

21250 Stevens Creek Blvd. Cupertino, CA 95014 408-864-5678 www.deanza.edu Academic Year

2019 - 2020

# **Automotive Technology**

An entry-level program for full-time day students

Business, Computer Sciences and Applied Technologies Division Bldg. L1, Room L14 408-864-8797 Counseling and Advising Center Student and Community Services Bldg., 2nd Fl. 408-864-5400

Please visit the Counseling and Advising Center to apply for degrees and for academic planning assistance.

# Certificate of Achievement Requirements

Completion of all major courses with a "C" grade or higher, or with a "Pass" if the course was taken on a Pass/No Pass (P/NP) basis and the "Pass" is equal to a "C" grade or higher.

Note: A maximum of six (6) quarter units may be transferred from other academic institutions.

#### Certificate of Achievement-Advanced Requirements

- Completion of all major courses with a "C" grade or higher, or with a "Pass" if the course was taken on a Pass/No Pass (P/NP) basis and the "Pass" is equal to a "C" grade or higher.
- Demonstrated proficiency in English and mathematics as evidenced by eligibility for EWRT IA or EWRT IAH or ESL 5 and eligibility for MATH 114.

Note: A maximum of 18 quarter units may be transferred from other academic institutions.

#### A.A./A.S. Degree Requirements

- Completion of all General Education (GE) requirements (32-43 quarter units) for the A.A./A.S. degree. GE units must be completed with a minimum 2.0 GPA ("C" average).
  Completion of all major courses with a "C" grade or higher, or
- Completion of all major courses with a "C" grade or higher, or with a "Pass" if the course was taken on a Pass/No Pass (P/NP) basis and the "Pass" is equal to a "C" grade or higher. Major courses can also be used to satisfy GE requirements (except for Liberal Arts degrees).
  - Note: A maximum of 22 quarter units from other academic institutions may be applied toward the major.
- Completion of a minimum of 90 degree-applicable quarter units (GE and major units included). All De Anza courses must be completed with a minimum 2.0 GPA ("C" average). All De Anza courses combined with courses transferred from other academic institutions must be completed with a minimum 2.0 GPA ("C" average).

Note: A minimum of 24 quarter units must be earned at De Anza College.

# **Advanced Automotive Technology**

#### Certificate of Achievement

This Certificate of Achievement prepares students for an entrylevel position in the automotive repair industry in advanced automotive electrical and environmental concepts.

Program Learning Outcomes - upon completion, students will be able to:

- Demonstrate understanding of general advanced automotive electrical/environmental concepts as they relate to automotive service, diagnosis and repair.
- 1. Meet the requirements for this certificate level.
- 2. Complete the following.

AUTO 60K	Automotive Body Electrical Systems	4.5
AUTO 66	Automotive Air Conditioning	4.5
AUTO 67A	Hybrid Electric Vehicles	4.5

# **Automotive Technology**

Certificate of Achievement-Advanced (Options A - C)

Complete the course requirements for the certificate option of your choice.

# Option A: Automotive Machining and Engine Repair

This Certificate of Achievement-Advanced prepares students for an entry-level position in the automotive repair industry in engine diagnostics.

Program Learning Outcomes - upon completion, students will be able to:

- Demonstrate an application of four-stroke engine theory, basic safe machining practices, estimates and repair orders and engine assembly.
- Identify basic electrical circuits and diagnose automotive electrical circuit systems.
- Apply the basic principles of physics as they work in the automotive industry.
- Demonstrate knowledge of the job procurement process and hazardous materialshandling in the automotive industry.
- 1. Meet the requirements for this certificate level.
- 2. Complete the following.

AUTO 53A	Automotive Mechanisms	4
AUTO 53B	Automotive Electromechanical Systems	2
AUTO 57A	Career Research and Employment	
	in the Automotive Industry	2
AUTO 94A	Principles of Four Stroke Cycle	
	Gas and Diesel Engines	6
AUTO 94B	Automotive Machining and Engine Service	6
AUTO 94C	Automotive Machining and Engine Service	6
AUTO 94D	Automotive Machining and Engine Service	6
AUTO 94E	Automotive Machining and Engine Service	6
AUTO 94F	Automotive Machining and Engine Service	6
	Total Units Required	44

#### Option B: Automotive Engine Performance

This Certificate of Achievement-Advanced prepares students for an entry-level position in the automotive repair industry.

Program Learning Outcomes - upon completion, students will be able to:

- Diagnose basic electrical, engine performance and emissions systems.
- Identify basic electrical circuits and diagnose automotive electrical circuit systems.
- Apply the basic principles of physics as they work in the automotive industry.
- 1. Meet the requirements for this certificate level.
- 2. Complete the following.

AUTO 53A	Automotive Mechanisms	4
AUTO 53B	Automotive Electromechanical Systems	2
AUTO 57A	Career Research and Employment	
	in the Automotive Industry	2
AUTO 99A	Automotive Electricity, Battery and	
	Cranking Systems	7
AUTO 99B	Automotive Charging, Ignition and	
	Accessory Systems	7
AUTO 99C	Introduction to Engine Performance Systems	7
AUTO 99D	Intermediate Engine Performance Systems	7
AUTO 99E	Basic Engine Performance	
	Diagnostic Procedures	7
AUTO 99F	Intermediate Engine Performance	
	Diagnostic Procedures	7
	Total Units Required5	50

#### Option C: Automotive Chassis and Powertrain

This Certificate of Achievement-Advanced prepares students for an entry-level position in the automotive repair industry.

Program Learning Outcomes - upon completion, students will be able to:

- Perform undercar inspections and repair suspension, steering, hydraulic and active braking systems.
- Demonstrate overall operation of an automotive transmission and differential as it relates to service, diagnosis and repair.
- Identify basic electrical circuits and diagnose automotive electrical circuit systems.
- Apply the basic principles of physics as they work in the automotive industry.
- Use written and oral communication skills to write repair orders and speak with customers.
- 1. Meet the requirements for this certificate level.
- 2. Complete the following.

AUTO 53A	Automotive Mechanisms	4
AUTO 53B	Automotive Electromechanical Systems	2
AUTO 57A	Career Research and Employment	
	in the Automotive Industry	2
AUTO 91A	Automotive Brake Systems	6
AUTO 92A	Automotive Steering and Suspension	6
AUTO 92B	Automotive Alignment	6
AUTO 93A	Automotive Final Drive Train	6
AUTO 93B	Standard Transaxles	2
AUTO 93C	Automatic Transmissions	6
AUTO 93D	Automatic Transaxles	2
AUTO 93E	Diagnostic Techniques	1.5
AUTO 93F	Automotive Transmission Service	6
	Total Units Required	49.5

# **Automotive Technology**

# A.S. Degree (Options A - C)

Refer to the corresponding description, program learning outcomes and course requirements for the Certificate of Achievement-Advanced option of your choice.

- Complete the Certificate of Achievement-Advanced requirements.
  44-50
- 2. Meet the A.A./A.S. degree requirements.
- 3. Complete the following.

# Prerequisite:

Approved Automotive Technology Course Sequence Contract. See department for an application.

Major	Complete the Cert. of Achievement-	
	Advanced requirements,	
	Option A, B or C	44-50
GE	General Education (32-43 units)	
Electives	Elective courses required when major	
	units plus GE units total is less than 90	
	Total Units Required	90

#### Recommended

One year of automotive educational experience (high school, ROP or De Anza's AUTO 50 series).