

**Associate Technician Technology Training  
Fall 2011 August 24—December 14, 2011**

**A Pre-Employment Training Program for the  
American Centrifuge Facility, a Division of USEC, Inc.**

**Technology Training Description**

This course consists of two components: Electrical & Control, and Fluids & Heat Transfer. In the first, successful students will be competent in the fundamental principles of DC and AC electricity; motors, generators, transformers, and power distribution. An introduction to electronics with emphasis on process control measurement and applications including programmable logic controllers will be included. In the second component, the properties of fluids, fluid flow, fluid mechanics and applications of basic thermodynamics will be covered. The course includes an exit exam and a report of student's progress. This is an open enrollment, non college credit, 60 hour course offered by Shawnee State University at the OSU South Centers at Piketon. The course will meet one evening per week for 4 hours for 15 weeks. Prerequisite: College Algebra level and High School General Science level.

Students will be assigned home work problems (2 or 3) per class to be handed in at the beginning of the following class. Solutions to homework problems will be given out and discussed after the homework is collected. A one hour exit exam will be given after the Electrical & Control component and after the Fluids & Heat Transfer component.

Instruction will be of the lecture type with questions & discussion encouraged. Relevant real world Industrial examples will be used throughout the course.



**Meet your Instructor .....**



Ken Warfield: Associate Professor of Electro-Mechanical Engineering Technology at Shawnee State University. Mr. Warfield has twenty six years of teaching experience and over eleven years of industrial experience in the electrical, mechanical, industrial controls, water and wastewater treatment fields. He is experienced in the operations, maintenance, and management of EPA governed treatment facilities as well as the industrial manufacturing and service industries. Ken designed the SSU Environmental Engineering Technology degree program and has led the Electro-Mechanical Engineering Technology through many up grades over his tenure with Shawnee State. Ken is currently serving as the distance site coordinator for SSU's EM Baccalaureate articulation program with Miami University.

Contact information: [kwarfield@shawnee.edu](mailto:kwarfield@shawnee.edu) (740) 351-3465.

**Registration deadline: August 19, 2011**

**Contact Hours: 60**

**Enrollment Limit: 30**

**Location:** OSU South Centers at Piketon. & Shawnee State  
University Advanced Technology Center  
1864 Shyville Road  
Piketon, OH 45661

**Prerequisite:** COMPASS Test indicates Intermediate Algebra

**Tentative Schedule:**



**Class will meet each Wednesday, 5:30 – 9:30 p.m. Fall 2011**

Session	Week #	Topic:	Location:
1	Aug 24	Atomic Structure, Current, Voltage, Resistance, Ohm's Law, Wire Tables, Power, Energy, and Efficiency	Endeavor Center 165
2	Aug 31	Series, Parallel, and Complex circuits	Endeavor Center 165
3	Sep 7	Capacitors, Inductors, AC RMS & Peak Values, and Phase Relationships	Endeavor Center 165
4	Sep 14	Motors, Generators, Transformers, Power Factor Correction, Power Distribution and 3 Phase circuits	SSU ATC 303
5	Sep 21	Electronics, Ladder Diagrams, and PLC's	Endeavor Center 165
6	Sep 28	Process Control Measurement, and PLC's	Endeavor Center 165
7	Oct 5	Industrial Control Schemes, Exam I	Endeavor Center 165
8	Oct 12	Introduction to Fluid Power, Force & Pressure Volume & Flow, Velocity & Power (Return & Review Exam I)	SSU ATC 303
9	Oct 19	Properties of Fluids, Energy, and Efficiency	Endeavor Center 165
10	Oct 26	Gas Laws and Properties	Endeavor Center 165
11	Nov 2	Pumps, Valves, and Piping	Endeavor Center 165
12	Nov 9	Circuit Design and Control Systems	SSU ATC 303
13	Nov 16	Flow Measurement and Control	Endeavor Center 165
14	Nov 23	No Class	
15	Nov 30	Basic Thermodynamics, Exam II	Endeavor Center 165
15	Dec 7	Return and Review Exam II, Wrap-Up, Virtual Field Trip, Discussion of Safety Issues	SSU ATC 303
16	Dec 14	Weather make-up, if needed	SSU ATC 303

**Cost:** \$935.00 per person

**Notes:**

- Students who earned C– or above in ETEM CT01 Electro Concepts (2008, 2009, or 2010), may begin class in the fourth class session (Sep 14). The adjusted registration fee is \$735.00.
- Endeavor Center 165 location: OSU South Centers, 1864 Shyville Road, Piketon, OH 45661
- ATC 303 location: Advanced Technology Center, Shawnee State University, 940 Second Street, Portsmouth, OH 45662

**Registration deadline: August 19, 2011**

Call University Outreach Services, at 740.351.3274, to register by telephone. We accept Discover, MasterCard and Visa. Or, complete all information on the following registration form and return with payment.

First Name	M. Initial	Last Name
Day phone	Evening phone	email address
Home Address Street		
Home City	State	Zip
Company/Organization		
Company/Organization Street Address		
Company/Organization City	State	Zip

**\$935.00 Course registration fee**

**Method of Payment:** Cash Check (Make checks payable to Shawnee State University and return with completed form to the address below.

Credit Card **Discover / MasterCard / Visa** \_\_\_\_\_ \$ \_\_\_\_\_  
(circle one) Account Number Amount

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_  
Card Expiration Date Security Code Name as it appears on your card

**Registration is complete when information is received and payment accepted.**

Registrations must be received three business days prior to the start date of the class to ensure enrollment.

Mail or fax completed form to:

**University Outreach Services  
Shawnee State University  
940 Second Street Portsmouth, OH 45662  
Attn: Ginnie Moore  
Phone: 740.351.3274 or toll free 866.672.8778 Fax: 740.351.3598**



**Offered in Partnership by the Ohio South Consortium for Training and Educations**

- Members:
- Buckeye Hills Career Center
  - Ohio University Chillicothe
  - Pickaway-Ross Career & Technology Center
  - Pike Career & Technology Center
  - Scioto County Career & Technology Center
  - Shawnee State University

**Refund Policy**

Full refunds are given when a class is cancelled due to low enrollment or other unforeseen circumstances or the course requested is already filled. Students withdrawing from a class at least three full business days before the start date of a class will receive a full refund minus a 10% processing fee. No other refunds will be granted.

**Cancellation Policy**

University Outreach Services reserves the right to cancel courses when the enrollment is too low to make the course feasible. Participants who have registered for those courses will be given a full refund of fees paid or may transfer fees to another class in the same terms. In the event of inclement weather, please listen to your local radio station for cancellation