SAN JUAN COLLEGE
Success Matters

MCAP-130-BRAKES 6 CREDITS

SYLLABUS

CATALOG DESCRIPTION

A study of the fuel and emission control systems used on current model Chrysler FCA vehicles. Troubleshooting method for Chrysler FCA fuel, electrical, and electronic systems. Instruction will include diagnostic procedures on fuel injected engines, including direct injections. Engine conditions, and diagnosis and repair of engine sensors and system monitors. Students will learn to use an exhaust gas analyzer, oscilloscopes, and other special test equipment.

Prerequisites: MCAP-120

Semester Offered: Spring

COMMON STUDENT LEARNING OUTCOMES

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in…

BROAD AND SPECIALIZED LEARNING

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION

Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to…

1. Complete 100% of NATEF priority 1 tasks.
2. Complete 85% of NATEF priority 2 tasks.

3. Complete 75% of NATEF priority 3 tasks.

SPECIFIC LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to…

1. Demonstrate safe techniques for servicing Fuel Systems.
2. Diagnose & replace fuel regulation components
3. Test the fuel delivery system. (Mechanical and Electrical)
4. Diagnose and repair an exhaust gas recirculation system.
5. Diagnose and repair an evaporative emission system.
6. Diagnose and repair an inlet air management system.
7. Diagnose and repair an early fuel evaporation system.
8. Diagnose and repair an air injector system.
9. Test for water and alcohol in gasoline and perform a Reid Vapor pressure test.
10. Use exhaust gas analyzers to check emissions on a vehicle.