Automotive Department

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http://www.byui.edu/Automotive/

The Automotive Program prepares students for a wide range of careers in a fast-growing, rapidly changing industry.

The demand for skilled, educated, and honest professionals continues to intensify as the complexity of the modern automobile increases. As a result, our graduates are highly sought after and well-compensated. Since every household and business in America is affected by the transportation industry, career opportunities are plentiful.

The Automotive Program offers two degree programs:

• B.S. in Automotive Technology Management (4 yr - #411)

This degree prepares graduates for career opportunities such as service technician, automotive service manager, fleet manager, service advisor, manufacturer representative, business owner or entrepreneur, teacher, and manufacturer service engineer.

• A.A.S. in Automotive Technology (2 yr - #346)

This degree prepares students for a career as an automotive technician or a related position.

Automotive courses: Department classes are "hands-on" and interactive. Much of the required course time is spent in labs, working on vehicles with real problems. BYU-Idaho's automotive facility is well equipped with state-of-the-art equipment where students can experience the latest technology and leave well-prepared to begin a successful career.

Business Management courses: Along with the automotive technical courses, four-year students take business management courses that prepare them to compete in the automotive business world. These courses are taught by business professors. The combination of both technical and business skills presents graduates with numerous opportunities in the automotive industry.

Internships are required and allow students to gain industry experience as part of their training. They provide an opportunity to enhance the knowledge learned in the classroom.

Elective courses: The Automotive Program also offers elective classes to non-majors where they learn consumer awareness and basic automotive maintenance skills. These courses are open to all university students.

Special costs: A lab fee of $60 per semester is required for automotive courses only. This fee provides coveralls, shop towels, and the cleaning of these items. Majors are expected to have at least a basic set of hand tools and a DVOM (digital volt/ohm meter). See the tool list link on the program website.

GPA requirements: In order to qualify for graduation with either automotive degree, students must earn at least a 'C' grade or higher in their major coursework.

AAS in Automotive Technology (346)

Take required Foundations courses

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C

Take these courses:	
AUTO 155	4
AUTO 165	4
AUTO 221	3
AUTO 225	6
AUTO 235	6
AUTO 250	6
AUTO 265	6
AUTO 298	1
AUTO 340	3
AUTO 380	6
	45

Take 1 course:	
ME 105	4
ME 131	2
	2
Take 1 course:	
B 220	3
B 283	3
B 364	3
	3

Take this course:	
PH 101	4
	4
Optional course	
AUTO 291	0.5

Program Notes:

Total Major Credits=54

This major is available on the following tracks:

Fall-Winter---- YES Winter-Spring---- YES Spring-Fall---- NO

BS in Automotive Management (411)

Take required Foundations courses

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C

Take these courses:	
AUTO 155	4
AUTO 165	4
AUTO 221	3
AUTO 225	6
AUTO 235	6
AUTO 250	6
AUTO 265	6
AUTO 298	1
AUTO 340	3
AUTO 380	6
	45
Optional course:	
AUTO 291	0.5

Take these courses:	
ACCTG 180	3
AUTO 398	1
B 364	3
CIT 140	3
ECON 112	3
FDMAT 221	3
	16
Apply to and take IBC Group courses. (These courses may not be taken as stand alone courses. They must be taken as the 12 credit IBC course	
B 301	3
B 321	3
B 341	3
B 361	3
	12

Take 1 courses:	
ME 105	4
ME 131	2
	2
Take 1 course:	
B 220	3
B 275	3
B283	3
	3

Program Notes:

Total Major Credits=78

This major is available on the following tracks:

Fall-Winter---- YES Winter-Spring---- YES Spring-Fall---- NO

Automotive Pre-approved Clusters

Automotive Technology

Take these courses:		
AUTO 100	Beginning Auto	1
AUTO 118	Auto Maintenance	1
Take 2 courses:		
AUTO 155	Brakes, Suspension & Alignment	4
AUTO 225	Automotive Electricity/Electronics	6
AUTO 235	Auto Engine Performance	6
	Total Credits	**12**

Course Descriptions — Credits*

AUTO 100 Auto Maintenance I (1.0:1:0)
Prerequisite: None.
This class is a basic consumer-awareness and career exploration course. It is designed to teach students about how their automobiles work and how to maintain them. They will also be introduced to career opportunities in the automotive field. Some of the course time will be spent in the classroom, while some will be spent working in the lab with small groups.
(Fall, Winter, Spring)

AUTO 118 Auto Maintenance II (1.0:0:2)
Fee: $10.00
Prerequisite: Auto 100 or concurrent enrollment in Auto 100 or consent of instructor.
This is a lab-only experience designed to teach students how to perform maintenance and basic repairs on their own automobiles. Students will learn skills through demonstrations and other assignments; they will then practice those skills on their own vehicles.
(Fall, Winter, Spring)

AUTO 155 Steering, Suspension and Brakes (4.0:2:7)
Fee: $60.00
A class oriented towards automotive majors that teaches service and repair procedures on the steering, suspension, and brake systems that are found on today's cars and light trucks.
(Fall, Spring)

AUTO 165 Manual Drive Trains (4.0:2:7)
Prerequisite: Majors Only.
Principles and theory, diagnosis and repair of clutch mechanisms, manual transmissions and transaxles, transfer cases, drive shafts, and drive axles.
(Winter)

AUTO 221 Air Conditioning & Heating (3.0:2:3)
Prerequisite: Automotive major or consent of Instructor, Auto 225
Wiring diagrams, vacuum circuits, climate control systems, air conditioning theory, and their computer controls diagnosis and repair of all related systems.
(Fall, Spring)

AUTO 225 Automotive Electrical Systems (6.0:4:8)
Prerequisite: Automotive major or consent of instructor.
Basic electricity, automotive electrical circuits, starting systems, charging systems, accessory circuits, problem diagnosis, repair, and adjustment.
(Fall, Spring)

AUTO 235 Engine Performance I (6.0:4:8)
Fee: $60.00
A class oriented towards automotive majors that teaches the operation, diagnosis and service of automobile and light truck ignition, fuel, and the design and service of emission systems. An introduction to computerized engine controls is an important portion of this class as well.
(Winter)

AUTO 250 Major Engine Repair (6.0:3:9)
Fee: $60.00
Prerequisite: Automotive Majors only and successful completion of Auto 165, Auto 235.
This course teaches the theory, operation, diagnosis and repair of automotive engines.
(Winter)

AUTO 265 Automotive Transmissions (6.0:3:9)
Prerequisite: Auto 165, Auto 225, and Auto 235.
Theory of operation, diagnosis and repair of common automatic transmissions used in passenger cars and light trucks.
(Winter)

AUTO 290 Independent Study (1.0-3.0:0:0)
Prerequisite: Coordinate with Department Chair.
Special problems in automotive skills. Credit and schedule arranged with Auto department chairman.
(Fall, Winter, Spring)

AUTO 291 Certification (0.5:1:0)
Prerequisite: Automotive majors only.
This class covers the basic information and procedures necessary to prepare to take the national ASE certification tests. Students will discuss test methodology, as well as take practice certification tests.
(Fall, Winter)

AUTO 298 Automotive Internship (1.0:0:0)
Prerequisite: Coordinate with Justin Miller.
Twelve consecutive weeks of supervised on-the-job training, totaling at least 200 hours. Required for all automotive majors. Conditions of internship are handled on an individual basis by department intern coordinator.
(Fall, Winter, Spring)

AUTO 340 Automotive Alternate Fuel Systems (3.0:2:2)
Prerequisite: Successful completion of Auto 225 and Auto 235 or instructor consent.
This course discusses the newest information of today's fuels and alternative power sources. Hybrid systems and alternate fuels such as ethanol, methanol, diesel, bio-fuel, will be the focus of the class. System comparisons, operation of these systems and how they impact the transportation industry will be explored as well.
(Winter)

AUTO 380 Engine Performance II (6.0:4:8)
Fee: $60.00
Prerequisite: Auto 225, Auto 235
This course of study is electronic engine control & management systems. Special emphasis will be placed on advanced electronic engine controls, theory of operation, and conditions related to failures. The understanding of these systems will build competence and assist in quality of work. Lab time will be devoted to understanding, and using a variety of test equipment.
(Fall, Spring)

AUTO 398 Automotive Management Internship (1.0:0:0)
Prerequisite:Complete as least 16 credits of Automotive course work, coordinate with Troy Spratling.
This is an internship experience for management training/assistant management positions in the automotive service world. Students will find and work in such a position for at least 250 hours during any semester of their choice in order to receive credit. Through this experience students will gain a better understanding of what the management side of the automotive industry is like. Students will be required to complete some forms at the start, during and at the completion of this course.

* Credit Description (Credit Hours : Lecture Hours per week : Lab Hours per week)