

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

470603 AUC

Available: Shoals Campus  
 Advisors: E. Reid (5231) [ereid@nwsc.edu](mailto:ereid@nwsc.edu)  
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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 Pait 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
<b>Total Semester Credit Hours</b>	<b>24</b>		

\*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 AOT Degree**

Available: Shoals Campus  
 Advisors: A. Austin (5449) [austin@nwsc.edu](mailto:austin@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. 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.
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	Semester Hours
<b>Major Requirements</b>	
AUM 101 Fundamentals of Automotive Technology	3
AUM 110 Electrical and Electronic Systems I	3
AUM 121 Braking Systems	3
AUM 122 Steering, Suspension and Alignment	3
AUM 124 Engine Repair I	3
AUM 130 Drive Train and Axles	3
AUM 133 Motor Vehicle Air Conditioning	3
AUM 210 Electrical and Electronic Systems II	3
AUM 224 Manual Transmission and Transaxle	3
AUM 230 Auto Transmission and Transaxle	3
AUM 239 Engine Performance	3
AUM 246 Automotive Emissions	3
AUM 244 Engine Performance II	6
AUM Electives	
<b>Total Major Requirements</b>	<b>45</b>

**Minor Requirements**

<i>Welding</i>	<b>309999 AWM</b>
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>

**Minor Requirements**

<i>Automotive Collision Repair</i>	<b>309999 AUR</b>
ABR 111 Non-Structural Repair .....	3
ABR 114 Non-Structural Panel Replacement .....	3
ABR 122 Surface Preparation .....	3
ABR Elective .....	3
<b>Total Minor Requirements .....</b>	<b>12</b>

**Minor Requirements**

<i>Machine Shop Technology</i>	<b>309999 AMT</b>
MSP 101 Basic Machining Technology .....	5
MSP 102 Intermediate Machining Technology .....	5
MSP 121 Basic Blueprint Reading for Machinists .....	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.

**Basic Automotive Service Technology Short-Term Certificate** **470604 AUM**

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Available: Shoals Campus  
 Advisors: A. Austin (5449) [aaustin@nwsc.edu](mailto:aaustin@nwsc.edu)  
 J. Hackworth (5335) [johackworth@nwsc.edu](mailto:johackworth@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
<b>Total Semester Credit Hours .....</b>	<b>24</b>		

\*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.**

	Theory Lab		Semester 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	3
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.	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
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
Electives .....	6
<b>Total Major Requirements .....</b>	<b>45</b>

**Minor Requirements**

**Business Management and Supervision 309999 CBU**  
 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 CCW**  
 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  
**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.

**Carpentry/Cabinetmaking 460201 CAR  
 Career Certificate**

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

**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.