

**MUSI-188 Brass Ensemble** 1 cr.  
Study and performance of musical literature for brass ensemble. Semester offered: Fall and Spring.

**MUSI-190 Computers in Music** 3 cr.  
Students learn about the latest computer-based technology in the Musical Instrumental Digital Interface (MIDI) keyboard lab. Topics covered include musical composition, arranging, sequencing, and using musical resources on the internet. Semester offered: Fall and Spring.

**MUSI-201 APMU: Brass** 1 cr.  
Private instruction in music for brass instruments. May be repeated for a total of three hours. Prerequisite: Permission of Instructor. Corequisite: MUSI 180, 181, 182, 183, 184,187, or 188. Semester offered: Fall and Spring.

**MUSI-202 APMU: Percussion** 1 cr.  
Private instruction in music for brass instruments. May be repeated for a total of three hours. Semester offered: Fall and Spring.

**MUSI-203 APMU: Piano** 1 cr.  
Private instruction in music for piano. May be repeated for a total of three hours. Semester offered: Fall and Spring.

**MUSI-204 APMU: Guitar** 1 cr.  
Private instruction in music for guitar. May be repeated for a total of three hours. Semester offered: On Demand

**MUSI-205 APMU: Woodwinds** 1 cr.  
Private instruction in music for woodwind instruments. May be repeated for a total of three hours. Prerequisite: permission of instructor. Corequisite: MUSI 180, 181, 182, 183, 184,187, or 188. Semester offered: Fall and Spring

**MUSI-206 APMU: Voice** 1 cr.  
Private instruction in voice. May be repeated for a total of three credit hours. Semester Offered: Fall, Spring and, Summer.

**MUSI-207 APMU: Strings** 1 cr.  
Private instruction in music for stringed instruments. May be repeated for a total of 3 hours. Prerequisite: permission of instructor. Corequisite: MUSI 180, 181, 182, 183, 184,187, or 188. Semesters offered: Fall and Spring.

**MUSI-218 Music in the Elementary Classroom** 3 cr.  
An introductory or refresher course for elementary classroom or future teachers. The course is designed for the student with little or no musical background. Musical experiences which relate to all age groups at the elementary level will be covered, including students with special needs. Prerequisite: APEN 85+ or ENGL 099. Semester offered: On Demand.

**MUSI-220 APMU: Instrumental** 1 cr.  
Advanced private instruction in instrumental music. Specific instruments will be listed in the Schedule of Classes. May be repeated for a total of 3 credit hours. Prerequisite: permission of instructor. Corequisite: MUSI 180, 181, 182, 183,184,187, or 188. Semester offered: On Demand.

**MUSI-275 Digital Audio Recording** 4 cr.  
A continuation of MUSI 175 with emphasis on advanced recording techniques. Track recording into digital format; computerized digital editing with knowledge of WaveLab, Cakewalk, MasterTrax, and other music editing programs. Individual and group lab projects required. Lab hours are scheduled throughout the week. Prerequisite: MUSI 175. Semester offered: Spring (and summer as needed.)

**MUSI-280 Cooperative Education** 1-9 cr.  
Cooperative Education is a planned instructional program designed to enhance the student's learning experience by coordinating actual on-the-job training related to his/her curriculum with classroom work. Individualized learning objectives will be developed by college personnel and employer. Semester offered: On Demand.

## NATURAL GAS COMPRESSION

**COMP-111 Introduction to Oil and Gas** 5 cr.  
This course will assist students in developing knowledge of the natural gas-fueled internal combustion engine and its subsystem. Prerequisites: Students must demonstrate basic college entry skills. DOT medical exam, drug test, work steps and completion of entry level OSHA safety requirements. Work Steps, Drug Test, (work experience and/or alternative engine theory credits will qualify an individual to test out of this course/or have equivalent work experience.) Semester Offered: Fall and Spring.

**COMP-112 Natural Gas Engine Repair/Overhaul** 5 cr.  
To provide students with techniques and procedures to overhaul and repair natural gas engines to OEM specifications. The course includes a complete disassembly and reassembly of a variety of most commonly used natural gas engines. Prerequisites: Understand the basics of engine theory in order to disassemble and reassemble the natural gas engine/or equivalent work experience. Semester Offered: Fall and Spring.

**COMP-115 Internal Combustion Engine** 1 cr.  
This course will assist students in developing basic knowledge of the natural gas fueled internal combustion engine.

**COMP-116 Introduction to Compression** 0.5 cr.  
This course will assist students in developing basic knowledge of natural gas compression basics and associated equipment.

**COMP-118 Gas Engine Technology** 2 cr.  
This course will assist students in developing basic knowledge of the natural gas fueled internal combustion engine.

**COMP-121 Natural Gas Preventive Maintenance** 2 cr.  
Students will become familiar with a variety of OEM procedures for performing natural gas engine preventive maintenance on various natural gas engines. Prerequisites: Working knowledge of natural gas engine theory and overhaul/or have equivalent work experience. Semester offered: Fall and Spring.

**COMP-122 Natural Gas Engine Auxiliary Equipment** 3 cr.  
This course examines auxiliary equipment as associated with various

types of natural gas compression units. Students will become skilled in correct procedures for preventive maintenance on auxiliary equipment. Prerequisites: Students must recognize the natural gas engine and understand overhaul procedures/or have equivalent work experience. Semester offered: Fall and Spring.

**COMP-123 Natural Gas Electrical Diagnostics** 3 cr.  
Study of techniques and procedures to correctly troubleshoot and diagnose electrical problems associated with natural gas compression. Safety will be strictly enforced. Prerequisites: Students must recognize the natural gas engine and understand overhaul procedures/or have equivalent work experience. Semester offered: Fall and Spring.

**COMP-124 Natural Gas Engine Troubleshooting** 3 cr.  
Develop knowledge and skills to effectively troubleshoot common problems associated with natural gas engines. Students will gain the knowledge needed to diagnose and repair problems associated with natural gas engines. Prerequisites: Working knowledge of natural gas engine theory and overhaul. Knowledge and skills in basic electrical diagnostics is essential to develop troubleshooting/or have equivalent work experience. Semester offered: Fall and Spring.

**COMP-147 Intro to Natural Gas Engine and Combustion** 2 cr.  
Class will introduce students to internal combustion engines (natural gas), reciprocating and screw type compressors and formulas for calculating horsepower and cylinder gas volumes. Safety will be strictly enforced.

**COMP-160 Ignition Systems** 6 cr.  
Learn how the different natural gas engine ignition systems operate and practice simple test procedures of diagnosing ignition problems. Prerequisites: Working knowledge of natural gas engine theory and overhaul/or have equivalent work experience. Semester offered: Fall and Spring.

**COMP-180 Coop Work Experience** 6 cr.  
Studies natural gas compressor engine preventive maintenance and provides students with the techniques, skills and procedures to perform routine maintenance on natural gas compressor engines. Prerequisites: Student must have completed all 100 level program requirements, or equivalent work experience. Semesters offered: Fall, Spring, Summer.

**COMP-218 VGF Technology** 2 cr.  
This course will assist students in developing knowledge of the VGF Waukesha and large horsepower natural gas fueled internal combustion engine.

**COMP-230 Natural Gas Compression Theory** 3 cr.  
Students will become familiar with natural gas compressor theory and the proper procedures for operating and maintaining various types of natural gas compressors. Prerequisites: Basic college entry skills. Students must meet industry requirements of DOT medical exam, drug test, work steps and completion of entry level OSHA safety requirements. Additionally be able to understand and apply basic mathematic equations/or have equivalent work experience. Semester offered: Fall and Spring.

**COMP-231 Natural Gas Compression Repair/Overhaul** 3 cr.  
Study of natural gas compressor repair and overhaul. Students will develop

skills and techniques for overhaul and repair of natural gas compressors as required by OEM. Prerequisites: Knowledge of the basic theories of natural gas compressor in order to disassemble and reassemble the natural gas compressor as demonstrated through course credits or work experience in this field. Semester offered: Fall and Spring.

**COMP-235 Natural Gas Compression Preventive Maintenance** 4 cr.  
This course studies compressor preventive maintenance and provides students with the techniques, skills and procedures to adequately perform routine preventive maintenance on natural gas compressors. Prerequisites: Working knowledge of natural gas engine theory and overhaul/or have equivalent work experience. Semester offered: Fall and Spring.

**COMP-236 Natural Gas Compression Troubleshooting** 3 cr.  
Students will gain techniques, skills and procedures to troubleshoot and diagnose common problems with natural gas compressors. Safety will be strictly enforced. Prerequisites: Working knowledge of natural gas engine theory and overhaul or equivalent work experience. Semester offered: Fall and Spring.

**COMP-250 Natural Gas Compression Instrument and Control** 3 cr.  
Provide students with an introduction to basic uses of instrument and controls associated with natural gas compression. Prerequisites: Minimal work experience in natural gas industry is required to develop skill in instrumentation and controls or equivalent work experience. Semester offered: Fall and Spring.

**COMP-280 Natural Gas Compression Coop Work Experience** 6 cr.  
This course studies compressor maintenance and provides students with the techniques, skills and procedures to adequately perform routine maintenance on natural gas compressors. Prerequisites: students must have completed all other program requirements before entering OJT or obtain equivalent work experience.

**COMP-285 Nat Gas Comp Coop Work Experience II** 15.5 cr.  
Students will be employed by a company in the natural gas compression field which will provide relevant learning experiences that are directly related to the student's most recent classroom/laboratory experiences. The student will be supervised jointly by his/her employer and San Juan College personnel.

## NAVAJO STUDIES

**NAVA-111 Elementary Navajo I** 4 cr.  
The purpose of this beginning class is to develop listening, speaking, reading and writing skills to communicate at a basic level. The course will use a communicative approach to cover the fundamentals of basic vocabulary, grammar, conversations, and culture. Prerequisites: APEN 40+ and APRD 39+ or permission of instructor. Semester offered: Fall, Spring, and Summer.

**NAVA-112 Elementary Navajo II** 4 cr.  
Continuation of NAVA 111. Prerequisite: NAVA 111 or permission of instructor. Semester offered: Fall, Spring, and Summer.

**NAVA-115 Reading and Writing Navajo** 3 cr.  
Application of the sounds of Navajo alphabet used as phonetic symbols