

Journalism

JRNLM 101 (IAI: MC 919)

Introduction to Journalism

Prerequisite: ENG 101 with C or better

3 lectures per week; 3 hrs credit

This course introduces students to the journalism industry and its practices, including techniques of news gathering, reporting, and interviewing. Students learn to use the library and do online database research. Students write basic stories under real-time constraints.

Languages

(See Spanish)

Library and Information Science

LIB 101

Information Fluency in the Digital World

Prerequisite: Placement into ENG 099 or higher

1 lecture per week; 1 hour credit

This course provides an introduction to the production and dissemination of information and knowledge. Students are introduced to the skills needed to effectively gather and organize information from subscription databases, websites, social media, and print resources. Issues include the evaluation of information, concepts underlying the research process, experience in the ethical use of information, and citation practices. These are essential skills for successful research, informed citizenship, and lifelong learning.

Literature

(See English)

Manufacturing Technology

MT 101

Metal Working Processes I

Prerequisite: None

2 lectures, 2 lab hrs per week; 3 hrs credit

This course introduces students to machine tool processes and operation by giving consideration to the efficient use of tooling, speeds, feeds, and fixtures in production processes; to metal processing; to precision measurement; and to the use and operation of lathes, drill presses, mills, saws, and grinders.

MT 102

Metal Working Processes II

Prerequisite: MT 101

2 lectures, 2 lab hrs per week; 3 hrs credit

This course continues development of the skills and knowledge attained in MT 101 by additional training in thread calculation and chasing, tool bit geometry and sharpening, basic CNC machine tool operation, foundry processes and machining of castings.

MT 105

Metal Working Processes III

Prerequisite: MT 102

2 lectures, 2 lab hrs per week; 3 hrs credit

This course provides students with information on horizontal milling, boring, drilling machines, and their operations. Coursework consists of lectures and demonstrations on the construction of the different types of horizontal machines, the type of work done, the workpiece setup, the tools used and safety practices.

MT 120

Industrial Safety

Prerequisite: None

2 lectures per week; 2 hrs credit

This course provides safety training for those in industrial plant situations. Topics include tool and machine safety, lock out/tag out procedures, fire protection, eye safety, basic electrical safety, ladder safety, and government safety regulations as well as general safety practices.

MT 210

CNC Programming I

Prerequisite: MT 102

2 lectures, 2 lab hrs per week; 3 hrs credit

This is an introductory course in computer numerical control programming. It covers CNC system operations; machine tool setup and tooling; G-code and M-code utilization; and 2 and 3-axis lineal and circular interpolation programming. Emphasis is placed on part programming and machine tool operation for CNC vertical milling and lathe work.

MT 211

CNC Programming II

Prerequisite: MT 210

2 lecture, 2 lab hrs per week; 3 hrs credit

This course is a continuation of MT 210. It covers such topics as cutter compensation, fixed and variable canned cycles, subroutine programming, and the calculation of machining process. Part programs are written for the lathe, the vertical mill, and the horizontal mill.

MT 212**Introduction to Robotics**

Prerequisite: None

2 lectures, 2 lab hrs per week: 3 hrs credit

This course introduces students to the use of robotic devices in various manufacturing environments. It covers topics ranging from the development of robotics, to robotic systems and the operation and programming of robotic devices. Students receive hands-on instruction in the use of the teach-pendant and computer-based robotic language programming.

MT 214**CAD/CAM Systems**

Prerequisite: MT 210; CADMD 243 recommended

2 lectures, 2 lab hrs per week: 3 hrs credit

This course introduces students to the relationship, use, and operations of CAD and CAM systems to generate CNC programs. Students learn to create CAD files for use with a CAM system; to use a CAM system to create geometry, tooling, and post-processor files; and to transmit CAM-generated programs to CNC equipment.

MT 215**Manufacturing Systems**

Prerequisite: MT 210 and 212

3 lectures, 2 lab hrs per week: 4 hrs credit

This course covers the identification, operation, and application of both basic industrial processes and various systems that can be integrated into a computer integrated manufacturing system (CIM). These include CNC, CAD, CAM, and robotics. Students design, program, and implement workcells that include material handling, manufacturing and assembly operations. Emphasis is placed on fully automated production system design and operation.

MT 220**Metallurgy – Ferrous**

Prerequisite: None

2 lectures per week: 2 hrs credit

Iron, steel and their alloys, standard classification systems, properties, and methods of testing are considered. Heat treatment processes, critical temperatures, crystalline structure changes, and standard physical tests and welding metallurgy are studied.

MT 221**Metallurgy – Nonferrous**

Prerequisite: None

2 lectures per week: 2 hrs credit

This course studies types of nonferrous metals and their applications. Standard classification systems, properties, and methods of testing properties are discussed. In addition, development of new nonferrous metals and their applications are studied.

Applied Mathematics**AMATH 100****Basic Mathematics for the Skilled Trades**

Prerequisite: None

2 lectures per week: 2 hrs credit

This course is for those students who have little or no skill in the operations of numbers. It includes topics on whole numbers, fractions, decimals, percents, powers, and square roots, measurement systems, and commonly used formulas.

AMATH 101**Algebra for the Skilled Trades**

Prerequisite: AMATH 100 or equivalent

2 lectures per week: 2 hrs credit

This course is for those students who have a knowledge of the arithmetic operations but have little or no background in algebra. It includes basic algebraic operations, factoring, solving equations, ratio and proportion, exponents, and radicals.

AMATH 103**Geometry for the Skilled Trades**

Prerequisite: AMATH 101

2 lectures per week: 2 hrs credit

An introduction to geometry which includes definitions and descriptions of geometric terms, axioms and theorems; explanations regarding dispositions dealing with straight lines, triangles, and circles; and application to practical shop problems.

AMATH 106**Applied Trigonometry for the Skilled Trades**

Prerequisite: AMATH 103

2 lectures per week: 2 hrs credit

Topics in this course include definitions of trigonometric functions, fundamental trigonometric identities, solution of triangle problems and applications of trigonometry to practical shop problems.

AMATH 107**Trigonometry and Shop Applications I**

Prerequisite: AMATH 106

2 lectures per week: 2 hrs credit

This course covers the solution of oblique triangles by use of altitude construction method, law of sines and cosines, cotangents, $t/2$ angle formula, and tangent law. Emphasis is placed upon standardized types of shop and drafting problems using above methods.