

Automotive Systems Technology

FALL 2008

[A60160]; Degree (Day); [D60160] Diploma (Day); [C60160] Certificate (Day)

The Automotive Systems Technology curriculum prepares individuals for employment as automotive service technicians. It provides an introduction to automotive careers and increases student awareness of the challenges associated with this fast and ever-changing field.

Classroom and lab experiences integrate technical and academic course work. Emphasis is placed on theory, servicing, and operation of brakes, electrical/electronic systems, engine performance, steering/suspension, automatic transmission/transaxles, engine repair, climate control and manual drive trains.

Upon completion of this curriculum, students should be prepared to take the ASE exam and be ready for full-time employment in dealerships and repair shops in the automotive service industry.

COMPETENCIES

Randolph Community College is committed to continuous improvement through program evaluation. One part of the evaluation is to assess program competencies. While our program contains many competencies for students to achieve, each year a select few are chosen for assessment purposes. This year, the Automotive Systems Technology Program competency assessment will focus on these:

1. Determine the cause of an illuminated Malfunction Indicator Light (MIL).
2. Determine the cause and choose the correction of vehicle power train problems.
3. Successfully diagnose and repair the cause of vehicle ride problems.
4. Interpret wiring diagrams.
5. Diagnose the cause of climate control problems.

COURSE INFORMATION

Major Courses

Automotive Technology (Degree - 21 courses; Diploma - 17 or 18 courses; Certificate - 5 courses) - Degree and diploma students study the various areas of the automobile and learn to disassemble, repair and reassemble components dealing with the brake systems, electrical systems, and suspension and steering systems. Degree and diploma students also study engine performance and automotive. Degree students also take classes in advanced engine performance, automatic and manual transmissions, and heating and air conditioning. Certificate students study engine repair, brake systems, and automotive climate controls.

Cooperative Education (Degree - 2 courses) - Degree students have the option of choosing work experience with a college-approved employer in place of comparable on-campus classes.

General Education Courses

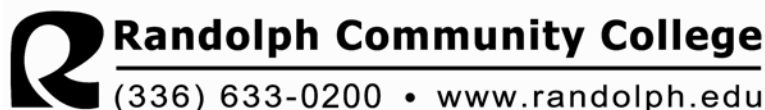
Electives (Degree - 2 courses) - Degree students are required to take a 3-credit-hour social/behavioral science course and a 3-credit-hour humanities/fine arts course.

English (Degree & Diploma - 2 courses) - Degree and diploma students study the writing process and professional communication skills.

Physics (Degree - 1 course) - This algebra-based course introduces fundamental physical concepts as applied to industrial and service technology fields.

Faculty Advisor

The faculty advisor for Automotive Systems Technology is Don Ashley, jdashley@randolph.edu, (336) 633-0320.



AUTOMOTIVE SYSTEMS TECHNOLOGY CURRICULUM BY SEMESTERS

		Hours/Week		Sem. Hrs	
		Class	Lab	Wk. Exp.	Credit
First Year: Fall Semester					
AUT 110	* Basic Automotive Technology	2	2	0	3
AUT 116	* Engine Repair	2	3	0	3
AUT 116A	* Engine Repair Lab	0	3	0	1
AUT 161	* +Basic Automotive Electricity	4	3	0	5
CIS 113	* Computer Basics	0	2	0	1
ENG 111	* Expository Writing	<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
		11	13	0	16
First Year: Spring Semester					
AUT 163	* Advanced Automotive Electricity	2	3	0	3
AUT 163A	* Advanced Automotive Electricity Lab	0	3	0	1
AUT 141	* +Suspension and Steering	2	3	0	3
AUT 141A	* +Suspension and Steering Lab	0	3	0	1
AUT 151	* +Brake Systems	2	3	0	3
AUT 151A	* +Brake Systems Lab	0	3	0	1
ENG 114	* Professional Research & Reporting	<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
		9	18	0	15
First Year: Summer Session					
PHY 121	* Applied Physics I	3	2	0	4
AUT 181	* Engine Performance 1	2	3	0	3
AUT 181A	* Engine Performance 1 Lab	0	3	0	1
<i>or</i>					
COE 112	* Cooperative Work Experience I	<u>0</u>	<u>0</u>	<u>20</u>	<u>2</u>
		5	8	0	8
		3	5	<i>or</i> 20	9
Second Year: Fall Semester					
AUT 183	Engine Performance 2	2	6	0	4
AUT 231	Manual Drive Trains/Axles	2	3	0	3
AUT 231A	Manual Drive Trains/Axles Labs	0	3	0	1
AUT 285	Intro to Alternative Fuels	2	2	0	3
---	Humanities/Fine Arts	<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
		9	14	0	14
Second Year: Spring Semester					
AUT 281	Advanced Engine Performance	2	2	0	3
AUT 221	Automatic Transmissions	2	3	0	3
AUT 221A	Automatic Transmissions Lab	0	3	0	1
AUT 283	Advanced Automotive Electronics	2	2	0	3
---	Social/Behavioral Science	<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
		9	10	0	13
Second Year: Summer Session					
AUT 171	Automotive Climate Controls	2	4	0	4
<i>or</i>					
COE 122	Cooperative Work Experience II	<u>0</u>	<u>0</u>	<u>20</u>	<u>2</u>
		2	4	0	4
		0	0	<i>or</i> 20	2

* Courses required for diploma
 + Courses required for certificate

TOTAL SEMESTER HOURS CREDIT FOR DEGREE: 68-71
TOTAL SEMESTER HOURS CREDIT FOR DIPLOMA: 39 or 40
TOTAL SEMESTER HOURS CREDIT FOR CERTIFICATE: 13

Visit RCC's website: www.randolph.edu
 An application for admission is available to be downloaded from the web