

# Associate of Applied Science Degree Engineering Technologies

## Nuclear Engineering Technology (9416)

This program is based on the nuclear industry "Nonlicensed Operator" training requirements. Before being hired to work within the nuclear industry, students must be able to pass a background check, drug tests, and psychological screening. Lakeland is one of only a handful of colleges nationwide to offer a two-year degree program in Nuclear Engineering Technology that is TAC/ABET (Technology Accreditation Commission of the Accreditation Board of Engineering and Technology) accredited. Graduates will be able to: (1) solve basic technical problems typical of what is encountered when working at a nuclear power plant; (2) perform tests and experiments, data analysis, and report findings including recommendations for improvement; (3) work and communicate effectively in diverse and multi-disciplinary teams; (4) be aware of modern professional, ethical, and societal issues as well as recognize the need for lifelong learning. This degree is accredited by the Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, phone 410.347.7700, [www.abet.org](http://www.abet.org).

Students meeting specific academic standards are eligible to receive, upon graduation, a "Nuclear Uniform Curriculum" certificate issued by the Nuclear Energy Institute (NEI) and Lakeland.

Students must meet specific admission requirements for this program. Interested students should contact the director of admissions or the Counseling Office for details about applying for admission to the program.

### First Semester:

<b>CHEM 1100*</b> . . . . . <b>Elementary Chemistry</b> . . . . .	4
<b>OR</b>	
<b>CHEM 1500</b> . . . . . <b>General Chemistry I</b>	
ENGR 1000 . . . . .Introduction to Engineering Technology . . . . .	2
MATH 1101 . . . . .Technical Mathematics I . . . . .	4
NUET 1000 . . . . .Nuclear Industry Fundamentals Concepts . . . . .	3
NUET 1100 . . . . .Radiation Detection and Protection . . . . .	3
PHYS 1100 . . . . .Applied Physics I . . . . .	3
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### Second Semester:

ELEC 1100 . . . . .Direct Current Circuit Analysis . . . . .	3
MATH 1201 . . . . .Technical Mathematics II . . . . .	4
NUET 1200 . . . . .Nuclear Plant Drawings . . . . .	3
NUET 1300 . . . . .Power Plant Components . . . . .	3
PHYS 1200 . . . . .Applied Physics II . . . . .	3
<b>SPCH 1000</b> . . . . . <b>Effective Public Speaking</b> . . . . .	3
<b>OR</b>	
<b>SPCH 1100</b> . . . . . <b>Effective Interpersonal Communications</b>	
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### Third Semester:

<b>ECON 1150</b> . . . . . <b>Basic Economics</b> . . . . .	3
<b>OR</b>	
<b>ECON 2500</b> . . . . . <b>Principles of Macroeconomics</b>	
<b>OR</b>	
<b>ECON 2600</b> . . . . . <b>Principles of Microeconomics</b>	
ELEC 1200 . . . . .Alternating Current Circuit Analysis . . . . .	3
<b>ENGL 1110**</b> . . . . . <b>English Composition I(A)</b> . . . . .	3
<b>OR</b>	
<b>ENGL 1111</b> . . . . . <b>English Composition I(B)</b>	
NUET 2000 . . . . .Reactor Plant Materials . . . . .	3
NUET 2300 . . . . .Thermo-Fluid Sciences . . . . .	4
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### Fourth Semester:

ELEC 2300 . . . . .Sensors and Actuators . . . . .	3
ENGL 1120 . . . . .English Composition II . . . . .	3
HUMX 1100 . . . . .Introduction to Humanities . . . . .	3
NUET 2250 . . . . .Reactor Theory, Safety and Design . . . . .	3
NUET 2400 . . . . .Capstone and Case Studies in Nuclear Engineering Technology . . . . .	2
Choose course(s) from the Electives list. . . . .	2
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**Program Total: 70**

*\*Chemistry course selection is based on prior chemistry experience.*

*\*\*English course selection is based on placement test results (ENGL 1111 is 4 credits, only 3 credits apply to the degree).*

### Electives: minimum 2 credits

BUSM 1330 . . . . .Business Ethics . . . . .	3
BUSM 2380 . . . . .Training Skills and Techniques . . . . .	3
CIMN 1110 . . . . .Machining Processes . . . . .	3
CIMN 1420 . . . . .Computer Numerical Control Part Programming (CNC) . . . . .	2
CPET 1120 . . . . .C Programming for Engineering Technology . . . . .	3
CPET 1200 . . . . .Visual Basic for Engineering Technology I . . . . .	2
CPET 2200 . . . . .Visual Basic for Engineering Technology II . . . . .	2
ELEC 1320 . . . . .Digital Systems Fundamentals . . . . .	3
ELEC 2101 . . . . .Linear and Switch-Mode Power Supplies . . . . .	3
ELEC 2700 . . . . .Motor Control and Servo Systems . . . . .	3
ELEC 2810 . . . . .Current Local and National Electrical Codes . . . . .	3
ELEC 2821 . . . . .Programmable Logic Controllers . . . . .	3
ENGL 2201 . . . . .Introduction to Technical Writing . . . . .	2
ENGL 2202 . . . . .Technical Research and Report Writing . . . . .	3
ENGR 2800 . . . . .Engineering Co-Op Experience . . . . .	1-3
MATH 1550 . . . . .Statistics . . . . .	4
MATH 1700 . . . . .Trigonometry . . . . .	3
NUET 2050 . . . . .Nuclear Field Experience . . . . .	2
PHYS 2100 . . . . .Applied Physics III . . . . .	2