



Southern
Illinois University
Carbondale

Program of Study



Bachelor of Science in Automotive Technology

**Southern Illinois University Carbondale
College of Applied Sciences and Arts**

For on-campus students only, off-campus students must follow the off-campus contract provided by their program advisor.

**BACHELOR OF SCIENCE
AUTOMOTIVE TECHNOLOGY
COLLEGE OF APPLIED SCIENCES AND ARTS
SOUTHERN ILLINOIS UNIVERSITY CARBONDALE**

Curriculum Description:

The Bachelor of Science degree in Automotive Technology is designed to provide a combination of basic and advanced automotive technical courses, automotive management and business/support courses, and core curriculum courses to students interested in a career in the automotive industry. The program can be combined with previous automotive training received from an approved two-year college.

Career Opportunities:

Southern Illinois University Carbondale's (SIUC) automotive technical and management education is intended to develop future leaders in the automotive industry. The SIUC Bachelor's of Science Degree in Automotive Technology is for persons interested in positions such as but not limited to: service, parts, or sales representatives for manufacturers, field service engineers, serviceability engineers, diagnostic tool and service manual developers, dealer development managers, warranty auditors, or becoming automotive college educators or corporate instructors. These positions require a four-year degree with skills in communications, management, and computers as well as technical knowledge of the automobile. From automotive and heavy truck manufacturers to equipment suppliers, software developers, and aftermarket corporations, this type of training is in extremely high demand from all sectors of the industry.

Freshman or Transfer Student:

Students can enter the program as freshman and complete four years of automotive/management education at SIUC. Students transferring from a community college with a two-year Associates of Applied Science Degree in Automotive Technology can typically complete the additional requirements for the Baccalaureate Degree in two additional years. Students can also enter the Automotive Technology Program without a completed degree with course work being evaluated on a course-by-course basis.

Double Major and/or Minor Options:

Students enrolled in the Automotive Technology Program have the options to double major in Education and become an Illinois certified high school automotive educator (double major requires five-years), or minor in areas such as management, marketing, or business administration.

Master's Degree Options:

Master's Degree options at SIUC include a Master's in Education and a Master's in Business Administration.

Enrollment Management:

This program is open to individuals admitted to the University and meeting the competitive enrollment management criteria of the Automotive Technology Department. Enrollment management criteria are available upon request from the Automotive Technology Program.

Capstone Option:

The Capstone Option is for the student who has earned or will soon earn an Associate in Applied Science (AAS) degree or equivalent certification. The Capstone Option makes it possible for students to earn a Bachelor's degree in 60 additional hours and allows them to complete an abbreviated University Core Curriculum requirement (30 hours vs. 41 hours). In order to qualify for admission to the Capstone Option, the student must have made application for admission to Capstone by no later than the end of the first term in the Bachelor degree program. Graduate with an associate degree in Automotive Technology with a GPA of 2.25 or better, for all college work, and meets all the requirements set forth in the SIUC Undergraduate Catalog, may be approved for Capstone.

The student may not have earned more than 12 hours of major coursework toward the Bachelor degree program prior to approval for Capstone.

Curriculum Requirements:

The Bachelor of Science in Automotive Technology is composed of four instructional categories and consists of a minimum of 125 semester hours.

Category I	University Core Curriculum Requirements	41 Semester Hours	Page 4 & 5
Category II	Lower Level Automotive Technology Courses	39 Semester Hours	Page 6
Category III	Upper Level Automotive Technology Courses	15 Semester Hours	Page 6
Category IV	Business/Management Support Courses	18 Semester Hours	Page 7
Category V	Elective Courses	12 Semester Hours	Page 8
TOTAL		125 Semester Hours	

NOTE: Each category will be explained in the following pages.

For additional information call:
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The Automotive Technology program at SIUC is Master Certified by the National Institute for Automotive Service Excellence.



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POLICY STATEMENTS

1. Admission to the Automotive Technology Bachelor's degree program is contingent upon:
 - a. Meeting or exceeding the SIUC admission standards as outlined by the University.
 - b. Meeting or exceeding the enrollment management standards as outlined by the Automotive Technology Department.
2. Students, with the assistance of an advisor, are responsible for meeting the University graduation requirements as stated in the *Undergraduate Catalog*. These graduation requirements include, but are not limited to, University Core Curriculum requirements, residency hours at a four-year institution, SIUC residency hours, and total credit hour requirements.
3. Students must complete all course work with a *minimum* GPA of 2.0.
4. Students are responsible for applying for graduation in keeping with University policies and deadlines.
 5. Transfer students with an A.A.S. in Automotive Technology must complete 60 hours of their required 125 hours at an approved four-year institution.
6. Students must complete the residence requirement by taking the last year, which is defined as 30 semester hours, or by having three years of credit, which is defined as 90 semester hours, at SIUC.
7. The student should expect to spend about \$700 to \$1,500 for a required basic tool kit consisting of both standard and metric tools and a digital multimeter.

CATEGORY I

Core Curriculum Requirements: **Capstone Option: 30 semester hours***

The Capstone Option at Southern Illinois University is designed for the student who has earned an Associate in Applied Science degree. The purpose of the Capstone Option is to provide an opportunity for students to add to the marketable occupational skills and competencies, which they have already acquired.

A student that graduates with an associate degree in Automotive Technology with a GPA of 2.25 or better, for all college work, and meets all the requirements set forth in the SIUC Undergraduate Catalog, may be approved for Capstone.

CORE CURRICULUM REQUIREMENTS: (Capstone Option: 30 semester hours)

English - 3 hours

Math - 3 hours

Speech - 3 hours

Science - 6 hours

Social Science - 6 hours

Humanities - 3 hours

Multicultural - 3 hours

Fine Arts - 3 hours

FOUNDATION SKILLS

ENGLISH COMP (3 Semester Hours)

ENGL 101

ENGL 102

MATHEMATICS (3 Semester Hours)

ANY MATHEMATICS PREFIX COURSE EXCEPT 107, 114 and 120

MATH 113 suggested

MATH 139 if minor in Business Administration or MGMT

SPEECH (3 Semester Hours)

SPCM 101

DISCIPLINARY STUDIES

SCIENCE (6 Semester Hours)

Select One Course From Each Group

GROUP I:

PHYS 101

GROUP II:

PLB 115, 117

Zool 115

HUMANITIES (3 Semester Hours)

AD 207a, 207b, 207c

CLAS 230, 270, 271

EA 102

ENGL 121, 204

FR 101a, 101b

GER 101a, 101b

HIST 101a, 101b

LING 200

PHIL 102, 103a, 103b, 104, 105

SOCIAL SCIENCE (6 Semester Hours)

Select Only One History Course

ANTH 104

ECON 113

GEOG 100, 103

HIST 110, 112

POLS 114

PSYC 102

SOC 108

FINE ARTS (3 Semester Hours)

AD 100a, 100b, 101

CP 101

ENGL 119, 206a, 206b

FL 200a, 200b, 200c

HIST 201

MUS 103

THEA 101

INTEGRATIVE STUDIES

(3 Semester Hours)

MULTICULTURAL: DIVERSITY IN THE U.S.

AD 227, 267

AJ 203

ANTH 202, 204

BAS 215

ENGL 205

FR 200

HIST 202, 210

LING 201

MCMA 204

MUS 203

KIN 210

PHIL 210, 211

POLS 278

PSYC 223, 233

SOC 215, 223

SPCM 201

WMST 200, 201, 223

Core Courses successfully completed at an accredited college may fulfill the SIUC Core requirements.

- Consult the SIUC Catalog for Core Curriculum substitutes.

CATEGORY II

Automotive Technical Courses – Lower Level:

39 semester hours of 100 and 200 level technical courses (or Approved Equivalents):

NOTE: This 39 hour requirement may be fulfilled by completing an Associate of Applied Science Degree in Automotive Technology from an approved two-year college.

Course No.	Hours	Course Name	Prerequisite
AUT 100	3 hr.	Automotive Laboratory Practices	
AUT 120	3 hr.	Automotive Electrical Principles	
AUT 150	6 hr.	Internal Combustion Engine Principles	AUT 100 or concurrent enrollment
AUT 170	6 hr.	Automotive Powertrain Electronics	AUT 120 or concurrent enrollment
AUT 180	3 hr.	Manual Drivetrains	
AUT 215	3 hr.	Automotive Braking Systems	AUT 170
AUT 216	3 hr.	Automotive Suspension and Steering Systems	AUT 170
AUT 240	6 hr.	Engine Management I	AUT 150 & 170
AUT 250	3 hr.	Engine Management II	AUT 240
AUT 280	3 hr.	Automotive Air Conditioning Systems	AUT 120 and AUT 170
TOTAL	39 hr.	Lower level automotive technical courses	

CATEGORY III

Automotive Technical Courses – Upper Level:

15 hours of 300 and/or 400 level technical courses to be selected from the following (or approved equivalents):

Course No.	Hours	Course Name	Prerequisite
AUT 330	3 hr.	Vehicle Stability and NVH	AUT 215 & 216 or consent of school
AUT 340	6 hr.	Drivability and Emission Diagnostics	AUT 250 or consent of school
AUT 355	6 hr.	Lighting, Convenience, and Safety Systems	Consent of school
AUT 360	6 hr.	Automatic Transmissions and Transaxles	Consent of school
AUT 390	3 hr.	Network Systems and Vehicle Electronics	Consent of school
AUT 480	3 hr.	Alternative Fueled Vehicles	AUT 250 or consent of school
AUT 490	6 hr.	Comprehensive Vehicle Diagnostics	AUT 235, 340, 360, or consent of school

CATEGORY IV

Business/Management Courses:

18 hours to be selected from the following (or approved equivalents):

Group 1 -- Select one course from the following:

Course No.	Hours	Course Name	Prerequisite
ENGL 291	3 hr.	Intermediate Technical Writing	ENGL 102
WED 302	3 hr.	Communications in Business	ENGL 101 and 102
TRM 316	3 hr.	Applications of Technical Information	ENGL 101

Group 2 -- Select one course from the following:

Course No.	Hours	Course Name	Prerequisite
CS 200(b)	3 hr.	Introduction to Business Computing	Basic Typing Skills
AUT 235	3 hr.	Computing for Automotive Applications	Basic Typing Skills Recommended

Group 3 -- Select one course from the following:

Course No.	Hours	Course Name	Prerequisite
AUT 325	3 hr.	Automotive Fixed Operations Management	ENGL 101 and 102
MGMT 350	3 hr.	Small Business Management	Junior Standing
MGMT 304	3 hr.	Introduction to Management	Junior Standing
TRM 364	3 hr.	Work Center Management	

Group 4 -- Select two courses from the following:

Course No.	Hours	Course Name	Prerequisite
AUT 435	3 hr.	Automotive Financial Management and Operations	Junior Standing
TRM 383	3 hr.	Data Interpretation	MATH
MGMT 208	3 hr.	Business Data Analysis	MATH 139
ACCT 210	3 hr.	Accounting Principles and Control	
MKTG 350	3 hr.	Small Business Marketing	Junior Standing
MKTG 304	3 hr.	Marketing Management	Junior Standing

Group 5 -- Select one course from the following:

Course No.	Hours	Course Name	Prerequisite
AUT 485	3 hr.	Automotive Warranty Administration and Customer Relations	Junior Standing
PSYC 323	3 hr.	Psychology of Employee Relations	PSYC 102
FIN 270	3 hr.	Legal & Social Environment of Business	Sophomore Standing
FIN 280	3 hr.	Business Law I	
MKTG 305	3 hr.	Consumer Behavior	Junior Standing

CATEGORY V

Support Courses:

12 hours to be selected from the following (or approved equivalents):

Course No.	Hours	Course Name	Prerequisite
AUT 320	variable	Automotive Internship	Consent of School
AUT 345	3 hr.	Automotive Data Management and Analysis	CS 200b or AUT 235
AUT 420	variable	Automotive Service Operations Internship	Junior Standing, Faculty Sponsor and Consent of School
AUT 430	variable	Technical Investigations in Automotive Technology	Junior Standing, Faculty Sponsor and Consent of School
AUT 475	variable	Special Projects in Automotive Technology	Junior Standing, Faculty Sponsor and Consent of School

And/or -- Any Upper Level Automotive Technical Courses not previously taken

And/or -- Any Group 3, 4, or 5 Business/Management Support Courses not previously taken

And/or -- Classes related to the major as approved by the department. For example: classes from Accounting, Technical Resource Management, Computer Science, Finance, Information Systems Management, Management, Marketing, Workforce Education Development or a foreign language. For Example:

Course No.	Course Name	Prerequisite
ACCT 220	Accounting I	MATH 139
ACCT 230	Accounting II	ACCT 220
CS 202	Introduction to Computer Science	MATH 111
Econ 240	Intermediate Microeconomics	
Econ 241	Intermediate Macroeconomics	
Econ 310	Labor Problems	ECON 240
Econ 315	Money and Banking	ECON 241
FIN 200	Personal Finance	
FIN 280	Business Law	
IMS 131	Information Processing Applications	
IST 141	Spreadsheet Concepts and Applications	
MGMT 208	Data Business Analysis	MATH 139
MGMT 318	Production- Operations Management	MGMT 208
MGMT 341	Organizational Behavior	MGMT 208 + MGMT 304
MKTG 305	Consumer Behavior	
MKTG 329	Marketing Channels	MKTG 304
MKTG 336	International Business	MKTG 304
MKTG 401	Retail Management	MKTG 304
TRM 361	Fiscal Aspects of Technical Management	
TRM 362	Legal Aspects of Technical Management	TRM 316
TRM 464	Managing for Quality	TRM 364+383
WED 460	Occupational Analysis and Curriculum Development	WED MAJOR
WED 462	Instructional Methods and Materials	WED MAJOR
WED 463	Assessment of Learner Performance	WED MAJOR