

# Energy Utility Concentration (ETPT)

## Associate in Science in Engineering Systems Technology (AS\_ETST)

Knight Campus, Warwick only

Developing the skills and knowledge to support today's complex technology requires a shift to a systems engineering approach. Systems engineering is an interdisciplinary view of complex systems that considers customer needs, product functionality, operation, performance, testing and manufacturing. This program incorporates system modeling, simulation, automation, robotics, electronics, digital systems, networking, machine design and electrical power. Emphasis is placed upon understanding the principles of electromechanical systems, automation, system control, machine design and energy systems. Students will develop skills in creative problem solving, design principles, machine programming, computer networking and system troubleshooting.

Throughout the program, students will be required to produce written reports, verbal presentations and portfolio entries; function in teams and complete a capstone project. The program is structured around a set of core technology courses and four concentration areas – electrical, mechanical, energy or manufacturing technology. The program will prepare students to be employed in a variety of technical support positions in the fields of electronics, electromechanical systems, automation, manufacturing, renewable energy technologies and the energy utility industry.

Three certificates and four concentration tracks can lead to the Engineering Systems Technology Associate Degree. All certificate courses map to the degree concentration track with no credit loss. This gives students the opportunity to start at the certificate level, increase employment opportunities while attending classes, and work toward the associate degree on a full or part-time basis.

**Note:** Many courses require prerequisites, corequisites and/or testing. [See course descriptions for details.](#)

### General Education Requirements

COURSE NO.	COURSE TITLE	COURSE NOTES	CREDITS
MATH 1179	Applied Technical Mathematics I		3
MATH 1181	Applied Technical Mathematics II		3
ENGL 1010	Composition I		3
PHYS 1050	Physics for Technology I		4
PHYS 1070	Introduction to Renewable Energy		3
<a href="#">Social Science Electives</a>		See <a href="#">this page</a> for complete listing of courses that meet this requirement	6
Total General Education Requirements Credits			22

### Core Requirements

COURSE NO.	COURSE TITLE	COURSE NOTES	CREDITS
ETEE 1050	Introduction to Electromechanical Systems		3
ETEE 1800	Introduction to Digital Systems		3
ETME 1010	Robotics and Control		3
ETME 1020	Introduction to Manufacturing Processes		3
ETME 2310	Automation Systems		3
Total Core Requirements Credits			15

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<b>COURSE NO.</b>	<b>COURSE TITLE</b>	<b>COURSE NOTES</b>	<b>CREDITS</b>
INST 1010	Introduction to Instrumentation Technology		3
ETUT 1060	Energy Industry Safety		3
ETUT 1160	Introduction to Energy Utility Industry		3
ETEE 1500	Electrical Systems I (Formerly ETEK 1060)	Seven-and-a-half week course	3
ETEE 1120	Electronic Devices & Circuits (Formerly ETEK 1120 )		3
ETEE 2390	Electrical Power Systems (Formerly ETEK 2390)	Seven-and-a-half week course	3
CNVT 1810	Networking Technology		3
CNVT 1200	Introduction to Wireless		3
ETUT 2500	Energy Industry Practicum and Capstone		3
<b>Total Energy Utility Technology (ETPT) Credits</b>			<b>27</b>

Total Program Credits 64