Course Descriptions for all AUTOMOTIVE TECHNOLOGY courses
(in order by semester)

AUTO 101 Automotive Engines (Cr4) (3:2)
Operational principles of basic engine systems and overhaul of the automotive engine; emphasis on proper use of precision measuring instruments and rebuilding tools, ability to locate and interpret engine specifications, engine diagnosis, and correct repair procedures. Additional course fees: $10.00. Offered fall semester only.

AUTO 103 Automotive Brakes (Cr3) (3:0)
Theory, principles of operation, and terminology of brake systems designs, emphasis on system inspection, accurate malfunction diagnosis, location and interpretation of specifications, proper use of special tools and machining equipment for disc/drum and standard/power systems, and correct repair procedures. Additional course fees: $10.00. Offered fall semester only.

AUTO 104 Automotive Suspension and Alignment (Cr3) (3:0)
Theory, principles of operation, and terminology of suspension system designs; emphasis on system inspection and accurate malfunction diagnosis, parts replacement procedures, location and interpretation of specifications, measuring and adjustment of alignment angles, wheel balancing, correct use of special tools and equipment, and correct repair procedures. Additional course fees: $10.00. Offered fall semester only.

AUTO 105 Automotive Electrical Systems (Cr3) (3:0)
Electricity and magnetism, basic DC circuits used in automotive electrical systems, use of meters, wiring diagrams, automotive wiring repair, location and interpretation of specifications, semiconductors, microprocessors and selected electronic devices used in automobiles. Additional course fees: $10.00. Offered fall semester only.

AUTO 106 Pennsylvania Safety Inspection Certification (Cr1) (1:0)
A 12 hour Pennsylvania Bureau of Motor Vehicles program designed to lead to certification by the state as an official inspection mechanic. Successful completion of the course and meeting all state requirements will lead to becoming a state licensed safety inspection mechanic. Coreq.-AUTO/ASEP/AUTC 103 and 104. Offered fall semester only.

CMTH 102 Speech Communication (Cr3) (3:0)
Basic principles of communication theory and practice, including speech preparation and delivery, and the effective use of critical thinking and listening in relation to intrapersonal, interpersonal, intercultural, and group communication.
AUTO 145 Winter Practicum I (Cr2) (0:0:20 hrs/wk practicum)
Work experience at a sponsoring dealership, approved automotive service facility or the advanced technology lab on campus; tasks consistent with the course work of the preceding semester. Pre- or coreq. - AUTO 103, 104 and 105. Additional course fees: $10.00.

AUTO 121 Automotive Air Conditioning & Heating Systems (Cr3) (3:0)
Operation, diagnosis, and servicing of auto air conditioning systems and components; emphasis on electronic climate control system troubleshooting and repair. Prereq - AUTO/ASEP/AUTC 105. Additional course fees: $10.00. Offered spring semester only.

AUTO 125 Advanced Automotive Electronic Systems (Cr3) (3:0)
Theory, operation, diagnosis and repair of starting, charging, ignition, computer control and electrical-electronic accessory systems to include electronic cruise control, body controls, driver information systems, and entertainment systems. Prereq. - AUTO 105. Additional course fees: $10.00. Offered spring semester only.

ENGL 101 English I (Cr3) (3:0)
A writing-intensive course giving close attention to the process of writing through networked workshops and conferences involved in preparation and revision of drafts. The course develops skills in logical and focused writing, through development of a main point by means of supporting ideas and evidence. In addition, students learn to integrate information from secondary sources through the use of summary, paraphrase, and direct quotation in various forms of thesis-based writing. Prereq. - Competence in reading and writing as determined by English Department through testing and/or course work.

MATH 103 Applications in Mathematics (Cr3) (3:0)
Applications of mathematics emphasizing problem solving and reasoning. Core: QL (A.A.S. only).

AUTO 175 Summer Practicum (Cr4) (0:0:320 practicum)
Work experience at a sponsoring dealership, approved automotive service facility or the advanced technology lab on campus; tasks consistent with the course work of the preceding semester. Pre- or coreq. - AUTO 101, 103, 104, 105, 121 and 125. Additional course fees: $10.00.

AUTO 203G Automotive Shop Management Practices (Cr3) (3:0)
Principles of operation for today's automotive repair center to include staffing, customer relations, personnel management, schedule of work and workers, parts inventory control procedures, job costs, supervisor roles in cost control, business law with special applications to the automotive repair field, marketing, and advertising the automotive repair services. Prereq.- AUTO 175 and ENGL101. Also available through Online Learning.
AUTO 211 Automotive Fuel and Emission Systems (Cr3) (2:2)
Theory, operation, diagnosis of malfunctions of electronically controlled automotive emission control systems; emphasis on location and interpretation of specifications, accurate diagnosis of malfunctions by proper use of test equipment, and correct repair procedures. Prereq.-AUTO 125 and 175. Additional course fees: $10.00. Offered fall semester only.

AUTO 221 Advanced Engine Performance (Cr3) (2:2)
Diagnosis, adjustment, and repair of the systems which affect engine performance; emphasis on synthesizing skills learned in electronic systems, fuel and emission control systems courses, accurate use of diagnostic equipment, proper tune-up procedures, use of specifications and interpretation of test results to enable the rapid isolation of malfunctions of a particular system or combination of systems in the automobile. Prereq. - AUTO 105, 125 and 175; Pre-or coreq.- AUTO 211. Additional course fees: $10.00. Offered fall semester only.

AUTO 224 Advanced Automotive Studies (Cr3) (3:0)
Topics related to recent developments or advanced systems currently in production on GM/DaimlerChrysler vehicles. Prereq. - AUTO 101, 103, 104, 105, 121, 125 and 175. Additional course fees: $10.00. Offered fall semester only.

ENGL 151 English II (Cr3) (3:0)
Students continue to develop the academic writing and critical reading skills begun in English I. Students may elect to work on introduction to literature (L), report writing (R), or technical writing (T). Prereq.- ENGL 101. Also available through Online Learning. ENGL 151L (literature option) is approved for the Honors Program and has a designated as a Diversity (D) core course.

PHYS 152 Physical Science II (Cr3) (2:2)
A study of basic physics and chemistry including properties of matter, force and motion, work and machines, heat and combustion, electricity and magnetism, mechanics of liquids and gases, basic chemical reactions, atomic energy and radiation. Core: SCI.

AUTO 245 Winter Practicum II (Cr2) (0:0:20 hrs/wk practicum)
Work experience at a sponsoring dealership or approved automotive service facility; tasks consistent with the course work of the preceding semester. Prereq. - AUTO 125, 211, and AUTO/ASEP/AUTC 221. Additional course fees: $10.00. Offered spring semester only.

AUTO 225 Mechanical Drive Train Systems (Cr4) (3:2)
Principles of operation, diagnosis, and repair of clutches, manual transmissions, drivelines, differentials, and front wheel drive units with emphasis on understanding the principles of torque multiplication and speed reduction through the use of gearing, location and interpretation of specifications, and correct troubleshooting and repair procedures. Prereq.- AUTO 125 and 175. Additional course fees: $10.00.
AUTO 226 Automatic Transmission Systems (Cr4) (3:2)
Theory of operation, diagnosis, maintenance, and overhaul procedures of the automatic transmission with a major emphasis on hydraulic systems and electronic controls used on automatic transmissions. Prereq.- AUTO 125 and 175. Additional course fees: $10.00.

GEOG 121 Environmental Sustainability (Cr3) (3:0)
This course used scientific principles of ecology to analyze human impact on the natural environment. It examines population change, resource consumption, environmental modification, and their past and present relationships. With economics, politics, and culture providing context, the course explores possible paths to the sustainability of human society in the natural world. Course numbers ending with a G are Writing Intensive (WI). Also available through Online Learning. Core: SSHB, WI, D

HUMA 121 The American Work Experience (Cr3)(3:0)
The American Work Experience is an interdisciplinary humanities course using history, literature and the arts, and other cultural studies to deepen the student's knowledge and understanding of over two centuries of Americans at work. Course numbers ending with G are Writing Intensive (WI). Core: AH, D.