

Automotive

Auto Collision Repair Technology

Associate of Applied Science Degree
Sioux City and Denison Campuses

Program Overview and Opportunities:

America is a nation on wheels. Every part of our society and all our industries are dependent on vehicles of one form or another. With over 124 million cars, vans, and trucks on American roads, there is a continuous need for skilled auto body repair people. It is estimated that between 30 and 40 million vehicles pass through collision repair shops each year for major repairs. Millions of additional vehicles pass through bump and paint shops for minor repairs.

The Auto Collision Repair Technology program prepares the student for a career as a specialist in auto body repair. The automobile repair business is becoming even more important today as many car owners are having their present vehicles repaired rather than buying new ones. Students will receive training in sheet metal welding and cutting, coat estimating, basic business procedures, metal straightening, frame repair, suspension, glass, plastic, and fiberglass repair, body construction, automotive painting and refinishing. The student will gain practical experience by working on damaged vehicles in a state-of-the-art auto collision facility.

According to the Bureau of Labor Statistics, employment of auto body repairers is expected to grow faster than average for all occupations through the year 2014. Demand for qualified body repairers will increase as the number of vehicles on the road continues to grow. (Occupational Outlook Handbook. Bureau of Labor Statistics 2006-2007.)

Auto Collision Repair Technology Curriculum

Course #	Title	Credits
CRR 102	Sheet Metal Welding*	3
CRR 411	Interior Body Construction*	3
CRR 403	Exterior Body Construction*	3
CRR 323	Sheet Metal Fundamentals*	3
MAT	Math General Education Elective	3
CRR 202	Plastic Repair	3
CRR 533	Structural Repair	3
CRR 551	Integral Body Repair	3
CRR 504	Frame and Unibody Damage Analysis	4
ENG/LIT/COM	English General Education Elective	3
CRR 811	Surface Preparation*	4
CRR 805	Refinishing I	4
CRR 834	Refinishing II	4
PSY 102	Human and Work Relations	3
CRR 742	Estimating Theory	2
CRR 671	Electricity	1
CRR 655	Advanced Collision Repair	5
CRR 874	Advanced Refinishing	4
CSC 110	Introduction to Computers	3
Elective	Humanities or Healthful Living/ Leisure General Education Elective	3
Total Credits		64

* Denotes courses commonly articulated with area high schools.

Are You a Part-time Student?
See a program advisor for a list of available courses for part-time students and to develop an individualized plan of study.
Some suggested courses for the part-time student before program entry include: English, Math, or PSY-102 or PSY-111.

Program Advisors

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See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites. The courses listed above are grouped in the order that they should be taken each semester. Please see an auto collision repair program advisor to ensure correct course sequence.

Automotive

Auto Body Refinishing

Diploma

Sioux City and Denison Campuses

Program Overview and Opportunities:

This diploma option prepares the student to do standard refinishing procedures, color blending, color tinting, and identify solutions to common paint problems. The student will gain practical experience by working on damaged vehicles in a state of the art auto collision facility.



Are You a Part-time Student?

See a program advisor for a list of available courses for part-time students and to develop an individualized plan of study.

Some suggested courses for the part-time student before program entry include: English, Math, or PSY-102 or PSY-111.

Auto Body Refinishing Curriculum

Course #	Title	Credits
CRR 811	Surface Preparation*	4
CRR 805	Refinishing I	4
CRR 834	Refinishing II	4
MAT 772	Applied Math	3
CRR 411	Interior Body Construction*	3
CRR 403	Exterior Body Construction*	3
CRR 742	Estimating Theory	2
CRR 874	Advanced Refinishing	4
COM 723	Workplace Communications*	3
Total Credits		30

* Denotes courses commonly articulated with area high schools.

** CRR 411 and CRR 403 are offered fall semester.

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Automotive

Auto Body Structural Repair

Diploma
Sioux City Campus

Program Overview and Opportunities:

This diploma option prepares the student to do basic body repairs, panel replacements, frame repair and analysis, and unibody structural repairs. The student will gain practical experience by working on damaged vehicles in a state-of-the-art auto collision facility.

Are You a Part-time Student?

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Auto Body Structural Repair Curriculum

Course #	Title	Credits
CRR 102	Sheet Metal Welding*	3
CRR 323	Sheet Metal Fundamentals*	3
CRR 411	Interior Body Construction*	3
CRR 403	Exterior Body Construction*	3
MAT 772	Applied Math	3
CRR 202	Plastic Repair	3
CRR 504	Frame and Unibody Damage Analysis	4
CRR 533	Structural Repair	3
CRR 551	Integral Body Repair	3
COM 723	Workplace Communications* OR	
COM 753	Technical Communication	3
Total Credits		31

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Automotive

Auto Body Procedures

Certificate

Sioux City and Denison Campuses

Program Overview and Opportunities:

The student with this certificate will be prepared to complete minor collision damage, windshield repair, and replacement of damaged panels. The student will gain practical experience by working on damaged vehicles in a state-of-the-art auto collision facility.

Auto Body Procedures Curriculum

Course #	Title	Credits
CRR 102	Sheet Metal Welding*	3
CRR 411	Interior Body Construction	3
CRR 403	Exterior Body Construction	3
CRR 323	Sheet Metal Fundamentals*	3
Total Credits		12

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See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

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Automotive Painting

Certificate

Sioux City and Denison Campuses

Program Overview and Opportunities:

Students take this certificate course of study to develop or enhance their skills in the painting of sheet metal and fiberglass panels. The student will gain practical experience by working on damaged vehicles in a state-of-the-art auto collision facility.

Automotive Painting Curriculum

Course #	Title	Credits
CRR 811	Surface Preparation*	4
CRR 805	Refinishing I	4
CRR 834	Refinishing II	4
Total Credits		12

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See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

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Automotive

Automotive Technology

Associate of Applied Science Degree
Sioux City, Cherokee, and Denison Campuses

Program Overview and Opportunities:

The Automotive Technology program is a two-year degree program designed to prepare the student to perform a wide range of diagnostics, repairs, and preventative maintenance on automobiles and light trucks.** Students have the opportunity to learn in an industry certified facility.

Students will have extensive hands-on training in engine overhaul, manual and automatic drive train, front end alignment, brake service and repair, fuel systems, ignition systems, and air conditioning. In addition, the program provides training in electrical and electronic control systems, engine performance diagnosis, and on-board computerized engine control systems diagnosis.

The majority of graduates will work in dealerships, independent repair shops, fleet service facilities, and service stations. Over 20 percent will be self-employed.

According to the Bureau of Labor Statistics, employment of automotive service technicians and mechanics is expected to grow much faster than average for all occupations through the year 2014. Employment growth will create many new jobs, but total job openings will be significantly larger because many skilled technicians are expected to retire. (Occupational Outlook Handbook. Bureau of Labor Statistics 2006-2007.)

Are You a Part-time Student?

See a program advisor for a list of available courses for part-time students and to develop an individualized plan of study.

Program Advisors

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Automotive Technology Curriculum

Course #	Title	Credits
AUT 115	Automotive Shop Safety* 1 (Must take first semester of enrollment)	1
AUT 615	Automotive Electricity/Electronics 4	4
AUT 633	Automotive Electrical Systems 4	4
AUT 671	Automotive Body Computer Systems 3	3
MAT	Math General Education Elective 3 (AUT 104* may be substituted for AUT 115* and AUT 671)	3
AUT 807	Automotive Engine Performance 5	5
AUT 838	Automotive Adv. Fuel & Ignition Systems 5	5
PSY 102	Human and Work Relations 3	3
AUT 941	Practicum 4	4
Elective	Humanities or Healthful Living/ Leisure General Education Elective 3	3
AUT 703	Automotive Heating & Air Conditioning 3	3
AUT 205	Automotive Automatic Transmissions/Transaxles 5	5
AUT 304	Automotive Manual Drive Train & Axles 4	4
CSC 110	Introduction to Computers 3	3
AUT 164	Automotive Engine Repair* 4	4
AUT 503	Automotive Brake Systems 3	3
AUT 404	Automotive Suspension and Steering 4	4
ENG/LIT/COM	English General Education Elective 3	3
Total Credits		64

* Denotes courses commonly articulated with area high schools.

** Completion of the CPT and Aptitude Test is required prior to admission to the Automotive Technology program.

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

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Automotive

Auto Mechanics

Diploma

Sioux City, Cherokee, and Denison Campuses

Program Overview and Opportunities:

This 3-semester diploma will prepare the student to enter the auto repair industry with basic skills in electrical/electronics, engine overhaul, cooling, and suspension systems. Students have the opportunity to learn in an industry certified facility.

According to the Bureau of Labor Statistics, employment of automotive service technicians and mechanics is expected to grow much faster than average for all occupations through the year 2014. Employment growth will create many new jobs, but total job openings will be significantly larger because many skilled technicians are expected to retire and will need to be replaced. (Occupational Outlook Handbook. Bureau of Labor Statistics 2006-2007.)



Are You a Part-time Student?

See a program advisor for a list of available courses for part-time students and to develop an individualized plan of study.

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Auto Mechanics Curriculum

Course #	Title	Credits
AUT 115	Automotive Shop Safety* 1 (Must take first semester of enrollment)	1
AUT 615	Automotive Electricity/Electronics 4	4
AUT 633	Automotive Electrical Systems 4	4
AUT 671	Automotive Body Computer Systems 3	3
MAT	Math General Ed Elective 3 (AUT 104 may be substituted for AUT 115 and AUT 671)	3
AUT 404	Automotive Suspension and Steering 4	4
AUT 164	Automotive Engine Repair 4	4
AUT 503	Automotive Brake Systems 3	3
ENG/LIT/COM	English General Ed Elective 3	3
AUT 703	Automotive Heating & Air Conditioning 3	3
PSY 102	Human and Work Relations OR	
PSY 111	Introduction to Psychology 3	3
Total Credits		35

* Denotes courses commonly articulated with area high schools.

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

The courses listed above are grouped in the order that they should be taken each semester. Please see an automotive technology program advisor to ensure correct course sequence.

Automotive

Automotive Drive Train

Certificate
Sioux City Campus

Program Overview and Opportunities:

This certificate prepares the student to rebuild transmissions. Upon completion of the certificate, graduates will work in dealerships and transmission repair shops. Students have the opportunity to learn in an industry certified facility.

Program Advisors

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Automotive Drive Train Curriculum

Course #	Title	Credits
AUT 304	Automotive Manual Drive Train & Axles	4
AUT 205	Automotive Automatic Transmissions/Transaxles	5
AUT 115	Automotive Shop Safety* OR	
AUT 104	Introduction to Automotive Technology*	1
Total Credits		10

* Denotes courses commonly articulated with area high schools.

Are You a Part-time Student?

See a program advisor for a list of available courses for part-time students and to develop an individualized plan of study.

Automotive Electrical

Certificate
Sioux City, Cherokee, and Denison Campuses

Program Overview and Opportunities:

This certificate will prepare the student to trace and troubleshoot electrical and electronic problems and make repairs in automotive electrical systems. Students have the opportunity to learn in an industry certified facility.

Program Advisors

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Automotive Electrical Curriculum

Course #	Title	Credits
AUT 115	Automotive Shop Safety* OR	
AUT 104	Introduction to Automotive Technology*	1
AUT 671	Automotive Body Computer Systems	3
AUT 615	Automotive Electricity/Electronics	4
AUT 633	Automotive Electrical Systems	4
Total Credits		12

* Denotes courses commonly articulated with area high schools.

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites. The courses listed above are grouped in the order that they should be taken each semester. Please see an automotive technology program advisor to ensure correct course sequence.

Automotive

Motorcycle/Powersports Technology

Associate of Applied Science Degree
Sioux City Campus

Program Overview and Opportunities:

The popularity of motorcycles has increased dramatically in recent years. Motorcycles are used by a wide variety of drivers for commuting, weekend touring, and racing. With the increasing cost of gasoline many people are choosing to drive a motorcycle due to the fuel efficiency. Based on this popularity there is an increased need for qualified motorcycle/powersports mechanics and technicians.

This career field is responsible for diagnosing, maintaining, repairing, and overhauling motorcycles. Many also repair other types of small engine equipment including mopeds, dirt bikes, and all-terrain vehicles. In addition to diagnosing, repairing, and maintaining motorcycle engines, students may work on transmissions, brakes, exhaust and ignition systems, and make minor repairs to damaged sections of the motorcycle's body. Students in the program will also be exposed to engines related to residential and commercial property maintenance.

Skills learned in this program can lead graduates to positions as technicians, assemblers, service managers, parts managers, or racing pit crew members. Graduates may pursue their interests in owning their own motorcycle/powersports maintenance and repair business.



Are You a Part-time Student?

See a program advisor for a list of available courses for part-time students and to develop an individualized plan of study.

Program Advisors

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Small Engine Mechanic Curriculum

Course #	Title	Credits
MOT 104	Powersports Shop Safety	1
MOT 105	Fundamentals of Small Engines	2
MOT 133	Motorcycle Electrical Systems	3
Program Total		6

Motorcycle/Powersports Technology Curriculum

Course #	Title	Credits
MOT 104	Powersports Shop Safety	1
MOT 105	Fundamentals of Small Engines	2
MOT 106	Air-Cooled V-Twin Engines	1
MOT 128	Motorcycle Engines Two- and Four-Stroke I	2
MOT 129	Motorcycle Engines Two- and Four-Stroke II	2
MOT 137	Transmissions and Drive Systems I	2
MOT 103	Motorcycle Powersports License and Inspection	1
MAT 772	Applied Math	3
MOT 133	Motorcycle Electrical Systems	3
MOT 126	Fuel and Ignition Systems	4
MOT 123	Wheels and Tires	2
MOT 127	Suspension and Brake Systems	4
PSY 102	Human and Work Relations	3
MOT 941	Practicum	4
SPC 122	Interpersonal Communications	3
MOT 138	Transmissions and Drive Systems II	2
MOT 200	Motorcycle * ATV Tune-Up/Maintenance	2
MOT 201	ATV Electrical Systems Diagnostics	2
BUS 130	Intro to Entrepreneurship	3
WEL 331	Welding Fundamentals	2
CSC 110	Introduction to Computers	3
MOT 130	Engine Overhaul/Repair	3
MOT 132	Motorcycle Electrical Systems Diagnostics	2
MOT 259	Shop Management	2
MFG 179	Intro to Machining and Fabrication	3
MOT 255	Performance Engine Tuning	2
COM 723	Workplace Communications	3
Total Credits		66

See course descriptions in the back of the catalog for more detailed information about course prerequisites and co-requisites.

The courses listed above are grouped in the order that they should be taken each semester. Please see a band instrument repair program advisor to ensure correct course sequence.