeeton@nwsc.edu)

Students desiring to receive the AOT Award must complete all major certificate courses, one minor certificate course of study, and the required credit hours of general education courses in Areas I, II, III, and IV. Upon completion of all the courses listed, students are eligible to receive the Associate in Occupational Technology Degree. Students desiring to take general education courses for transfer to another institution should consult an advisor for proper general education course selection.

**Core Degree Requirements for the Associate in Occupational Technology Degree**

Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.

	<b>Semester Hours</b>
Area I: Written Composition .....	3
English Composition I and/or Technical Writing	
Area II: Humanities and Fine Arts .....	3
Area III: Natural Science and Mathematics .....	9
A minimum of 3 hours in degree creditable mathematics is required. The additional 6 hours of degree creditable coursework may be taken from disciplines of math, biology, chemistry, physical science, physics, environmental technology and computer science.	
Area IV: History, Social and Behavioral Sciences .....	3
Courses may be taken from the disciplines of history, economics, geography, political science, psychology, and sociology.	

**Minimum General Requirements ..... 18****Major Requirements ..... Semester Hours**

WDT 108 SMAW Fillet/OFC .....	3
WDT 109 SMAW Fillet/CAC .....	3
WDT 110 Industrial Blueprint Reading .....	3
WDT 115 GTAW Carbon Pipe Theory .....	3
WDT 119 Gas Metal Arc/Flux Cored Arc Welding Theory .	3
WDT 120 Shielded Metal Arc Welding Groove Theory .....	3
WDT 122 SMAW Fillet/OFC Lab .....	3
WDT 123 SMAW Fillet/PAC/CAC Lab .....	3
WDT 124 Gas Metal Arc/Flux Cored Arc Welding Lab .....	3
WDT 125 Shielded Metal Arc Welding Groove Lab.....	3
WDT 155 GTAW Carbon Pipe Lab .....	3
WDT 182 Special Topics .....	3
WDT 184 Special Topics .....	1
WDT 217 SMAW Carbon Pipe Theory .....	3
WDT 218 Certification Theory .....	3
WDT 228 Gas Tungsten Arc Welding Theory .....	3
WDT 257 SMAW Carbon Pipe Lab .....	3
WDT 268 Gas Tungsten Arc Lab .....	3
<b>Total Major Requirements .....</b>	<b>48-52</b>

**Minor Requirements**

<b>Machine Shop Technology</b> .....	<b>309999 WMS</b>
MSP 101 Basic Machining Technology .....	5
MSP 102 Intermediate Machining Technology .....	5
MSP 121 Basic Blueprint Reading for Machinists .....	2
<b>Total Minor Requirements .....</b>	<b>12</b>

**Minor Requirements**

<b>Air Conditioning/Refrigeration Technology</b> .....	<b>309999 WAC</b>
ACR 111 Refrigeration Principles .....	3
ACR 115 Heating Systems .....	3
ACR 132 Residential Air Conditioning .....	3
ACR 133 Domestic Refrigeration .....	3
<b>Total Minor Requirements .....</b>	<b>12</b>

**Minor Requirements**

<b>Automotive Service Technology</b> .....	<b>309999 AUT</b>
AUM 133 Motor Vehicle Air Conditioning .....	3
AUM 101 Fundamentals of Automotive Technology .....	3
AUM 121 Braking Systems .....	3
AUM 110 Electrical and Electronic Systems I .....	3
<b>Total Minor Requirements .....</b>	<b>12</b>

**Minor Requirements**

<b>Carpentry Technology</b> .....	<b>309999 WCR</b>
CAR 121 Introduction to Blueprint Reading .....	3
CAR 134 Stairs, Moldings, and Trim .....	3
CAR 226 Metal Framing .....	3
CAR 217 Estimating .....	3
<b>Total Minor Requirements .....</b>	<b>12</b>

**General Requirements ..... 18****Total Requirements for AOT Degree ..... 78**

\*Computer competency skills are embedded within one or more courses required in this curriculum.

**Welding  
Career Certificate**

480508 WEL

Available: Shoals Campus  
 Advisor: W.Garner (5254) [wgarner@nwsc.edu](mailto:wgarner@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)  
 L. Liles (8072) [lliles@nwsc.edu](mailto:lliles@nwsc.edu)  
 B. Keeton (5254) [bkeeton@nwsc.edu](mailto:bkeeton@nwsc.edu)

This certificate is designed to develop the skills necessary to enter and maintain a job in the welding field. Students should develop the skills necessary to pass a certification test that meets the requirements of the American Welding Society (AWS) D1.1 code. Applicants are not required to have completed any particular subject prior to enrollment. Welders need to have good eye-hand coordination, and they need to be in good physical condition. Welding is used in fabrication shops, construction, maintenance, ship building, aircraft, automotive, electrical, and machine shops. Welding is a tool of all trades. The welding field is rapidly expanding, requiring a continually increasing volume of technical knowledge and skills on the part of the operator.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		Hours
	Theory	Lab	
COM 100 Introductory Technical English I	3	0	3
MAH 101 Introductory Mathematics I	2	2	3
WDT 108 SMAW Fillet/OFC	3	0	3
WDT 109 SMAW Fillet/PAC/CAC	3	0	3
WDT 110 Industrial Blueprint Reading	3	0	3
WDT 115 GTAW Carbon Pipe Theory	3	0	3
WDT 119 Gas Metal Arc/Flux Cored Arc Welding Theory	3	0	3
WDT 120 Shielded Metal Arc Welding Groove Theory	3	0	3
WDT 122 SMAW Fillet/OFC Lab	0	3	3
WDT 123 SMAW Fillet/PAC/CAC Lab	0	3	3
WDT 124 Gas Metal Arc/Flux Cored Arc Welding Lab	0	3	3
WDT 125 Shielded Metal Arc Welding Groove Lab	0	3	3
WDT 155 GTAW Carbon Pipe Lab	0	3	3
WDT 217 SMAW Carbon Pipe Theory	3	0	3
WDT 218 Certification Theory	3	0	3
WDT 228 Gas Tungsten Arc Welding Theory	3	0	3
WDT 257 SMAW Carbon Pipe Lab	0	3	3
WDT 268 Gas Tungsten Arc Lab	0	3	3

**Total Semester Credit Hours ..... 54**

\*\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

\*\*\*A high school diploma or GED is not required for admission to this program. Students must be at least 16 years old to enroll.

**Basic Welding Technology  
Short-Term Certificate**

480508 WDT

Available: Shoals Campus  
 Advisors: W. Garner (5254) [wgarner@nwsc.edu](mailto:wgarner@nwsc.edu)  
 J. Hackworth (5335) [joehackworth@nwsc.edu](mailto:joehackworth@nwsc.edu)  
 L. Liles (8072) [lliles@nwsc.edu](mailto:lliles@nwsc.edu)  
 B. Keeton (5254) [bkeeton@nwsc.edu](mailto:bkeeton@nwsc.edu)

This short-term certificate is designed to prepare students for immediate employment. Students are provided with technical knowledge and job specific skills that enable them to compete favorably in the welding field.

Opportunities for welders exist in the business services industry, manufacturing, repair and production work, construction, machinery maintenance, wholesale trade and automobile vehicle industry.

Welders need good eyesight, good eye-hand coordination, and manual dexterity. They should be able to concentrate on detailed work for long periods of time and be able to bend, stoop, and work in awkward positions. Welders need to be adaptable to receive cross-training for other production jobs.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		Hours
	Theory	Lab	
WDT 108 SMAW Fillet/OFC	3	0	3
WDT 109 SMAW Fillet/PAC/CAC	3	0	3
WDT 110 Industrial Blueprint Reading	3	0	3
WDT 119 Gas Metal Arc/Flux Cored Arc Welding Theory	3	0	3
WDT 122 SMAW Fillet/OFC Lab	0	3	3
WDT 123 SMAW Fillet/PAC/CAC Lab	0	3	3
WDT 124 Gas Metal Arc/Flux Cored Arc Welding Lab	0	3	3
WDT 218 Certification Theory	3	0	3

**Total Semester Credit Hours ..... 24**

\*\*Transfer Credit: Students may receive up to one semester of Advanced Placement for Career Technical coursework completed at another institution.

\*\*\*A high school diploma or GED certificate is not required for admission to this program. Students must be at least 16 years old to enroll.

## Allied Health Linkage Programs

Northwest-Shoals Community College has established a cooperative linkage program with Wallace State/Hanceville. The first year of general education and prerequisite courses are completed at the College on either campus. **After acceptance to Wallace State and the desired program, students transfer to Wallace State to complete the course work in the specific area along with clinical experiences to obtain an Associate in Applied Science Degree/and or Certificate.** The following programs are offered through this arrangement:

Health Programs	Approximate Length of Study at Wallace State Community College
Clinical Laboratory Technician .....	5 semesters
Dental Assisting .....	4 semesters
Dental Hygiene .....	5 semesters
Diagnostic Imaging .....	5 semesters
Diagnostic Medical Sonography .....	6 semesters
Electroneurodiagnostic Technology .....	6 semesters
Health Information Technology .....	5-6 semesters
Human Services .....	5 semesters
Medical Assistant .....	5 semesters
Occupational Therapist Assistant .....	5 semesters
Physical Therapist Assistant .....	5 semesters
Respiratory Therapy .....	5 semesters

Linkage students should submit an application for admission to Wallace State College as soon as they begin classes at Northwest-Shoals. Separate applications are required by each program. **June 15 is the deadline date for program applications. Call (256) 352-8031 to request specific program application.**

Students interested in pursuing any of the linkage programs should contact an advisor as early as possible. The student is strongly advised to contact the Wallace State College linkage program director the first semester at Northwest-Shoals to ensure that the proper courses are taken. See WSCC catalog for contact information.

Some of the programs specify deadlines for admission. If no deadline is specified, application should be made as soon as possible. Students will be expected to meet the academic standards of Northwest-Shoals. **Since admission requirements and course requirements at Wallace State are subject to change, please consult with the linkage coordinator at Wallace State.** Students who complete these programs are awarded the Associate in Applied Science degree from Wallace State. Certificates are available in Medical Coding, Medical Transcription, Dental Assisting, and Pharmacy Technology.

While attending Wallace State, the student will be responsible for tuition, books, cost of background screening and drug testing fee, an Accident Insurance fee and a Malpractice Insurance fee each semester. Malpractice insurance is available through the College at a low cost. Most programs require students to carry health insurance. All students must have evidence of current immunizations and physical exam.

Linkage scholarships are available. **March 1st** is the deadline for application.

## Clinical Laboratory Technician 510899 CLS Career Degree - Wallace Linkage

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwscce.edu](mailto:jfrederick@nwscce.edu)  
 A. Lyndon (5319/6235) [lyndon@nwscce.edu](mailto:lyndon@nwscce.edu)  
 W. Rhodes (5458) [wrhodes@nwscce.edu](mailto:wrhodes@nwscce.edu)  
 K. Ricketts (5331) [kricketts@nwscce.edu](mailto:kricketts@nwscce.edu)  
 B. Smith (5379) [bsmith@nwscce.edu](mailto:bsmith@nwscce.edu)  
 S. Watson (6253) [sberrian@nwscce.edu](mailto:sberrian@nwscce.edu)

Graduates of the Clinical Laboratory Technician Program are employed in hospital laboratories, physicians' offices, and other laboratory facilities as Clinical Laboratory Technicians (CLT) and Medical Laboratory Technicians (MLT). These graduates are allied-health professionals that perform analyses in the areas of microbiology, hematology, immunology, biochemistry, and immunoematology.

The program provides education and training in these sciences and in the performance of laboratory procedures used in the diagnosis and treatment of diseases and disorders. The Clinical Laboratory Program accepts students twice a year in the summer and fall semesters. The graduate receives an Associate in Applied Science Degree and will be eligible to sit for a National Certification Examination. See program webpage for accreditation information.

**General Required Courses to be Completed at Northwest-Shoals Community College.** It is not mandatory that all General Required Courses be completed before entering the professional phase.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

### Semester Hours

BIO 103 Principles of Biology I .....	4
CHM 104 Introduction to Inorganic Chemistry .....	4
ENG 101 English Composition I .....	3
ENG 102 English 102 English Composition II <b>or</b>	
SPH 107 Fundamentals of Public Speaking .....	3
MTH 116 Mathematical Applications .....	3
Humanities/Fine Arts Elective .....	3
Elective Social or Behavioral Sciences .....	3
<b>Total Semester Hours .....</b>	<b>23</b>

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

Health programs at Wallace State have program admission requirements unique to the individual program. Information on program admission requirements can be obtained through the WSCC catalog, WSCC website ([www.wallacestate.edu](http://www.wallacestate.edu)), or Wanda Rhodes, Health Linkage advisor located at NW-SCC. Admission requirements may include, but are not limited to: CPR certification, ACT scores, Compass testing, and observation hours.

After program admission, all WSCC Health Science Division students are required to submit a physical exam, consent to drug testing, and criminal background checks to meet clinical agency requirements.

**Dental Assisting** 510899 DA  
**Career Degree - Wallace Linkage**

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwscce.edu](mailto:jfrederick@nwscce.edu)  
 A. Lyndon (5319/6235) [lyndon@nwscce.edu](mailto:lyndon@nwscce.edu)  
 W. Rhodes (5458) [wrhodes@nwscce.edu](mailto:wrhodes@nwscce.edu)  
 K. Ricketts (5331) [kricketts@nwscce.edu](mailto:kricketts@nwscce.edu)  
 B. Smith (5379) [bsmith@nwscce.edu](mailto:bsmith@nwscce.edu)  
 S. Watson (6253) [sberrian@nwscce.edu](mailto:sberrian@nwscce.edu)

Upon successful completion of this program, graduates will be prepared to function as Dental Assistants in dental offices, hospitals and clinics. A dental assistant assists with the direct care of patients under the supervision of a dentist. **STUDENTS ENROLLING IN THE PROGRAM MAY DO SO FOR EITHER A CERTIFICATE PROGRAM OR AN ASSOCIATE IN APPLIED SCIENCE DEGREE PROGRAM.** Either approach enables the student to qualify to take the National Certification Examination administered by the Dental Assisting National Board, Inc. Students are required to complete the program within 2 years of entry into the program. See program webpage for accreditation information.

**General Required Courses to be completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

**Semester Hours**

*CIS 146 Microcomputer Applications .....	3
*ENG 101 English Composition I .....	3
*MTH 116 Mathematical Applications .....	3
*PSY 200 General Psychology .....	3
*SPH 107 Fundamentals of Public Speaking .....	3
Humanities/Fine Arts Elective .....	3
Elective Natural Science .....	4
<b>Total Semester Hours .....</b>	<b>22</b>

**\*Required for certificate program.**

Students must complete specialized courses at Wallace State to receive this degree or certificate. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

Health programs at Wallace State have program admission requirements unique to the individual program. Information on program admission requirements can be obtained through the WSCC catalog, WSCC website ([www.wallacestate.edu](http://www.wallacestate.edu)), or Wanda Rhodes, Health Linkage advisor located at NW-SCC. Admission requirements may include, but are not limited to: CPR certification, ACT scores, Compass testing, and observation hours.

After program admission, all WSCC Health Science Division students are required to submit a physical exam, consent to drug testing, and criminal background checks to meet clinical agency requirements.

**Dental Hygiene** 510899 DH  
**Career Degree - Wallace Linkage**

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwscce.edu](mailto:jfrederick@nwscce.edu)  
 A. Lyndon (5319/6235) [lyndon@nwscce.edu](mailto:lyndon@nwscce.edu)  
 W. Rhodes (5458) [wrhodes@nwscce.edu](mailto:wrhodes@nwscce.edu)  
 K. Ricketts (5331) [kricketts@nwscce.edu](mailto:kricketts@nwscce.edu)  
 B. Smith (5379) [bsmith@nwscce.edu](mailto:bsmith@nwscce.edu)  
 S. Watson (6253) [sberrian@nwscce.edu](mailto:sberrian@nwscce.edu)

Wallace State Community College offers this course of study leading to an Associate in Applied Science Degree in Dental Hygiene. Individuals who have received a Certificate or A.A.S. in Dental Assisting from an accredited program may receive advanced standing for previously completed courses including DHY 103 (Radiology) and DHY 102 (Dental Materials). The DHY Program requires a minimum of five semesters for completion.

As a practicing member of the dental health team, the dental hygienist acts as an educator and motivator in maintenance of oral health and the prevention of dental disease. There are many professional roles the dental hygienist may assume: participation in community health programs, dental office managerial roles, and participation in research activities. Since many dentists employ one or two dental hygienists, employment opportunities in this field are wide. Hygienists are in demand in general dental practices as well as in specialty practices such as periodontics or pediatric dentistry. Hygienists may also be employed to provide dental hygiene services for patients in hospitals, nursing homes, and public health clinics.

See program website for accreditation information. Graduates are allowed to take National Dental Hygiene Boards. Students who successfully complete the National Board Exam are qualified to take any State or Regional licensing examination.

**General Required Courses to be completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

**Semester Hours**

*BIO 201-202 Anatomy and Physiology I and II .....	8
*BIO 220 General Microbiology .....	4
CHM 104 Introduction to Inorganic Chemistry .....	4
ENG 101 English Composition I .....	3
MTH 116 Mathematical Application .....	3
PSY 200 General Psychology .....	3
SOC 200 Introduction to Sociology .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Humanities or Fine Arts Elective .....	3
<b>Total Semester Hours .....</b>	<b>34</b>

**\*Biology 103 highly recommended**

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

## **Diagnostic Imaging** 510899 DI **Career Degree - Wallace Linkage**

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwsc.edu](mailto:jfrederick@nwsc.edu)  
 A. Lyndon (5319/6235) [lyndon@nwsc.edu](mailto:lyndon@nwsc.edu)  
 W. Rhodes (5458) [wrhodes@nwsc.edu](mailto:wrhodes@nwsc.edu)  
 K. Ricketts (5331) [kricketts@nwsc.edu](mailto:kricketts@nwsc.edu)  
 B. Smith (5379) [bsmith@nwsc.edu](mailto:bsmith@nwsc.edu)  
 S. Watson (6253) [sberrian@nwsc.edu](mailto:sberrian@nwsc.edu)

This program is designed to provide terminologists for diagnostic imaging departments of hospitals and clinics. Students are taught the fundamental principles underlying all phases of Radiologic Technology. Upon graduation, the student is eligible to take the registry examination of the American Registry of Radiologic Technology. According to the American Registry of Radiologic Technologist, application for certification to practice as a R.T. may be denied if a person has been convicted of a felony, is guilty of a crime involving moral turpitude, and/or has displayed other grounds for denial by law. Students must satisfy general qualifications for certification in accordance with The American Registry of Radiologic Technologists (ARRT) guidelines. See program webpage for accreditation information.

Participation in the performance of radiographic procedures in a clinical setting will begin during the first year of the program. Students enrolled in clinical education will be assigned hours consistent to day shift for the majority of their training; however, assignments will also include 3:00 p.m.-11:00 p.m. shifts. Assignment to clinical facilities will be at the discretion of the program officials and students are required to travel to different locations during the clinical phase.

The Radiologic Technology Program admits students annually in the fall semester, although general education courses may be taken prior to admission into the program. Program spaces are limited; therefore, students are encouraged to apply early.

Wallace State College will award the Associate in Applied Science Degree upon completion of program requirements. Graduation requirements must be met within three years following entry into the program. A student who withdraws or is dismissed from the program must reapply for admission for the following year's class. Readmission into the Program will be allowed only one time. **Acceptance to Wallace State College does not guarantee admission to the Diagnostic Imaging Program.**

**General Required Courses to be completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	<b>Semester Hours</b>
ENG 101-102 English Composition I and II .....	6
*BIO 201-202 Anatomy and Physiology I and II .....	8
MTH 100 Intermediate Algebra .....	3
PSY 200 General Psychology .....	3
Humanities/Fine Arts Elective .....	3
<b>Total Semester Hours .....</b>	<b>23</b>

**\*Biology 103 highly recommended**

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

**NOTE: Once admitted into the program, Diagnostic Imaging students may attend WSCC courses teleconferenced at NW-SCC.**

## **Diagnostic Medical Sonography** 510899 DMS **Career Degree - Wallace Linkage**

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwsc.edu](mailto:jfrederick@nwsc.edu)  
 A. Lyndon (5319/6235) [lyndon@nwsc.edu](mailto:lyndon@nwsc.edu)  
 W. Rhodes (5458) [wrhodes@nwsc.edu](mailto:wrhodes@nwsc.edu)  
 K. Ricketts (5331) [kricketts@nwsc.edu](mailto:kricketts@nwsc.edu)  
 B. Smith (5379) [bsmith@nwsc.edu](mailto:bsmith@nwsc.edu)  
 S. Watson (6253) [sberrian@nwsc.edu](mailto:sberrian@nwsc.edu)

This program of study is designed to provide didactic and clinical training in the field of general diagnostic medical sonography (ultrasound). The student will receive training in acoustic principles, instrumentation and safety, abdominal, obstetrical, gynecologic, and superficial sonography.

Sonography is a technologist-dependent imaging field that places great emphasis on "hands on" training. Clinical education in the DMS Program begins early in the professional phase of training with hours increasing as the program progresses. Graduates of the Program will be eligible to apply for the National Registry Examination by the American Registry of Diagnostic Medical Sonographers and American Registry of Radiologic Technologists for Sonography when registry guidelines have been met. See program webpage for accreditation information.

The Associate in Applied Science Degree Program has a six semester competency-based curriculum that includes practical experience in regional health institutions. Math/Science courses must have been completed within seven years of the date of expected entry into the DMS program. (See sonography advisor for information).

The professional phase of the Sonography Program is four semesters in length and is designed to begin fall semester of each year.

**Acceptance to Wallace State College does not guarantee admission to the Sonography Program.**

**General Required Courses to be completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	<b>Semester Hours</b>
*BIO 201 Anatomy and Physiology I .....	4
ENG 101 English Composition I .....	3
Humanities/Fine Art Elective .....	3
MTH 100 Intermediate College Algebra .....	3
SPH 107 Fundamentals of Public Speaking .....	3
**PHY 115 Technical Physics .....	4
PSY 200 General Psychology .....	3
<b>Total Semester Hours .....</b>	<b>23</b>

**\*Biology 103 highly recommended**

**\*\*MTH 112 recommended**

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

Vascular Technology and Echocardiography courses are available for students interested in acquiring specialized skills.

**Electroneurodiagnostic**                      **510899 EMD**  
**Technologist**  
**Career Degree** - Wallace Linkage

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwscce.edu](mailto:jfrederick@nwscce.edu)  
 A. Lyndon (5319/6235) [lyndon@nwscce.edu](mailto:lyndon@nwscce.edu)  
 W. Rhodes (5458) [wrhodes@nwscce.edu](mailto:wrhodes@nwscce.edu)  
 K. Ricketts (5331) [kricketts@nwscce.edu](mailto:kricketts@nwscce.edu)  
 B. Smith (5379) [bsmith@nwscce.edu](mailto:bsmith@nwscce.edu)  
 S. Watson (6253) [sberrian@nwscce.edu](mailto:sberrian@nwscce.edu)

The Electroneurodiagnostic (END) Technologist is a multiskilled allied health professional who performs diagnostic testing procedures including, but not limited to, electroencephalograms (EEG), evoked potentials (EP), polysomnograms (PSG), nerve conduction studies (NCS), and electronystagmograms (ENG). Growth in the number of sleep labs and neurodiagnostic centers in Alabama and across the country supports an increasing demand for trained professionals and provides outstanding employment opportunities for qualified technologists. Currently, the average technologist graduate can expect to earn a yearly salary between approximately \$29,000 and \$43,000. Registered Olysomnography Technologists or Electroneurodiagnostic Technologists with advanced training and experience can expect to make a median salary around \$47,000.

Students have the option of taking the END or PSG as two semester certificate programs or taking END and PSG courses with required general courses and earning an Associate Degree in Electroneurodiagnostics.

Students admitted into the Electroneurodiagnostic program are expected to comply with the Health Science Program Regulations and Expectations.

**Acceptance to Wallace State College does not guarantee admission to the Electroneurodiagnostic Program.**

**General Required Courses to be completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

<b>Semester Hours</b>	
ENG 101 English Composition I .....	3
BIO 103 Principles of Biology .....	4
BIO 201 Anatomy and Physiology I .....	4
BIO 202 Anatomy and Physiology II .....	4
MTH 100 Intermediate College Algebra .....	3
PSY 200 General Psychology .....	3
HUM Humanities and Arts Electives .....	6
<b>Total Semester Hours .....</b>	<b>27</b>

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

## HEALTH CARE INFORMATION PROGRAMS

This department offers several unique programs: The Associate in Applied Science degree in Health Information Technology, a certificate in Medical Transcription and a certificate in Medical Coding.

### Health Information Technology 510899 HIT Career Degree - Wallace Linkage

Available: Phil Campbell and Shoals Campuses

Advisors: J. Frederick (6294/5494) [jfrederick@nwsc.edu](mailto:jfrederick@nwsc.edu)

A. Lyndon (5319/6235) [lyndon@nwsc.edu](mailto:lyndon@nwsc.edu)

W. Rhodes (5458) [wrhodes@nwsc.edu](mailto:wrhodes@nwsc.edu)

K. Ricketts (5331) [kricketts@nwsc.edu](mailto:kricketts@nwsc.edu)

B. Smith (5379) [bsmith@nwsc.edu](mailto:bsmith@nwsc.edu)

S. Watson (6253) [sberrian@nwsc.edu](mailto:sberrian@nwsc.edu)

The Health Information Technician (HIT) is a skilled professional who analyzes and evaluates highly sensitive data in health records. Skills of the health information technician are varied but include the following: supervising the release of health information, maintaining and utilizing information storage and retrieval systems, compiling various health statistics, editing transcribed clinical information and supervising electronic health information management systems. Health information technicians may be employed by any facility that manages patient information, such as a hospital, clinic, physician office, insurance company, or medical research center.

Health Information Technicians are trained to also become medical coding specialists. The medical coding specialists perform detailed review of medical records to identify diagnoses and operative procedures. Numeric classification codes are assigned to each diagnosis and procedure, using automated or manual methods. Principle classification systems used include the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), and Current Procedural Terminology (CPT).

See program webpage for program accreditation information. Each graduate of the HIT Program is eligible to take the national examination to become a Registered Health Information Technician (RHIT). Technicians trained in non-accredited programs or trained on the job are not eligible to take the examination.

Students have the opportunity to spend many hours in a clinical setting to practice skills obtained in the classroom. Students enrolled in professional practice experience (clinical) courses will be assigned hours consistent with day shift. Assignment to the professional practice experience facilities will be at the discretion of program officials, and students are required to travel to different locations for the "hands on" training.

The Health Information Technology Program Offers three alternatives for a student's completion of classes: (Note: Actual program completion time may vary).

- One year, non-integrated program:** A student who has completed all general education courses may complete the HIT program courses in three semesters of full-time study.
- Two year, integrated program:** A student may schedule general education courses while taking the health information technology courses. This alternative requires a minimum of 5 to 6 semesters to complete.
- Online Program:** A student may schedule HIT online courses in accordance with either the one year or two year completion option. The professional practice experience activities must be completed on dayshift at an approved health care facility, not online. HIT students who live within 50 miles of campus must attend a minimum number of on-campus class/lab meetings. Instructors may require online students to take make-up exams on campus. Instructors may also require online course exams to be proctored, according to college policy.
- Part-time Program:** The student may choose to complete the program by taking classes on a part-time basis. Program completion time will depend upon the number of classes taken each semester. The program must be completed within three years following entry into the program.

Students should indicate on the program application, the option that they would like to choose to complete their degree.

#### **General Courses to be Completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

#### **Semester Hours**

*BIO 201-202 Human Anatomy and Physiology I and II .....	8
CIS 146 Microcomputer Applications .....	3
ENG 101-102 English Composition I and II .....	6
MTH 116 Mathematical Applications .....	3
PSY 200 General Psychology .....	3
Humanities/Fine Art Elective .....	3
<b>Total Semester Hours .....</b>	<b>26</b>

#### **\*Biology 103 highly recommended**

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

Health programs at Wallace State have program admission requirements unique to the individual program. Information on program admission requirements can be obtained through the WSCC catalog, WSCC website ([www.wallacestate.edu](http://www.wallacestate.edu)), or Wanda Rhodes, Health Linkage advisor located at NW-SCC. Admission requirements may include, but are not limited to: CPR certification, ACT scores, Compass testing, and observation hours.

After program admission, all WSCC Health Science Division students are required to submit a physical exam, consent to drug testing, and criminal background checks to meet clinical agency requirements.

**Human Services** **510899 HS**  
**Career Degree - Wallace Linkage**

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwscce.edu](mailto:jfrederick@nwscce.edu)  
 A. Lyndon (5319/6235) [lyndon@nwscce.edu](mailto:lyndon@nwscce.edu)  
 W. Rhodes (5458) [wrhodes@nwscce.edu](mailto:wrhodes@nwscce.edu)  
 K. Ricketts (5331) [kricketts@nwscce.edu](mailto:kricketts@nwscce.edu)  
 B. Smith (5379) [bsmith@nwscce.edu](mailto:bsmith@nwscce.edu)  
 S. Watson (6253) [sberrian@nwscce.edu](mailto:sberrian@nwscce.edu)

The Human Services curriculum is designed for students who wish to pursue a two-year degree and prepare for a paraprofessional career in a mental health/human services related field.

Clinical experience allows the student to gain valuable knowledge in observation and assistance in human services facilities. Students enrolled in clinical education will be assigned hours consistent with day working hours of human services agencies. However, assignments may include second shift hours of 3-11 p.m. Assignment to clinical facilities will be at the discretion of the program director and/or clinical director. Students may be required to travel distances away from their home for their clinical assignment.

The Human Services Program offers three A.A.S. degree options for the student: Mental Health Technician Associate, Alcohol and Drug Associate Counseling Associate, and Social Work Associate. A student may complete one or more of the three options, depending upon which field he/she desires to pursue.

The Mental Health Technician Associate Option is offered every year. The Alcohol and Drug Counseling Associate Option is offered in odd-numbered years and the Social Work Associate Option is offered in even-numbered years.

The Mental Health Associate (sometimes called a Psychiatric Technician, Behavioral Health Technician, Mental Health Technologist, or Counselor Assistant) is trained to work as a paraprofessional in state institutions, mental health centers, psychiatric (behavioral medicine) units of hospitals, domestic violence centers, developmental centers, group homes, halfway houses, and a variety of human services facilities. He/she may work with children, adolescents, and adults who are experiencing mental illness, mental retardation, substance abuse, domestic violence, adjustment disorders (personal loss, stress, and health), various categories of behavior-related pathology, and family issues. Upon completion of the program, a student may voluntarily take the Nationally Certified Psychiatric Technician exam to become a Nationally Certified Psychiatric Technician.

The Alcohol and Drug Counseling Associate option offers special training for students desiring to work with substance abusers and their families. He/she is trained to work in state institutions, mental health centers, profit treatment centers, non-profit treatment centers, 12-step recovery programs, halfway houses, and group homes. With the course work in this program and a minimum of two years of documented work experience in the addictions field, the student may qualify to take the state certification exam to become a "Certified Alcohol and Drug Counselor."

The Social Work Associate Option trains the student to work as an assistant social worker or assistant case manager. Graduates of this option work at mental health centers, domestic violence shelters, nursing homes, assisted living facilities, developmental centers, state institutions, hospitals, service providers of the Alabama Department of Human Resources, addiction recovery programs, various state and federal government programs, Community Action programs, non-profit assistance programs, child advocacy centers, adolescent programs, adolescent and adult detention centers, and literacy programs. Students are trained to work with individuals at all stages of the human lifespan.

**General Required Courses to be Completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	<b>Semester Hours</b>
BIO 103 Principles of Biology I .....	4
CIS 146 Microcomputer Applications .....	3
ENG 101-102 English Composition I and II .....	6
MTH 116 Mathematical Applications .....	3
PSY 200 General Psychology .....	3
PSY 210 Human Growth and Development .....	3
Humanities/Fine Art Elective .....	3
<b>Total Semester Hours .....</b>	<b>25</b>

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program every term. See your advisor.

## **Medical Assistant** **510899 MA** **Career Degree - Wallace Linkage**

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwscce.edu](mailto:jfrederick@nwscce.edu)  
 A. Lyndon (5319/6235) [lyndon@nwscce.edu](mailto:lyndon@nwscce.edu)  
 W. Rhodes (5458) [wrhodes@nwscce.edu](mailto:wrhodes@nwscce.edu)  
 K. Ricketts (5331) [kricketts@nwscce.edu](mailto:kricketts@nwscce.edu)  
 B. Smith (5379) [bsmith@nwscce.edu](mailto:bsmith@nwscce.edu)  
 S. Watson (6253) [sberrian@nwscce.edu](mailto:sberrian@nwscce.edu)

Projected as the fastest growing healthcare profession through the year 2014 by the U.S. Department of Labor and Statistics, the Medical Assistant Program offers a variety of options of study. The Medical Assistant curriculum prepares students to function as allied-health professionals who perform medical assisting procedures, laboratory procedures, and basic radiographic techniques, usually in a physician's office or outpatient clinic. Administrative duties include scheduling and receiving patients, preparing and maintaining medical records, performing secretarial skills and medical transcription, handling telephone calls and writing correspondence, serving as a liaison between the physician and other individuals, and managing practice finances. Clinical duties include preparing the patient for examination, taking patient histories and vital signs, performing first-aid and CPR, assisting the physician with examinations and treatments, performing routine laboratory procedures and diagnostic tests, preparing and administering medications as directed by the physician, and performing electrocardiograms and basic radiography.

The Medical Assistant Program offers four alternatives for a student's completion of classes: (Note: Actual program completion time may vary).

1. Four Semester, Non-integrated program: A student who has completed all general education courses may complete the MAT program courses in 4 semesters by taking 3 semesters of full-time study. The last semester the student will perform the clinical rotation.
2. Two-year integrated program: A student may schedule general education classes while taking the medical assistant courses. This alternative requires a minimum of 5 or 6 semesters to complete.
3. Online-Hybrid program: A student may schedule MAT online program in accordance with either the one-year or two-year completion option. MAT lab hours must be completed on campus. The clinical practicum/preceptorship must be completed on dayshift at an approved health care outpatient physician's office or clinic, not online.
4. Part-time program: The student may choose to complete the program by attending part time. Progression will depend upon the number of classes taken each semester.

Students should indicate on the program application, the option that they would like to choose to complete their degree.

Graduates will be able to sit for the national certification examination for the Medical Assistant administered by the American Association of Medical Assistants Certification Board. See program webpage for accreditation information.

**General Required Courses to be Completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

### **Semester Hours**

BIO 103 Principles of Biology I .....	4
ENG 101 English Composition .....	3
MTH 116 Mathematical Applications .....	3
PSY 200 General Psychology .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Computer Science Elective .....	3
Humanities or Fine Arts Elective .....	3
<b>Total Semester Hours .....</b>	<b>22</b>

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

**Occupational Therapy Assistant 510899 OTA  
Career Degree - Wallace Linkage**

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwscce.edu](mailto:jfrederick@nwscce.edu)  
 A. Lyndon (5319/6235) [lyndon@nwscce.edu](mailto:lyndon@nwscce.edu)  
 W. Rhodes (5458) [wrhodes@nwscce.edu](mailto:wrhodes@nwscce.edu)  
 K. Ricketts (5331) [kricketts@nwscce.edu](mailto:kricketts@nwscce.edu)  
 B. Smith (5379) [bsmith@nwscce.edu](mailto:bsmith@nwscce.edu)  
 S. Watson (6253) [sberrian@nwscce.edu](mailto:sberrian@nwscce.edu)

Under the direction of an Occupational Therapist, the Occupational Therapy Assistant (OTA) assists in evaluating patients and in developing a plan of selected tasks to restore, influence or enhance performance of individuals whose abilities to cope with daily living tasks are impaired or threatened by developmental deficits, the aging process, physical injury or illness, learning disabilities, or psychological and social disabilities. Occupational Therapy Assistants are employed in general hospitals, rehabilitation centers, nursing homes, home health care agencies, private practices, and other specialized health care settings.

The Occupational Therapy Assistant Program is a two-year course of full-time study.

The certifying agency is the National Board for Certification in Occupational Therapy, Inc. (NBCOT). After successful completion of the NBCOT exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Conviction of a felony may affect a graduate's ability to sit for the NBCOT certification examination or to attain state licensure. Most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. See program webpage for accreditation information.

**General Required Courses to be Completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	<b>Semester Hours</b>
*BIO 201 Human Anatomy and Physiology I .....	4
ENG 101 English Composition I .....	3
Humanities/Fine Art Elective .....	3
MTH 116 Mathematical Applications .....	3
OAD 211 Medical Terminology .....	3
OAD 101 Beginning Keyboarding .....	3
PSY 200 General Psychology .....	3
SPH 107 Fundamentals of Public Speaking .....	3
<b>Total Semester Hours .....</b>	<b>25</b>

**\*Biology 103 highly recommended**

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

**Physical Therapist Assistant 510899 PTA  
Career Degree - Wallace Linkage**

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwscce.edu](mailto:jfrederick@nwscce.edu)  
 A. Lyndon (5319/6235) [lyndon@nwscce.edu](mailto:lyndon@nwscce.edu)  
 W. Rhodes (5458) [wrhodes@nwscce.edu](mailto:wrhodes@nwscce.edu)  
 K. Ricketts (5331) [kricketts@nwscce.edu](mailto:kricketts@nwscce.edu)  
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The Physical Therapist Assistant (PTA) is a skilled technical health worker who, under the supervision of a Registered Physical Therapist, assists in patients' treatment programs. The assistant, following established procedures, carries out a planned patient-care program. Duties of the Physical Therapist Assistant are varied but include rehabilitation of orthopedic, neurological, pediatric, and sports-related problems. Physical Therapist Assistants are employed in general hospitals, rehabilitation centers, nursing homes, home health-care agencies, private practices, and other specialized health-care settings.

The Physical Therapist Assistant Program is a two-year course of study. The student should complete the first year of general education course prerequisites before being eligible to apply to the Physical Therapist Assistant Program. Three semesters are necessary to complete the final year of the program, which begins in the fall semester. The second year classes include technical and clinical experience in a variety of health-care settings where the student performs selected clinical procedures under the supervision of a Physical Therapist or Physical Therapist Assistant.

See program webpage for accreditation information. Graduates will be eligible to apply to sit for the National Licensing Examination for the Physical Therapist Assistant, administered by the Federation of State Boards of Physical Therapy. After successful completion of this exam, the individual will be a Licensed Physical Therapist Assistant.

**Acceptance to Wallace State College does not guarantee admission to the Physical Therapist Program.**

**General Required Courses to be Completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	<b>Semester Hours</b>
*BIO 201-202 Human Anatomy and Physiology I and II .....	8
ENG 101 English Composition I .....	3
**Humanities/Fine Art Elective .....	3
MTH 100 Intermediate College Algebra .....	3
OAD 211 Medical Terminology .....	3
PSY 200 General Psychology .....	3
PSY 210 Human Growth and Development .....	3
SPH 107 Fundamentals of Public Speaking .....	3
<b>Total Semester Hours .....</b>	<b>29</b>

**\*Biology 103 highly recommended**

**\*\*Ethics in the Health Science or Spanish is recommended.**

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively and only in certain terms. See your advisor.

## **Respiratory Therapy** **510899 RT** **Career Degree** - Wallace Linkage

Available: Phil Campbell and Shoals Campuses  
 Advisors: J. Frederick (6294/5494) [jfrederick@nwscce.edu](mailto:jfrederick@nwscce.edu)  
 A. Lyndon (5319/6235) [lyndon@nwscce.edu](mailto:lyndon@nwscce.edu)  
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 K. Ricketts (5331) [kricketts@nwscce.edu](mailto:kricketts@nwscce.edu)  
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This program is designed to provide training necessary for successful completion of the requirements for the advanced practitioner level as defined by the National Board for Respiratory Care (NBRC). A respiratory therapist is responsible for administering under a physician's prescription many types of breathing therapeutics and utilizing specialized breathing, aerosol, and humidification equipment. The respiratory therapist works closely with the physician and also directly with the patient in the treatment situation.

The Respiratory Therapy program is accredited by the Commission of Accreditation of Allied Health Education Programs in association with the Committee on Accreditation for Respiratory Care (CoARC). Upon graduation, the student is eligible to take the registry examination of the National Board of Respiratory Care.

**General Required Courses to be Completed at Northwest-Shoals Community College.**

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

### **Semester Hours**

*BIO 201-202 Human Anatomy and Physiology I and II ....	8
ENG 101-102 English Composition I and II .....	6
MTH 100 Intermediate College Algebra .....	3
PSY 200 General Psychology .....	3
Humanities/Fine Art Elective .....	3
<b>Total Semester Hours .....</b>	<b>23</b>

### **\*Biology 103 highly recommended**

BIO 201, ENG 101, and MTH 100 must be completed by the June 15 application deadline. The other courses may be completed at Wallace.

Students must complete specialized courses at Wallace State to receive this degree. Wallace State enrolls students in this program competitively beginning in fall semester. See your advisor.