Training for Wind Turbine Technicians at North Iowa Area Community College

Electromechanical Systems Technology

Electromechanical Systems Technology is an Associate in Applied Science Degree Program designed to prepare the graduate for immediate employment as electronic, electrical, and mechanical maintenance personnel in manufacturing settings.

Entrance Requirements

Students must either have completed Essentials of Math or higher OR score 16 or higher on ACT math OR have a COMPASS score at the Beginning Algebra level.

Self-Paced Courses

Several courses in the Electromechanical Systems Technology Program are offered in an instructor-supervised/student-paced format. See course descriptions for details concerning specific course status. Much of the instruction in these courses is computer-based using software available only in the Electromechanical Systems Technology Labs on campus. Students enrolled in such courses should expect to spend 25-30 hours in the Electromechanical Systems Technology Lab for each semester hour of the course. For example, ELT-382, Electronic Circuit Analysis is a 3-semester-hour course. The student enrolled in that course should expect to spend 75-90 hours (5-6 hours per week) in the Electromechanical Systems Technology Lab to complete the course. While a suggested schedule appears on this page, the use of instructor-supervised/student-paced course work allows the student much more flexibility in scheduling.

College Transfer Option

Through an articulation agreement with the University of Northern Iowa, graduates of the Electromechanical Systems Technology Program may continue their education by transferring to baccalaureate programs in such industrial technology fields as manufacturing, electromechanical systems, engineering technology, or supervision and management. Help of a NIACC counselor or program instructor is advised.

Through proper course selection, students may tailor their course selection to meet Wind Industry standards to obtain a position as a wind turbine technician. See your counselor for additional information.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

BUS-161	Human Relations	3 s.h.
	OR PSY-111 Introduction to Psychology (3 s.h.)	
ELT-190	Introduction to Tech Computing & CAD	3 s.h.
ELT-382	Electronic Circuit Analysis	3 s.h.
ELT-790	Fluid Power	3 s.h.
ENG-701	Communications I	3 s.h.
	OR ENG-105 Composition I (3 s.h.)	
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
	OR MAT-121 College Algebra (4 s.h.)	
		19 s.h.

Second Term (Spring Semester)

ELT-210	Motor Control Circuits	3 s.h.
ELT-550	Analog Devices	4 s.h.
ELT-309	Digital Circuits	3 s.h.
ENG-702	Communications II	3 s.h.
	OR ENG-106 Composition II (3 s.h.)	
		13 s.h.

Third Term (Summer)

ELT-895	Electromechanical Internship	2 s.h.
		2 s.h.

Second Year

Fourth Term (Fall Semester)

ELT-124	Advanced PLCs and System Integration	3 s.h.
ELT-133	Electric Motor Drives	2 s.h.
ELT-170	Introduction to PLC's	3 s.h.
ELT-734	Industrial Instrumentation	4 s.h.
PHY-162	College Physics I	4 s.h.
	OR PHY-106 Survey of Physics (4 s.h.)	
	OR CHM-122 Introduction to General Chemistry (4 s.h.)	
		16 s.h.

Fifth Term (Spring Semester)

ELT-710	Computer Automated Manufacturing	3 s.h.
ELT-745	Maintenance Shop Operations	3 s.h.
ELT-750	Facilities Maintenance	4 s.h.
PHY-172	College Physics II	4 s.h.
	OR PHY-106 Survey of Physics (4 s.h.)	
	OR CHM-122 Introduction to General Chemistry (4 s.h.)	
SDV-135	Job Seeking Skills	1 s.h.
		15 s.h.

Total Program Hours	65 s.h.

Career Opportunities

Completion of this program prepares graduates to enter the following occupations:

Wind Turbine Technician
- Electromechanical Technician
- Industrial Maintenance Technician
- Electronics Technician
- Industrial Process Control Technician
- Instrumentation Technician
- Control Systems Technician
- Computer Automated Process Control Technician

For specific information contact the Career and Internship Center or the NIACC Industrial Division.