SIU CARBONDALE Southern Illinois University

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Automotive Technology

The Automotive Technology Program prepares students for challenging careers and advancement in the automotive, truck, diesel, equipment, ground mobility, and related industries.

Current trends indicate that the many industries surrounding ground mobility will continue to experience rapid changes and development for: improving performance, fuel efficiency, emission reduction, and passenger comfort and safety. Advancements in autonomous mobility systems, embedded technologies, industry business practices, and evolving consumer markets and regulations all point to the need for individuals with a thorough understanding of the technology systems, advanced diagnostics, and industry business operations.

The Automotive Technology Program provides extensive technical and industry business training to prepare the student for numerous career possibilities. Opportunities for students to become involved in industry research thrive at SIU Carbondale. The Program's broad industry relationships allow the student to not only learn the leading edge, but to also help develop it while attending school.

Students develop skills and acquire knowledge through laboratory-based experiences with over 140 modern vehicles and pieces of equipment. The student should expect to spend about $1,500 for a required basic tool kit consisting of metric tools and a digital multimeter. The Automotive Technology Program has achieved a master-level accreditation by the Automotive Service Excellence (ASE) Education Foundation. Students are encouraged to complete their ASE certification process by taking the ASE certification exams.

The Program's national advisory board is comprised of over 50 executives from the automotive, truck, and equipment industries who are charged with ensuring the program's curriculum and offerings are in alignment with industry needs. Members include: representatives from General Motors Company; Ford Motor Company; Fiat Chrysler Automobiles; Toyota Motor Sales, U.S.A.; Inc., Nissan Motor Corporation; Mitsubishi Motors North America, Inc.; Cummins, Inc.; American Honda Motor Co., Inc.; NAPA; training providers; vocational directors; automotive dealerships; and wholesale/retail outlets.

Admission to Automotive Technology

Those interested in applying to the Automotive Technology Program are encouraged to begin the application process approximately one year in advance. Admission requirements to the applicant pool are the same as those to the University. After acceptance to the University and indicating Automotive Technology as the primary intended major, students are placed into the Automotive Technology Applicant Pool. No separate application is needed. Additional review of applicants will occur on predetermined dates for possible acceptance into the Automotive Technology major. The review criteria and dates are available from the Program and are on the Program's website: automotive.siu.edu.

The Automotive Technology Program welcomes students with A.A.S. degrees in automotive, diesel, truck, and equipment technology and management related programs from regionally accredited colleges. These students may qualify for the Capstone Option (see below for additional information).

Internship and Cooperative Programs

Automotive Technology majors can participate in paid internship and cooperative education experiences and may be able to earn credit toward graduation. Opportunities occur during all semesters (including the summer term), with some programs available for two sequential terms. These programs enrich the student's academic experience and are situated in various locations throughout the United States. Opportunities may be available with: Fiat Chrysler Automobiles; Cummins Inc.; Toyota Motor Sales, U.S.A., Inc.; Eaton Corporation; General Motors Company; Robert Bosch Corporation; Ford Motor

Company; Sherwin-Williams Automotive Finishes; Ally Financial-Motors Insurance Corporation; Camping World; General Services Administration (GSA) of the Federal Government; and other various industry businesses.

Bachelor of Science (B.S.) in Automotive Technology

The Bachelor of Science degree in Automotive Technology is designed to provide an educational environment for students to acquire the professional, research, and technical skills necessary for success in the automotive and related industries. The degree provides theoretical and practical hands-on application of knowledge through a combination of technical courses, industry business/management courses, computing, and communication courses. The flexibility of the curriculum accommodates the needs of both incoming First-Year and transfer students. Students have the option of focusing on multiple areas of emphasis, earning a minor, and possibly earning dual degrees. Students can adjust their focus in areas such as: automotive technical, automotive business operations, automotive management, automotive engineering, automotive technical education, automotive marketing, and automotive management.

The Program can strengthen previous training. The Capstone Option is available to qualified Associate in Applied Science (A.A.S.) graduates entering the Automotive Technology Bachelor's Degree Program as explained in this catalog. Automotive and truck manufacturers, component manufacturers and suppliers, government agencies, insurance organizations, educational institutions, training and curriculum organizations, and service providers are seeking four-year automotive technology graduates. The number of job titles in the area of automotive technology reflects the nature of a diverse and expanding field. Job titles include: field service engineer, technical assistance specialist, serviceability engineer, diagnostic engineer, district parts/service manager, customer support manager, automotive instructor, account manager, fleet manager, service advisor, dealership service manager, technical training specialist, district sales manager, field executive, technical writer, and product engineer. These positions require a four-year degree with skills in communications, management and consumer relations, as well as technical knowledge.

B.S. Automotive Technology Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Requirements for Major in Automotive Technology	81
Category II: Automotive Technology 100- and 200-level courses: (or Approved Substitutions) Select from: AUT 120, AUT 150, AUT 170, AUT 180, AUT 215, AUT 216, AUT 240, AUT 250 and AUT 280	36
Category III: Automotive Technology 300- and 400-level technical courses: (or Approved Substitutions) Select from: AUT 330, AUT 340, AUT 355, AUT 360, AUT 370, AUT 390, AUT 410, AUT 440, AUT 445, AUT 450, AUT 455, AUT 470, AUT 480, AUT 490 [1]	15
Category IV: Business/Management Courses (or Approved Substitutions)	15
Group I: Select one course from the following: AUT 310, TRM 316	

Degree Requirements		Credit Hours
	Group II: Select one course from the following: AUT 335	
	Group III: Select one course from the following: AUT 325, AUT 350, AUT 435, AUT 485	
	Group IV: Select two courses from the following: AUT 325, AUT 345, AUT 350, AUT 380, AUT 435, AUT 460, AUT 485, FIN 208, FIN 270, FIN 280, IMAE 307, IMAE 340, IMAE 442, IMAE 450, IMAE 465, IMAE 470A, IMAE 470B, IMAE 476, MGMT 304, MGMT 350, MKTG 304, MKTG 305, PSYC 323, TRM 361, TRM 362, TRM 364, TRM 383	
Category V: Support Courses selected from the following:		15
	Any Category III course not previously taken can count here. Any Category IV: Group III or Group IV course not previously taken. Credit from: AUT 100, AUT 301, AUT 320, AUT 420, AUT 430, AUT 475, MGMT 318, MGMT 341, MKTG 329, MKTG 336, MKTG 401, TRM 361, TRM 362, OLID 460, OLID 462, OLID 463 or program approved substitutions	
Total [2]		120

[1] *Consent of program. Credit toward the degree is either AUT 410 or AUT 490. Not both.*

[2] *Note: Credit from all areas must total a minimum of 42 hours of 300- and 400-level courses. Degree requires a total of 120 credit hours.*

Capstone Option for Transfer Students

The SIU Carbondale Capstone Option may be available to eligible students who have earned an Associate in Applied Science (A.A.S.) degree or the equivalent. The Capstone Option reduces the University Core Curriculum requirements from 39 to 30 hours, therefore reducing the time to degree completion. If you have questions about what classes are needed to qualify for the Capstone Option, contact your community college advisor and the SIU Carbondale Automotive Technology Program.

Automotive Technology Courses

AUT100 - Automotive Laboratory Practices Course covers universal automotive shop practices including safety, tool usage, fasteners, sealants and measurement devices. Lecture topics cover safety and environmental concerns, service information retrieval, and correct application of sealants and fasteners. Laboratory activities include thread repair, automotive measurements, electrical repair, and cutting/grinding equipment usage. Restricted to major. Fee: $36. Credit Hours: 3

AUT120 - Automotive Electrical Principles A course of study in the design and theory of automotive electrical circuits. Particular emphasis placed on the study of how electricity behaves in series and parallel DC circuits, general application of these theories to automotive electrical systems, and the proper use of typical electronic and electrical circuit diagnostic equipment. Also emphasizes the understanding of

automotive wiring diagrams, and relay and solenoid operation. Restricted to major. Lab fee: $45. Credit Hours: 3

AUT150 - Internal Combustion Engine Principles Course combines the study of engine operational theory with practical technical skills. Content emphasizes the 720 degree power cycle and the dynamics of engine operation, design and efficiency (thermal, mechanical & volumetric). Laboratory experience consists of engine disassembly, component design study, inspection and measurement of components and engine assembly techniques. Restricted to major. Fee: $90. Credit Hours: 6

AUT170 - Automotive Powertrain Electronics Course includes design and operation of solid state devices, wiring, batteries, starting and charging systems, and basic powertrain control systems. Lectures emphasize the operation of these systems and their individual components. Emphasis placed on system diagnosis. Laboratories allow the study of digital multimeters, battery/starting/charging system test equipment and scan tools. Restricted to major. Lab fee: $120. Credit Hours: 6

AUT180 - Manual Drivetrains A detailed study of automotive manual transmission and transaxle assemblies, clutch assemblies, drive axles, and four-wheel drive transfer cases, including an introduction to noise, vibration, and harshness (NVH) diagnostics. Lectures focus on the basic theory of operation and diagnostics of the automotive drivetrain. Laboratory experience provides the opportunity to study approved inspection, maintenance, and diagnostic procedures. Restricted to major. Lab fee: $60. Credit Hours: 3

AUT215 - Automotive Braking Systems Course covers brake system design, operation and diagnosis. Lectures describe brake system component interrelationships and an introduction to ABS. Special emphasis placed on component diagnosis and maintenance procedures. Laboratory experience provides students the opportunity to use specialized tools, such as on-the-car lathes, brake bleeding equipment, and brake system diagnostic equipment. Restricted to major. Special approval needed from the advisor. Lab fee: $105. Credit Hours: 3

AUT216 - Automotive Suspension and Steering Systems Course covers suspension and steering system design, operation, maintenance and diagnosis. Emphasis is placed on component diagnosis and maintenance procedures. Laboratory experience provides students the opportunity to use computerized alignment, wheel balance and vibration correction equipment. Restricted to major. Special approval needed from the advisor. Lab fee: $105. Credit Hours: 3

AUT240 - Introduction to Engine Controls A study of automotive engine electronics. Lectures focus on engine control circuits, fuel injection and ignition systems with emphasis on operation, application and diagnosis. Discussion topics include operational strategies, fuel delivery, sensor inputs and actuator outputs. Laboratory includes the use of electronic diagnostic tools for engine performance diagnosis. Prerequisite: AUT 150 & AUT 170 or consent of the department. Restricted to major. Special approval needed from the advisor. Lab fee: $150. Credit Hours: 6

AUT250 - On Board Diagnostics and Emissions The specialized study of automotive fuels, electronic fuel injection systems, and related emission control systems. Lectures focus on the operational and diagnosis of electronic fuel injection systems and emission control systems. Laboratory experience provides the opportunity to study the use of electronic diagnostic tools, specialized equipment, and diagnostic systems. Prerequisites: AUT 150 and AUT 170 or consent of department. Restricted to major. Special approval needed from the advisor. Lab fee: $75. Credit Hours: 3

AUT258 - Work Experience Credit awarded for prior documented automotive industry related work experience. Credit established by program evaluation. Credit may apply only to the program's lower level course requirements unless otherwise determined by the school director. Restricted to major. Credit Hours: 1-30

AUT259 - Occupational Training Credit awarded for prior documented formal training that prepares an individual for entry-level employment. Credit established by program evaluation. Credit may apply only to the program's lower level course requirements unless otherwise determined by the school director. Restricted to major. Credit Hours: 1-40

AUT280 - Automotive Air Conditioning Systems A study of refrigeration systems, temperature controls, and automotive HVAC vacuum/electrical circuits. Emphasis placed on environmental impact

of refrigerants, environmentally safe refrigerant technology and applicable legislation. Laboratory experiences provide the opportunity to study the use of air conditioning system diagnostic tools, refrigerant recovery/recycling equipment, and diagnostic and repair services. Prerequisite: AUT 170. Restricted to major. Special approval needed from the advisor. Lab fee: $75. Credit Hours: 3

AUT299 - Individual Study Provides students with opportunity to develop a special program of study to fit a particular need not met by other offerings. Each student will work under the supervision of a sponsoring faculty. Special approval needed from the department. Credit Hours: 1-16

AUT301 - Automotive and Mobility Industry Ethics This course introduces students to the principles of ethics and proper conduct in the professional academic environment. Considerable time is spent researching and analyzing ethics case studies/dilemmas pertaining to the automotive industry, within an ethical decision-making framework. Oral presentations are based on case studies and are peer-evaluated using specific assessment criteria. Intellectual honesty is practiced through ethical documentation, and citation. Prerequisite: none. Restricted to Automotive Technology students or departmental approval required. Credit Hours: 1

AUT310 - Automotive Technical Communications and Documentation This course engages students in the study of technical communications and documentation skills used by managers and technical experts in the automotive industry. Foundations of technical communication and documentation are followed by the application of automotive industry specific examples. Emphasis will be placed on critical thinking, documentation and communication in the appropriate industry context. Prerequisite: ENGL 101 and CMST 101, or consent of department. Restricted to major. Special approval needed from the advisor. Credit Hours: 3

AUT320 - Automotive Internship Students will participate in a program approved automotive related internship that includes formal instruction, training and/or career related work experiences. Students receive a salary or wages and engage in prearranged assignments related to their academic program and career objectives. Program faculty evaluations, supervisor performance evaluations, and student reports are required. Internship experiences may be in one of the following areas: automotive service technical, engineering, parts, business, management, training, or government agencies. Hours and credits to be individually arranged. Students can take a maximum of 15 hours toward degree. Restricted to major. Special approval needed from the advisor. Credit Hours: 1-6

AUT325 - Automotive Fixed Operations Management An introduction to management of automotive retail fixed operations. A study of the automotive retail industry and environment, developing concepts and methods to improve customer satisfaction along with an increase in market penetration, profits and efficiency are emphasized. Planning of workflow control and human resource management will be included. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: ENGL 101. Restricted to major. Special approval needed from the advisor. Credit Hours: 3

AUT330 - Vehicle Stability and NVH Suspension and braking control systems that provide additional safety to vehicle operation. Topics covered include antilock brakes, traction control, electronic stability assist, electronic power steering, variable power steering, active suspensions, and tire pressure monitoring. Course includes techniques in diagnosing noise, vibration and harshness (NVH) concerns. Restricted to major. Special approval needed from the advisor. Lab fee: $90. Credit Hours: 3

AUT335 - Automotive Data Management Course introduces data management, information presentation, and software applications relevant to the automotive industry through project-based learning exercises. Lab fee: $15. Prerequisite: None. Credit Hours: 3

AUT340 - Drivability and Emission Diagnostics An in-depth study of electronic engine controls and emission systems. Lectures focus on fuel analysis, advanced diagnostics, legislative regulations and new technologies related to engine controls and emission systems. Laboratory activities include the use of advanced diagnostic tools such as oscilloscopes, scan tools, exhaust gas analyzers, and chassis dynamometer. Restricted to major. Special approval needed from the advisor. Lab fee: $180. Credit Hours: 6

AUT345 - Vehicle Computing Solutions, Networking, and Security Course is an in-depth study of recent advancements in vehicle computing systems and network technologies through exploration-based

projects. Topics include vehicle computers and virtualization, vehicle networking, internetworking (V2X), vehicle system and network security, and advanced microcontroller programming. Special approval needed from the advisor. Lab fee: $15. Credit Hours: 3

AUT350 - Automotive Parts Center Management Course provides insight into automotive dealership parts management with emphasis on application to daily work. Studies will focus on interpretations stocking benchmarks and on business management techniques essential to successful dealership parts operations. Prerequisite: none. Restricted to Automotive Technology students or departmental approval required. Credit Hours: 3

AUT355 - Lighting, Convenience, and Safety Systems Course covers theory of operation and diagnosis of standard body electrical systems. Topics include power windows, power door locks, power seats, lighting, instrumentation, cruise control, and supplemental restraints. Emphasis is placed on analysis of electrical diagrams and development of diagnostic techniques. Laboratory provides the opportunity to practice troubleshooting skills. Restricted to major. Special approval needed from the advisor. Lab fee: $150. Credit Hours: 6

AUT358 - Work Experience Credit awarded for prior documented advanced level work experiences related to the automotive industry. Credit for experiences demonstrating progressively higher levels of responsibility and rigorous levels of learning are established by program evaluation. Credit may be applied only to program requirements as determined by the school director. Restricted to major. Credit Hours: 1-30

AUT359 - Education Credit Credit awarded for prior documented educational experiences related to the student's educational objectives. Credit established by program evaluation. Credit may be applied only to program requirements as determined by the school director. Restricted to major. Credit Hours: 1-60

AUT360 - Automotive Transmissions and Transaxles Course covers the theory of operation, diagnosis, and repair of modern transmissions. The course will break down the transmission into basic components and provide the depth required for complete understanding of the specific transmission. The laboratory will allow students to understand correct service procedures, and test the transmission on a dynamometer. Restricted to major. Special approval needed from the advisor. Lab fee: $150. Credit Hours: 6

AUT370 - Automotive Introductory Welding and Fabrication Course covers introductory topics of metal cutting, welding and shaping applicable to the automotive industry practice. Lectures focus on setup, operation and maintenance of equipment such as oxygen-acetylene systems as well as Stick, MIG, and TIG welders. Laboratory activities include the use of equipment to develop and improve skills. Not for graduate credit. Restricted to major. Special approval needed from the advisor. Lab fee: $120. Credit Hours: 3

AUT380 - Automotive Industry Process Improvement A study into several of the automotive wholesale and retail industry approaches to system processes for service production, component production, quality control, and regulatory control. Topics will include organizational systems utilized, application of the systems, and the theories to controlling and improving of the systems to ensuring project success. These areas are critical to the assembly, sales and service segments of the automobile industry. Prerequisite: none. Restricted to Automotive Technology students or departmental approval required. Credit Hours: 3

AUT390 - Network Systems and Vehicle Electronics A study of specialized body electrical systems. Topics include data communication networks, theft deterrent systems, automatic temperature controls, and audio systems. Emphasis is placed on current and developing technologies. Laboratory experiences provide the opportunity to use scan tools, oscilloscopes, and on-board self-diagnostic systems. Restricted to major. Special approval needed from the advisor. Lab fee: $60. Credit Hours: 3

AUT410 - Diagnostics and Problem Solving This course encompasses multiple technical areas of the vehicle with specific emphasis on diagnostic strategies and routines. Students engage in and enhance diagnostic thought and problem solving processes. The course utilizes problem-based learning where students experience real-world diagnostics through the use of case studies and various diagnostic scenarios. Prerequisite: None. Restricted to Major. Special approval needed from the advisor. Credit Hours: 3

AUT415 - Automotive Dealership Variable Operations Management An in-depth study of dealership new and pre-owned vehicle sales operations and their management practices. Topics include the foundation and analysis of department operations, strategies of management, and application of practices. Finance and insurance, leasing, sourcing, inventory control, marketing, and consumer regulatory practices are discussed. Special approval needed from advisor. Credit Hours: 3

AUT420 - Automotive Industry Project This course provides the student an opportunity to investigate contemporary issues within the automotive, truck, equipment, and related industries. The student will engage in an industry related project to support their learning objectives and program goals. The student will work with an assigned instructor to identify outcomes and assessment of the project. Projects will include a written assignment. Credit hours based upon the scope of the project are determined prior to registration. Students can take a maximum of 15 hours toward the degree. Restricted to major. Special approval needed from the advisor. Credit Hours: 1-6

AUT430 - Automotive Investigations Provides opportunities for students to conduct research in such areas as: green vehicle technology, emissions and clean air testing; diagnostic software debugging; diagnostic methods; development of training information; alternative fuel systems; business operations; management/marketing practices; and production systems. Independent study. Student can take a maximum of 15 hours toward degree. Restricted to major. Special approval needed from the advisor. Credit Hours: 1-6

AUT435 - Automotive Financial Management and Operations This course will provide insight into the applied analysis and management of automotive retail dealership financial operations. Studies will focus on fixed and variable operations with emphasis on manufacturer/dealer performance expectations, and management techniques essential to successful operations. Not for graduate credit. Special approval needed from the advisor. Credit Hours: 3

AUT440 - Diesel Engine Performance and Emissions An in-depth study of electronic diesel engine controls and emission systems. Lectures focus on electronic fuel and intake air system controls, advanced diagnostics, legislative regulations and new technologies related to diesel engine controls and emission systems. Laboratory activities include the use of advanced diagnostic tools and equipment. Restricted to major. Special approval needed from the advisor. Fee: $180. Credit Hours: 6

AUT445 - Medium/Heavy Duty Commercial Vehicle Systems Course encompasses commercial vehicle chassis and body systems related to medium and heavy duty on-road vehicles. Students engage in body/chassis system failures, diagnostic strategies and root causal issues. Class is based on Symptom to System to Component to Cause (SSCC) strategy to determine failure and repair procedures. Course utilizes problem-based learning through the use of lab vehicles, experiments and exploratory research. Not for graduate credit. Restricted to major. Special approval needed from the advisor. Lab fee: $120. Credit Hours: 3

AUT450 - Hybrid and Electric Vehicle Technology This course introduces and investigates hybrid electric and electric vehicle technologies through lecture and laboratory demonstrations. Emphasis will be placed on developing an understanding of the functions of hybrid/electric components and subsystems, the diagnosis and maintenance of electrical subsystems, and high-voltage/high current safety practices. Prerequisite: AUT 250 or consent of department. Special approval needed from the advisor. Fee: $120. Credit Hours: 3

AUT455 - Electric Vehicle Propulsion Course investigates electric vehicle propulsion system technologies through lecture and laboratory activities/experimentation. Emphasis placed on the functions and control of electric components/subsystems, diagnosis and management of electrical subsystems, and high-voltage/high-current service practices. Special approval needed from the advisor. Lab fee: $180. Credit Hours: 6

AUT457 - Vehicle Electrification Technology and Environmental Impact This course introduces the students to advancements in hybrid and electric vehicle technology, including motor design, power inversion, high voltage safety, storage and delivery, electronic braking, heating and cooling systems, and system integration with conventional electronics and engine systems. In addition to vehicle technology, the course addresses important topics and issues such as environmental impacts, current and future

energy sources, and electrical infrastructure concerns and solutions. Prerequisites: AUT 120, AUT 150, AUT 170 with grades of C or better. Credit Hours: 3

AUT460 - Automotive Dealership Operations in the Age of Mobility In depth study of new vehicle dealership culture and business practices. Manufacturer and consumer influence to each department, how departments and the business have adapted and need to adapt in the changing retail environment. New department trends to meet changing consumer desires, regulatory policy, corporate policy, business practices, and how operational/efficiency business technologies, and transportation technologies will influence the industry are discussed. Special approval needed from advisor. Credit Hours: 3

AUT470 - Autonomous and Intelligent Mobility System Technology This course investigates technologies used for vehicular and mobility system autonomous and intelligent controls. Topics include autonomous and intelligent systems, system controls, system intelligence, adaptation, diagnostics, and serviceability design. Not for graduate credit. Restricted to Automotive Technology students or departmental approval required. Lab fee: $120. Credit Hours: 3. Credit Hours: 3

AUT475 - Special Projects in Automotive Technology Investigation of contemporary issues within the automotive, ground transportation and power generation fields. Example subjects include emission laws and regulations; passenger and pedestrian safety; inspection, maintenance, diagnostic, and servicing procedures; consumer protection legislation; diagnostic systems; waste material regulations; industry wholesale and retail business operations and procedures. Independent study. Student can take a maximum of 15 hours toward degree. Restricted to major. Special approval needed from the advisor. Credit Hours: 1-6

AUT480 - Alternative Fueled Vehicles Study of alternative fuel and energy systems, fuel delivery systems, alternative propulsion systems, hybrid and alternative propulsion. Study of energy conversion, battery design, fuel cells, renewable and fossil fuel. Environmental concerns with current legislative actions will be discussed. Laboratory includes demonstrations with alternative fueled propulsion. Not for graduate credit. Restricted to major. Special approval needed from the advisor. Lab fee: $60. Credit Hours: 3

AUT485 - Automotive Warranty Administration and Customer Relations This course investigates the various federal and state laws and regulations impacting the operations of the automotive wholesale and retail business. There will be specific concentration on the warranty policies of automotive manufacturers, warranty decisions, law covering warranties, and the legal aspects of product campaigns. Emphasis will be placed on the use of the warranty and goodwill process to increase customer satisfaction. Not for graduate credit. Restricted to major. Special approval needed from the advisor. Credit Hours: 3

AUT490 - Comprehensive Vehicle Diagnostics Course encompasses all technical areas of the vehicle with emphasis on diagnostic strategies and routines. Students engage in systematic diagnosis following the Symptom to System to Component to Cause (SSCC) strategy to determine the root cause of failure. Course utilizes problem-based learning through the use of lab vehicles, experiments and exploratory research. Not for graduate credit. Prerequisites: AUT 340, 440, or consent of department. Special approval needed from advisor. Lab fee: $180. Credit Hours: 6

Automotive Technology Faculty

Behrmann, Michael, Associate Professor and Chair, M.S.Ed., Southern Illinois University Carbondale, 1995; 1988. Automotive retail and wholesale business; Industry careers and diversity; Experiential education.

Boyle, Sean M., Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1996; 1994. Automotive technology; Videography; Remote and online education; Vehicle diagnostics; Powertrain and driveline systems.

Collard, Rodney, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1990; 1986. Automotive technology; Steering and braking systems; Alternative fuels; Fabrication and welding.

Croxell, Andrew, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 2010; 2008. Automotive Technology; Fixed Operations Management; Technical Communications.

Goro, Todd, Assistant Instructor, B.S., Southern Illinois University Carbondale, 1997; Automotive computers, networking, security and software applications; Automotive Data Management.

Grant, Todd, Assistant Instructor, B.S., Southern Illinois University Carbondale, 1987; 2016. Automotive fixed and variable operations; Automotive management; Automotive IC engines; A/C systems.

Heathcoat, Anthony, Assistant Professor, M.S.Ed., Southern Illinois University Carbondale, 2020; 2017. Automotive technology, electronics, drivetrains.

Heisner, Blaine, Associate Professor, M.S.Ed., Southern Illinois University, 2010; 2007. Automotive IC engines; Electronic engine controls; Alternative fuels.

Janello, Tim, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 2008; 2005. Automotive technology; Diesel technology; Emission testing; Dynameter testing.

Johnston, Alicia, Assistant Instructor, B.S., Southern Illinois University Carbondale, 2017; 2018. Automotive Technology; Electric and hybrid vehicle; emission and drivability diagnostics; IC engines; A/C systems.

Komnick, Benjamin, Assistant Professor, M.S.Ed., Southern Illinois University Carbondale, 2004; 1999. Automotive technology; Electrical, electronic, and network systems.

Meckfessel, Kent E., Assistant Professor, B.S, Southern Illinois University Carbondale, 1996; 1992. Automotive technology; electronics; NVH; Undercar chassis; Steering and braking systems.

Pickerill, Ken, Associate Instructor, M.S.Ed., Indiana State University, 2008; 2013. Automotive technology; Emission and drivability diagnostics; NVH

Rizzo, Lana, Assistant Instructor, B.S., Southern Illinois University Carbondale, 1988; 2018. Automotive electronics and network systems.

Sing-Gupta, Vidya, Instructor, Ph.D., Southern Illinois University Carbondale, 1988; 1992. Automotive technical communications; Automotive industry ethics.

Suda, Jessica L., Assistant Professor, M.S., Southern Illinois University Carbondale, 2018; 2015. Electric and hybrid vehicle technology; Emission and drivability diagnostics; Automotive fault detection and isolation systems.

Talley, Eugene R., Associate Professor, M.B.A., Baker College, 2008; 2009. Automotive business and management; Automotive technology; Industry careers; Experiential education.

Tillman, Andrew, Assistant Instructor, B.S., Southern Illinois University Carbondale, 2011; 2019. Automotive Technology; Automotive IC engines; A/C systems; Emission and drivability diagnostics.

Emeriti Faculty

Gilbert, David W., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 2006.

Greer, Jack, Assistant Professor, Emeritus, M.S.Ed., Southern Illinois University Carbondale, 1997.

Jeralds, Lawrence E., Assistant Professor, Emeritus, M.S., Southern Illinois University Carbondale, 1988.

Kazda, Joseph G., Assistant Professor, Emeritus, M.S.Ed., Southern Illinois University Carbondale, 1965.

Simpson, Jerry, Assistant Professor, Emeritus, M.S., Colorado State University, 1966.

Tate, Ralph F., Associate Professor, Emeritus, M.S., Air Force Institute of Technology, 1991.

White, James E., Assistant Professor, Emeritus, B.S.Ed., Southern Illinois University Carbondale, 1961.

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