Continuing Education Classes
SPRING 2010

A certificate of completion will be awarded for each Continuing Education Class or Seminar.
All classes are subject to minimum class sizes. Class schedules may be rescheduled, postponed, or cancelled. Books/supplies are not included in class tuition and are the responsibility of the students.
Payment Options: Personal Check, Cash, MasterCard, Payment Plan, Company Check or Pre-approved Company Purchase Order.

Contact Marie Whipple at 814-868-9900 or MarieW@ErieIT.edu to register.

Technical Classes

Blueprint Reading I **$252.00**
Monday, April 5 – May 17, 2010 - 6:00-9:00 p.m. **21 hours**
Learn the fundamentals of reading and interpreting information on industrial blueprints with emphasis on manufacturing applications. Topics may include: basics of drawing interpretation, terminology and notations, one, two, and three view projections, machining symbols and sectional views.

Intro to G Code Programming **$360.00**
Wednesdays, April 7 – June 9, 2010 6:00 – 9:00 p.m. **30 hours**
This class will include hands on experience with G & M programming on simulators. Be able to write a program from scratch with the following understandings. Knowledge of rapid traverse, linear interpolation, and circular arcs using a drawing will be taught. Learn about work offsets, different coordinate systems, tool definition to include proper tooling, tool length, tool diameter control, along with cutter compensations. Reference points and safety returns will be covered.

Maintenance Classes

Pneumatics **$540.00**
T/TH – March 18 – May 6, 2010, 6:00-9:00 p.m. **45 hours**
This is a supervised lab course that applies the principles and applications of pneumatics as it applies to power and industrial equipment. Topics include: pneumatic principles, preventive maintenance, and troubleshooting.

Basic Electricity **$360.00**
Wednesdays – April 7– June 9, 2010, 6:00-9:00 p.m. **30 hours**
Learn basic electricity through theory and hands on application labs with group projects. The following topics will be discussed: Ohm's law, AC and DC, electrical safety, electric meters, voltage, current, and resistance, electrical terminology, electrical drawings, choosing the right type of wire, National Electric Code and simple troubleshooting.

Introduction to Electric Troubleshooting **$288.00**
Thursdays – April 15 – June 3, 2010, 6:00-9:00 p.m. **24 hours**
Students will have an overview of AC/DC circuits, test instruments, transformers, power supplies, reading electric schematics, operation of motor starters, control relays, sensors, and overload protection devices.

Introduction to National Electric Code **$360.00**
Tuesdays, May 11 – July 13, 2010, 6:00-9:00 p.m. **30 hours**
Get the tools you need in this challenging job market or update the skills you have. Learn to plan and layout electrical circuits and devices that meet or exceed the code requirements. Learn how to reference the NEC Code book. Understand the Safety of the proper electrical installation as it pertains to the NEC Code. Who Will Benefit: Anyone concerned with life safety compliance including: Electrical Maintenance, facility managers, inspectors, safety directors, engineers, architects, designers, risk managers, facility consultants, and project managers.

WEB DESIGN

Intro to Basic Web Design **$252.00**
Wednesday, April 7 – May 19, 2010, 6:00-9:00 p.m. **21 hours**
Learn how to make a basic web page with Dreamweaver software. This class will teach you the basics needed to design and maintain your own webpages. You will learn layout, code structure, how to create templates, tables, and forms. Other areas to be covered will be text, web safe colors, web standards, etc.

CREDIT CLASSES

Our credit classes in the evening will start on March 25, 2010:
You may register to take individual classes in our credit courses in our CNC Machinist Technician and Welding Technology Program:
All classes are subject to minimum class sizes. Class schedules may be rescheduled, postponed, or cancelled. Books/supplies are not included in class tuition and are the responsibility of the students. Contact Marie Whipple at 814-868-9900 or MarieW@ErieIT.edu for more information on classes listed below:

Basic Mathematics – 3 credits (45 hours) **$975.00**
Learn basic mathematics used in the shop environment. The topics to be included will be a review of whole numbers, fractions, decimals, conversion of fractions and decimals, percentages, and basic principles of measurement. Practical geometry, ratio, and proportion, equations, and problem solving. Students must have a scientific calculator for the class.

Practical Dimensional Inspection – 2 credits (45 hours) **$650.00**
Introduction to the theory and practice of dimensional inspection of industrial products including basic inspection tools and gauges. The following topics will be included : measuring geometric characteristics, thread inspection, surface finish inspection, hardness testing, and introduction to CMM and Optical Comparators.

Blueprint Reading with GD & T- 2 credits (45 hours) **$650.00**
An introduction to the fundamentals of reading and interpreting information on industrial blueprints with emphasis on manufacturing applications. Topics may include: basics of drawing interpretation, terminology and notations, one, two, and three view projections, machining symbols and sectional views. Students will also learn surface textures, tolerances and allowances, dimensioning and tolerancing.

Basic Machining Level I - 5 credits (135 hours) **$1,625.00**
This course includes the concepts, principles, and skill required in the operation and application of the metal lathe, milling machine, drill press, and various bench tools. The course is a combination of lecture and hands-on instruction. The student will be able to demonstrate knowledge and skill competencies in machine safety, set up, machine operations and capabilities, use of various accessories and attachments. Students will machine parts to specifications.

CNC Mill & Lathe I – 9 credits (225 hours) **$2,925.00**
This course includes the concepts, principles, and skills required in the operation and application of the CNC Lathe and CNC Mill. The course is a combination of lecture and hands on instruction. The students will be able to demonstrate knowledge and skill competencies in machine safety, machine set up, programming, machine operations and capabilities, use of various accessories and attachments, and machine maintenance. Students will machine parts to specifications.
Prerequisites: Basic Machining Level II, Blueprint Reading with GD & T, and Mathematics for Technology I.

MW101 Mathematics for Welding I – 4 credits **$1,000.00**
A study of whole numbers, fractions, decimal fractions, percentages, roots, ratios, and proportions. Also, a study of algebraic expressions, operations with signed numbers, linear equations, systems of equations, quadratic equations, graphing, and word problems.

WLD101 Introduction to Arc Welding Processes – 3 credits **$750.00**
Introduction to Arc Welding Processes is a course that offers instruction in welding techniques using shielded metal arc welding, gas metal arc welding, and gas tungsten arc welding. A study of the concepts of metallurgy as related to base metal and welding will be covered. A study of the theory of electrode selection, joint design and welding techniques will be explored to develop the necessary skills to meet standards required for commercial quality welds.

WLD102 Fuel Gas Processes – 3 credits **$750.00**

Cutting, Heating and Welding – This course will begin with a study of terms, types of equipment, and various fuel gases used in industry. This course will then proceed with the development of the manual skills involved in oxyfuel cutting of plate, bar and pipe. Emphasis will be placed on the proper preparation of base metals for the welding processes including measurement and marking, cutting and finish grinding to specifications. This course will also cover the study of filler metals, and fluxes. The student will weld joints on plate and pipe with common alloys used in the industrial and maintenance welding fields. By the completion of the course, the development of the manual skills necessary to complete cuts and welds used in the maintenance and repair industries will be explored.

WLD103 Industrial Safety – 2 credits **$500.00**

This course will cover the basic elements of safety as related to welding, cutting and related processes.

WLD104 Welding Codes and Procedures – 2 credits **$500.00**

Welding codes and procedures is a course that offers instruction to familiarize our students with welding products and the basic documents that govern or guide welding activities in industry.

WLD105 Metallurgy and Strength of Materials – 2 credits **$500.00**

Metallurgy and strength of materials is a course that offers instruction in the mechanical and physical properties of various materials. The course will begin with a description of the mechanical properties, and proceed to the types of strength and other properties of metals. Other topics to be explored include: the metals we use, nonferrous metals.

WLD106 Blueprint Reading – 2 credits **$500.00**

This course will begin by discussing the importance of a general aspect of a print. Principles of blue print reading will be covered through the use of lines, views, dimensions and projection as used in fabrication and assembly of structural parts drawings. The student will develop skills in standard multi view sketching techniques of common fabrication products. These “hands on” applications are intended to improve the student’s ability to interpret standard fabrication drawings which will allow the student to professionally communicate concepts to both production and design personnel. The course will proceed to a thorough study of principles of blueprint reading as applied to welding drawings. Emphasis will be placed on determining the welding and cutting costs used to prepare a welding estimate. The student will develop the necessary skills to read, interpret, and draw weld symbols as used in structural and machine assemblies.