

**NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
AUT 121 - AUTOMOTIVE FUEL SYSTEMS I (4 CR.)**

Course Description

Analyses major domestic and foreign automotive fuel systems to include carburetors and fuel injection systems. Includes detailed inspection and discussion of fuel tanks, connecting lines, instruments, filters, fuel pumps, superchargers, and turbo charger. Also includes complete diagnosis, troubleshooting, overhaul and factory adjustment procedures of all major carbureted and fuel injection systems. Part I of II. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

General Course Purpose

The course emphasis for AUT 121 is placed upon the use of the latest diagnostic test procedures and equipment for automotive fuel system repair. Attention will be given to determining defects, their probable cause and making repairs and adjustments required for correction. Lecture/demonstrations will include step-by-step inspection and test procedure for checking fuel systems under various operating conditions. Students will be instructed on methods of determining the cause of fuel systems defects and procedures to follow for problem correction. The student will develop an understanding of equipment used in diagnosing fuel system defects.

Course Prerequisites/Corequisites

Prerequisites: AUT 111 and AUT 241. The ability to read, write, and speak the English language.

Course Objectives

Upon completion of this course, the student should be able to:

- Explain the operating principles of automotive fuel management systems
- Understand current automotive fuel properties and applications
- Identify component parts of automotive fuel systems and their specific function
- Isolate possible defects in automotive fuel systems, explain their cause and how they affect operation
- Troubleshoot and use test equipment used in the diagnosis process
- Determine the extent of repairs and adjustments needed for correction of defects

Major Topics to be Included

- General engine diagnosis
- Fuel and exhaust systems diagnosis and repair
- Basic emission systems operation diagnosis and repair
- Basic electronic engine control operation
- Fuel tank and pump systems