

# INDUSTRIAL MAINT TECH-AAS

## Program Overview

### Associate of Applied Science - Industrial Maintenance Technology

#### Student Learning Outcomes

The Associate of Applied Science (AAS) in Industrial Maintenance Technology program prepares students for advanced technical roles in maintaining, troubleshooting, and repairing industrial equipment. The program combines hands-on experience with theoretical knowledge to equip students for leadership and specialized positions in industrial maintenance.

Graduates of the AAS in Industrial Maintenance Technology program will be able to:

- Advanced Blueprint Interpretation and Equipment Layout – Read, interpret, and create detailed blueprints and technical drawings for industrial equipment, and apply this knowledge to install, maintain, and troubleshoot systems effectively.
- Precision Alignment Techniques – Use advanced shaft alignment methods, including laser and dial indicator techniques, to ensure machinery is properly aligned, preventing damage and improving operational efficiency.
- Complex Troubleshooting and System Maintenance – Diagnose and maintain complex industrial systems, including fluid handling pumps, gear trains, drives, and material handling systems, using advanced diagnostic tools and techniques.
- Rebuilding and Replacing System Components – Rebuild and replace critical components in liquid, air, and material handling systems, using industry-standard methods to restore performance and extend equipment lifespan.
- Bearing and Seal Replacement – Replace bearings and seals in rotating equipment using non-destructive techniques to avoid damage and ensure the integrity of surrounding components.
- Advanced Electrical Systems Maintenance – Apply advanced electrical theory and safety principles to troubleshoot, maintain, and repair single-phase and three-phase power equipment in compliance with industry standards.
- Vibration and Root Cause Analysis – Use vibration analysis and root cause analysis to identify and resolve issues in industrial equipment, improving reliability and reducing downtime.
- Metallurgical Knowledge for Equipment Repair – Select and apply appropriate metals for repairs based on metallurgical testing to ensure compatibility with system specifications and prevent premature failures.
- Fabrication and Precision Layout – Design, fabricate, and lay out custom components for industrial applications, ensuring they meet operational requirements through advanced fabrication techniques.
- Workplace Safety and Regulatory Compliance – Adhere to advanced safety protocols and regulations, including hazard identification, risk assessments, and compliance with OSHA standards, ensuring a safe and productive work environment.
- Leadership and Project Management – Lead and manage maintenance projects, coordinating teams and resources to meet deadlines, optimize performance, and achieve maintenance goals.
- Continuous Professional Development – Engage in ongoing learning to stay up-to-date with new technologies and best practices in industrial maintenance, preparing for future certifications and career advancement.

This program is a rigorous 42-week accelerated program and can be completed in that time. The Industrial Maintenance Technology program prepares a student for an exciting entry-level career as an Industrial Technician in manufacturing, mining, construction, and the service industry. The Associate of Applied Science degree allows the graduate the opportunity for faster advancement in the management areas of industry such as planner, scheduler (both short term and long range), supervisors, project leaders, project superintendents, and crew leaders.

We use the National Center for Construction and Education Research (NCCER) curriculum which was developed and is recognized nationally by industry as a training standard for the curriculum. Students graduate with an Associate of Applied Science and the opportunity to receive a nationally recognized certification of completed training to find employment in this field.

Technical training is taught in mechanical operations, fluid power, industrial pumps, preventive predictive maintenance, precision shaft alignment, electrical theory, welding processes, and all safety standards for tools and equipment in the workplace.

Upon successful completion of the program, the student will possess the skills necessary to diagnose and repair mechanical, electrical, and liquid and air handling systems. These are common systems found in most industrial, agricultural, mining, construction, and service industries that use machinery to produce a product or service. Other employment opportunities for graduates of this program can include steel mills, paper mills, mining operations, gravel quarries, universities, schools, textile mills, food processing plants, automotive plants, shipyards, power plants, hospitals, aerospace industry facilities, and office complexes.

Formal admission to this program is required.

*For more information about any School of Industrial Technology and Workplace Development programs, contact 775-327-2167.*

#### General Education Requirements

**English/Communications (two courses required):** ENG 100 or ENG 101 and ENG 102 or ENG 107 and ENG 108

**ENG 100      Composition-Enhanced      5 Credits**

Allows students to fulfill their first semester of English while completing the remediation process. Designed for students who did not place into ENG 101 on the placement test/writing sample, but did not score so low that they need ENG 95. Allows a student to refine specific skill deficiencies while completing the first semester of freshman composition (ENG 100 is equivalent to ENG 101). Students will have additional Academic Success Center requirements. Although it is a five-credit course, it does not replace ENG 102. After successful completion of ENG 100, a student must take ENG 102 to complete the general education requirement.

**ENG 101      Composition I      3 Credits**

Critical reading and writing of the expository essay. Emphasizes pre-writing, strategies for organization, and revision.

**ENG 102      Composition II      3 Credits**

Continuation of English 101. Emphasizes writing from sources, argument, the investigative paper, and research techniques.

**ENG 107      Tech Communications I      3 Credits**

Basic skills necessary for successful on-the-job communications including improved letter and report writing, persuasion, interviewing, process, mechanism description, and business and technical grammar.

**ENG 108      Tech Communications II      3 Credits**

Advanced letter and report writing techniques including proper word choice, tone, and structure. Business letters, memorandums, formal and informal reports, process, and mechanism descriptions.

**Mathematics (one course required):** Choose from the courses listed below or any higher-level math course. Excludes MATH 389

**MATH 116      Technical Mathematics I      3 Credits**

Provides technical mathematical core material so that the student gains practical problem solving experience. May include arithmetic operation, integers, exponents, scientific notation, algebraic expressions, equations, metric system, trigonometry, and logarithms. This course satisfies the general education requirement for occupational/technical AAS degree. It is recommended that students have completed prerequisites within two years of enrolling in this course.

**MATH 116E      Technical Mathematics Expanded      3-5 Credits**

Provides technical mathematical core material so that the student gains practical problem solving experience. May include arithmetic operation, integers, exponents, scientific notation, algebraic expressions, equations, metric system, trigonometry, and logarithms. This course satisfies the general education requirement for occupational/technical AAS degree.

**MATH 120      Fund of College Math      3 Credits**

Includes set theory, logic, consumer mathematics, measurement, geometry, probability, and statistics. Course is broad in scope, emphasizing applications. It is recommended that students have completed prerequisites within two years of enrolling in this course.

**MATH 120E      Fund of College Math Expanded      3 Credits**

Fundamentals of College Mathematics with Corequisite Support: Includes real numbers, consumer mathematics, variation, functions, relations, graphs, geometry, probability, and statistics. Course is broad in scope, emphasizing applications. Fulfills the lower-division mathematics requirement for a Bachelor of Arts Degree. Satisfies mathematics requirement for baccalaureate degrees.

**MATH 126      Precalculus I      3 Credits**

A third course in algebra that stresses polynomial, quadratic, rational, exponential, and logarithmic functions, including their graphs and applications; complex numbers; systems of equations; and basic operations with matrices and determinants, including Cramer's rule. It is recommended that students have completed prerequisites within two years of enrolling in this course.

**MATH 126E      Precalculus I Expanded      3 Credits**

Precalculus I Expanded with Co-requisite support: Includes equations, relations, functions, graphing; polynomial, rational, exponential, logarithmic, and circular functions with applications; coordinate geometry of lines and conics; analytic trigonometry; matrices and determinants; and binomial theorem. It is recommended that students have completed prerequisites within two years of enrolling in this course.

**STAT 152      Intro to Statistics      3 Credits**

Includes descriptive statistics, probability models, random variables, statistical estimation and hypothesis testing, linear regression analysis, and other topics. Designed to show the dependence of statistics on probability. It is recommended that students have completed prerequisites within two years of enrolling in this course.

**Science (one course required)**

**ANTH 102      Physical Anthropology      3 Credits**

Introduction to the study of how humans, Homo sapiens, have emerged as a species and come to dominate the planet by examining processes of human biological and cultural evolution. Topics include inheritance, the emergence of primates, fossil hominids, the development of technology, and biological variability among modern humans. Satisfies general education science.

**AST 101      General Astronomy      3 Credits**

An introductory examination of the solar system, stellar systems, and stellar and galactic evolution according to currently accepted concepts. Introduces astronomical instruments and light theory.

**BIOL 100      General Biology/Non Major      3 Credits**

Basic biological concepts, interpretation and application of scientific methods, and effects of biological advances on society. Core curriculum science course; cannot be used for credit toward field of concentration in biology.

**BIOL 190 Intro Cell/Molecular Biology 4 Credits**

Structure and function of cells. Major molecules of life; composition and physiology of cellular organelles; cell metabolism, reproduction, motility, and gene function of both plant and animal cells. Required for biology majors. Concurrent enrollment in a corresponding lab section is required for this course.

**CHEM 100 Molecules/Life Modrn Wrld 3 Credits**

Introduction to chemistry in its many forms and applications, physical and organic, with consideration of environmental and social issues. Includes laboratory activities.

**CHEM 121 General Chemistry I 4 Credits**

Fundamentals of chemistry including reaction stoichiometry, atomic structure, chemical bonding, molecular structure, states of matter, and thermochemistry.

**ENV 100 Humans and the Environment 3 Credits**

Introduction to the relationship of man and his environment. Current thinking and research concerning the impact of industrialization and urbanization on environmental quality, including the population explosion; the potential decline of the affluent society by the depletion of natural resources; the pollution of air, land surface, and water; and the public agencies and policies designed to solve environmental problems.

**GEOG 103 Physical Geog Earth Environmnt 3 Credits**

Physical elements of the earth's natural features and their significance to man. Topics include earth form and motion, landforms, weather, climate, vegetation, and soils. Four laboratory experiences required.

**GEOL 101 Exploring Planet Earth 3-4 Credits**

Fundamental principles of geology including tectonic and surficial processes, oceans, atmosphere, environmental applications, and resources. Includes a laboratory component.

**GEOL 132 Rocks and Minerals 3 Credits**

An introduction to the more common or important minerals and rocks. Emphasizes the conditions of formation and hand sample identification. The economic value of minerals and rocks is presented.

**NUTR 121 Human Nutrition 3 Credits**

An introductory nutrition course for the beginning student. Course will center on the major nutrients and their roles in maintaining good health. Students will learn to recognize well-balanced diets and acquire shopping tips and preparation techniques for optimum utilization of food dollars. Class includes four required labs.

**PHYS 100 Introductory Physics 3 Credits**

A concise treatment of the basic principles of physics. Includes mechanics, matter, electricity, magnetism, heat, sound, light, relativity, and nuclear physics.

**PHYS 107 Technical Physics I 3 Credits**

Investigates traditional topics of physics. Topics include mechanics, electricity, basic solid state components, optics, gases, hydraulics, fluids, and thermodynamics. This course provides a basic understanding of how physical systems are related and their technical applications. Hands-on labs, demonstrations, and calculations are an integral part of the course.

**PHYS 151 Gen Physics I 4 Credits**

Primarily for students in arts and science. Topics include kinematics, energy and momentum conservation, rotational dynamics, thermodynamics, fluids, harmonic motion, and sound. Laboratory experiments illustrate many of these fundamental principles.

**U.S. and Nevada Constitutions:** HIST 101 and HIST 102 or PSC 101

**HIST 101 U.S. History to 1877 3 Credits**

Survey of U.S. political, social, economic, diplomatic, and cultural development from colonial times through Reconstruction. When taken with HIST 102 satisfies the GBC General Education American Constitutions and Institutions Requirement. HIST 101 and 102 need not be taken sequentially. Either class may be taken alone.

**HIST 102 U.S. History Since 1877 3 Credits**

Survey of U.S. political, social, economic, diplomatic, and cultural development from 1877 to the present. Course satisfies the Nevada Constitution Requirement. When taken with HIST 101 satisfies the GBC General Education American Constitutions and Institutions Requirement. Can be used to satisfy the Nevada Constitution Requirement for out-of-state transfer students who have previously satisfied the United States Constitution Requirement. HIST 101 and 102 need not be taken sequentially. Either class may be taken alone.

**PSC 101 Intro American Politics 3 Credits**

A survey of United States, national, state, and local governments with emphasis on the cultural aspects of the governing process. Satisfies the legislative requirement for the United States and Nevada Constitutions.

**Social Science/Human Relations** (embedded in Maintenance Curriculum)

**IT 106 Maintenance/Process Term 1-4 Credits**

A one-to-four credit lecture, discussion, and laboratory course designed to introduce students to millwright and process terminology. Students will learn basic terminology and functions of primary process equipment and their sub-components. This course will also cover parts of basic safety policies and procedures for use in the laboratory and also translate to the job or work site safety.

**Humanities or Fine Arts (one course required)**

**ART 100 Visual Foundations 3 Credits**

A beginning art class that includes a survey of art and the basic components of design. The class explores visual concepts as they relate to the history of art through class presentations, discussions, and a variety of media. Students should plan for three hours of studio work outside the class.

**ART 101 Drawing I 3 Credits**

A disciplined foundation in drawing concepts based on visual observation skills.

<b>ART 107</b>	<b>Design Fundmntls I (2-D)</b>	<b>3 Credits</b>
Explores the fundamentals of design using various media focusing on 2-D design.		
<b>ART 160</b>	<b>Art Appreciation</b>	<b>3 Credits</b>
Introduction to the visual arts, illustrating the place of art in its social and cultural setting.		
<b>ART 260</b>	<b>Survey of Art History I</b>	<b>3 Credits</b>
Presentation of the historical context of major and minor works of art from the ancient world to the Renaissance, art analysis, and criticism.		
<b>ART 261</b>	<b>Survey of Art History II</b>	<b>3 Credits</b>
A continuation of Survey of Art History I presenting major and minor works of art from the Renaissance to the present, art analysis, and criticism.		
<b>ENG 203</b>	<b>Intro to Literary Study</b>	<b>3 Credits</b>
Introduction to the elements of fiction, poetry, and drama used in the analysis of literature.		
<b>ENG 205</b>	<b>Intro to Creative Writing</b>	<b>3 Credits</b>
A creative writing course designed to introduce students to the production of fiction and poetry.		
<b>ENG 223</b>	<b>Themes of Literature</b>	<b>3 Credits</b>
Themes and ideas significant in literature.		
<b>FIS 100</b>	<b>Introduction to Film</b>	<b>3 Credits</b>
Introduction to the historical development of film as art. Considers the development of cinematic techniques (i.e., cinematography, editing, sound, etc.), cinematic genres (i.e., the western, romantic comedy, etc.) and narrative elements (i.e., plot, character, conflict, etc.) as exemplified by the work of major American and international directors.		
<b>FREN 111</b>	<b>First Year French I</b>	<b>3-4 Credits</b>
Development of language skills through practice in listening, speaking, reading, writing, and structural analysis. Language practice required.		
<b>FREN 112</b>	<b>First Year French II</b>	<b>3-4 Credits</b>
A continuation of FREN 111. Language practice required.		
<b>HIST 208</b>	<b>World History I</b>	<b>3 Credits</b>
Survey of world civilizations to 1600. Examines societies, cultures, and issues relative to Africa, the Americas, Asia, Europe, the Middle East and Oceania.		
<b>HIST 209</b>	<b>World History II</b>	<b>3 Credits</b>
Survey of world civilizations since 1600. Examines historical societies, cultures, and issues relative to Africa, the Americas, Asia, Europe, the Middle East, and Oceania.		
<b>HUM 101</b>	<b>Intro to Humanities I</b>	<b>3 Credits</b>
An introduction to humanities through a study of seven major arts including film, drama, music, literature, painting, sculpture, and architecture. Each of these arts is considered from the perspective of historical development, the elements used in creating works of art, meaning and form, and criticism and critical evaluation.		
<b>HUM 111</b>	<b>Gateway to the Humanities</b>	<b>3 Credits</b>
Through five distinct modules, students discover answers to all of the following questions: What attributes are irreducibly human - that is, independent of gender, race, culture, society, nationality, or philosophy? How do human beings relate to one another? How do we humans express ourselves? In what ways do we limit ourselves? The student will explore: philosophy/religion; language/linguistics; history; art and architecture; law and ethics; and literature/performance. Students will seek out applications of the humanities to chosen disciplines.		
<b>HUM 210</b>	<b>Communicating Diversity</b>	<b>3 Credits</b>
Communicating Diversity is a lower division course designed to familiarize students with the fundamentals of diversity and how those are expressed through communication. Students will develop a deep understanding of the way in which we communicate race, gender, class, sexual orientation, nationality, religion, and physical/mental ability and how it impacts our daily lives. This course will take an intersectional approach to understanding diversity and seek communication strategies for inclusivity. Emphasis will be placed on defining and developing the critical thinking skills necessary to push past oppression, marginalization, and other issues centralized around diverse populations. Students will be encouraged to investigate and discover diversity issues, solutions, and concepts at the local and global level using case studies, current events, and other significant moments in history.		
<b>MUS 101</b>	<b>Music Fundamentals</b>	<b>3 Credits</b>
Notation, terminology, intervals, and scales. Designed to furnish a foundation for musicianship. Recommended for teachers in public schools and all others desiring a basic music background.		
<b>MUS 121</b>	<b>Music Appreciation</b>	<b>3 Credits</b>
The historical and cultural background of music and origins to the twentieth century.		
<b>MUS 125</b>	<b>History of Rock Music</b>	<b>3 Credits</b>
The history and stylistic development of rock from its origins, through transitions, and subsequent revolutions.		
<b>PHIL 101</b>	<b>Intro to Philosophy</b>	<b>3 Credits</b>
Basic problems in different areas of philosophy such as ethics, political theory, metaphysics, and epistemology.		

<b>PHIL 102</b>	<b>Critical Thinking</b>	<b>3 Credits</b>
Covers non-symbolic introduction to logical thinking in everyday life, law, politics, science, advertising; common fallacies; and the uses of language, including techniques of persuasion.		
<b>PHIL 135</b>	<b>Introduction to Ethics</b>	<b>3 Credits</b>
Introduction to Ethics: critical introduction to classical and modern ethical theories such as utilitarianism, deontology, and virtue ethics. Emphasis throughout on applying the theories in various contexts such as social, political, or interpersonal. The ultimate goal will be to allow students to clarify their own thinking and positions on important ethical issues confronting society today.		
<b>SPAN 111</b>	<b>First Year Spanish I</b>	<b>3 Credits</b>
Development of language skills through practice in listening, speaking, reading, writing, and structural analysis. Language practice required.		
<b>SPAN 112</b>	<b>First Yr Spanish II</b>	<b>3 Credits</b>
A continuation of SPAN 111. Language practice required.		
<b>SPAN 211</b>	<b>Second Year Spanish I</b>	<b>3 Credits</b>
Considers structural review, conversation and writing, and readings in modern literature.		
<b>THTR 100</b>	<b>Introduction to Theatre</b>	<b>3 Credits</b>
A survey of the basic principles, facts, and theories providing an understanding of the art of theatre. Course also includes a special focus on the practical technical aspects of the theatre and on live theatre experiences.		
<b>THTR 105</b>	<b>Introduction to Acting I</b>	<b>3 Credits</b>
Examines acting fundamentals and focuses on development of vocal, physical, and creative tools to be used on stage.		
<b>THTR 121</b>	<b>Stage Makeup</b>	<b>3 Credits</b>
This course focuses on the history of makeup and basic approaches to applying make-up for the stage and screen. Make-up supplies will be studied, as well as techniques for corrective, old-age, character, stylized, and special effects makeup.		
<b>THTR 204</b>	<b>Theatre Technology I</b>	<b>3 Credits</b>
Lecture and discussion encompassing the philosophy and techniques of technical theatre.		
<b>WELD 200</b>	<b>Metal Art</b>	<b>3 Credits</b>
This course is designed to give the student the basic understanding of two dimensional 2D and three-dimensional 3D metal art. Also covered in this course we will discuss different Cutting, Welding and metal finishing techniques that are used in this discipline as it relates to metal art.		
<b>Technology</b> (embedded in Maintenance Curriculum)		
<b>IT 210</b>	<b>Failure Analysis</b>	<b>1-4 Credits</b>
A one-to-four credit lecture, demonstration, and laboratory course in the study of predictive and preventive maintenance techniques. Emphasis will be placed on root cause analysis, vibration analysis, and the proper use of lubrication to prevent failures. Prevention of maintenance problems through predictive methods will be emphasized.		
<b>Program Requirements</b>		
<b>IT 102</b>	<b>Pipefitting Principles</b>	<b>1-4 Credits</b>
This is a one to four credit lecture, discussion, and laboratory course designed to introduce students to the basics of pipefitting. This course will cover basic pipefitting and introduce students to the tools and materials used to complete projects in industries associated with the pipefitting field.		
<b>IT 103</b>	<b>Industrial Pump Technology</b>	<b>1-4 Credits</b>
A one-to-four-credit laboratory and lecture course covering various industrial pumps. Emphasis is on centrifugal pump maintenance and repair and introductory hydraulic engineering concepts that pertain to centrifugal pumps. Pump seals, packing techniques, and bearings are also discussed. Unlimited Repeatability.		
<b>IT 105</b>	<b>Mechanical Power Trans</b>	<b>1-4 Credits</b>
A one-to-four-credit lecture, demonstration, and laboratory course in the study and application of bearings, belt and mechanical drives, chain and chain drives, couplings, clutches, gears, and fluids in the transmission of power used in the industrial processes.		
<b>IT 106</b>	<b>Maintenance/Process Term</b>	<b>1-4 Credits</b>
A one-to-four credit lecture, discussion, and laboratory course designed to introduce students to millwright and process terminology. Students will learn basic terminology and functions of primary process equipment and their sub-components. This course will also cover parts of basic safety policies and procedures for use in the laboratory and also translate to the job or work site safety.		
<b>IT 201</b>	<b>Blueprint Read/Meas Fund</b>	<b>1-6 Credits</b>
A laboratory and lecture course covering blueprint reading fundamentals for mechanical and construction drawings. Also, an introduction to different types of measuring instruments and their proper uses in industry.		
<b>IT 207</b>	<b>Boiler/Convey/Pneum System</b>	<b>1-5.5 Credits</b>
A one to five-point-five credit lecture, demonstration, and laboratory course in the study and application of boiler, conveyer, and pneumatic systems. The course will cover operation, maintenance, and repair of boiler, conveyer, and pneumatic systems. Safety is emphasized. Unlimited repeatability.		
<b>IT 208</b>	<b>Fluid Power</b>	<b>1-9 Credits</b>
A review of fluid power mechanics with an emphasis on schematic symbols, circuit operation and design, hydraulic component theory and operation, and hydraulic terminology. Course may be taught in modules.		

**IT 209 Principles of Rigging**

**1-4 Credits**

This is a laboratory and lecture course covering rigging practices, proper lifting techniques and safety. Hand signals based on national standards will be taught and practiced also. May be repeated up to 16 credits.

**IT 210 Failure Analysis**

**1-4 Credits**

A one-to-four credit lecture, demonstration, and laboratory course in the study of predictive and preventive maintenance techniques. Emphasis will be placed on root cause analysis, vibration analysis, and the proper use of lubrication to prevent failures. Prevention of maintenance problems through predictive methods will be emphasized.

**IT 214 Basic Electrical Theory**

**1-4 Credits**

A one-to-four credit lecture, demonstration, and laboratory course in the diagnosis of common electrical problems associated with industrial equipment. The course covers basic AC/DC electrical theory, electrical motor maintenance, motor control, and uses of electrical tools for troubleshooting.

**IT 216 Basic Metallurgy**

**1-4 Credits**

A one-to-four credit lecture, demonstration, and laboratory course which emphasizes the practical approach to the basic principles of metallurgy. The course explores the behaviors of metals subjected to metallurgical processes and explains how desired material properties are attained.

**IT 220 Alignment Principles**

**1-6 Credits**

Study and practice and shaft and gear alignments using the four-step method to align and correct misalignments as a procedure to extend the life of bearings, couplings, and seals, and to reduce vibration in equipment and components and gears. Tools and equipment used in the course include dial indicators, and electronic and laser measuring devices. Safety is emphasized. Unlimited repeatability.

**TA 100 Shop Practices**

**1-4 Credits**

An introduction to hand tool identification and proper use, shop safety, and other topics including screw thread, hydraulic hose, fitting identification, and measuring devices. Unlimited repeatability.

**WELD 136 Welding Maintenance Tech I**

**1-3 Credits**

In this course the Maintenance Technician will learn safety in welding and Oxy-Fuel Cutting operations. Also covered in this course, the Maintenance Technician will gain an understanding of electrodes and electrode selection as well as develop an understanding on Shielded Metal Arc Welding equipment that is used in the shop and field environments. The Maintenance Technician will perform the operation of using high alloy electrodes to extract broken bolts. The Maintenance Technician will become knowledgeable in the MSHA and OSHA fabrication regulations regarding hand railing. Repeatable up to three times. (Formerly WELD 135, Welding for the Maintenance Technician I)

**WELD 235 Welding Maintenance Tech II**

**1-3 Credits**

The course is designed to give the Maintenance Technician a basic understanding of the principles of the Flux Cored Arc Welding process with hands-on training. The course will also cover the Carbon Arc Cutting process, joint designs, welding symbols, weld testing and inspection. Repeatable up to three times.

**Suggested Course Sequence**

**1st Semester - Fall**

Course Credits ENGLISH\* 3 IT 102 2 IT 106 3 IT 201 5 IT 209 2 IT 216 4 TA 100 4 MATHEMATICS\* 3 HUMANITIES/FINE ARTS\* 3 PSC 101 3 WELD 136 3 TOTAL 35 \*Choose with advisor

**2nd Semester - Spring**

Course Credits IT 103 4 IT 105 4 IT 207 3 IT 208 2 IT 210 4 IT 214 3 IT 220 5.5 ENGLISH\* 3 SCIENCE\* 3 WELD 235 3 TOTAL 34.5 \*Choose with advisor