

ELECTRICAL ENGINEERING TECHNOLOGY (SMART GRID) (B.S.)

Evening study available.

BS-SP ETS

Engineering Technology Department Bachelor of Science (HEGIS 0925)

Technology Building 126
(716) 878-6017
engineeringtechnology.buffalostate.edu/ (<https://engineeringtechnology.buffalostate.edu/>)

The Electrical Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, [abet.org](http://www.abet.org) (<http://www.abet.org>)

About the Program

Graduates of the Smart Grid option in Electrical Engineering Technology have found careers in the fields of electrical power generation, transmission, and distribution; industrial, commercial and residential electrical power distribution; as well as power systems protection, control, and monitoring.

Program Requirements

Code	Title	Credit Hours
Intellectual Foundations Requirements (http://ecatalog.buffalostate.edu/undergraduate/collegewide-degree-requirements-baccalaureate-degrees/#IF_Courses)		
33-39 credit hours ¹		33-39
Electrical Engineering Technology Major Requirements (57 credit hours)		
ENT 104	ESSENTIALS OF ELECTRICAL ENGINEERING TECHNOLOGY	3
ENT 300	MATHEMATICS APPLICATIONS IN ENGINEERING TECHNOLOGY	3
ENT 301	MECHANICS I	3
ENT 330	ELECTRICAL CIRCUITS ANALYSIS I	3
ENT 332	ELECTRICAL CIRCUITS ANALYSIS II	3
ENT 340	BUILDING INFORMATION MODELING (BIM) USING REVIT MEP	3
ENT 341	ELECTRONICS	3
ENT 342	ADVANCED CIRCUIT ANALYSIS	3

ENT 371	ELECTRIC MACHINES	3
ENT 345	DIGITAL SYSTEMS	3
ENT 346	MICROCONTROLLERS	3
ENT 445	POWER ELECTRONICS	3
ENT 461	CONTROL SYSTEMS I	3
ENT 462	CONTROL SYSTEMS II	3
ENT 465	ELECTRICAL DESIGN I	3
ENT 466	ELECTRICAL DESIGN II	3
ENT 471	POWER SYSTEMS I	3
ENT 472	POWER SYSTEMS II	3
ENT 481	RENEWABLE DISTRIBUTED GENERATION AND STORAGE	3

Required Courses Outside of Major

25-30 credit hours		25-30
PHY 107	GENERAL PHYSICS I or PHY 111 UNIVERSITY PHYSICS I	
PHY 108	GENERAL PHYSICS II or PHY 111 UNIVERSITY PHYSICS II	
CHE 101	GENERAL CHEMISTRY I	
or		
CHE 111 & CHE 113	FUNDAMENTALS OF CHEMISTRY I and LABORATORY FOR FUNDAMENTALS OF CHEMISTRY I	
CIS 151	COMPUTER-BASED INFORMATION PROCESSING I	
<i>Math Option 1 (11 credit hours)</i>		
MAT 126	APPLIED CALCULUS I	
MAT 127	APPLIED CALCULUS II	
MAT 202	INTRODUCTION TO LINEAR ALGEBRA ¹	
<i>Math Option 2 (11 credit hours)</i>		
MAT 161	CALCULUS I	
MAT 162	CALCULUS II	
MAT 315	DIFFERENTIAL EQUATIONS ¹	
<i>Electives (0-11 credit hours)</i>		
Total Credit Hours		120

¹ MAT 202 for Option 1 and MAT 315 for Option 2 are preferred courses. Other mathematics courses such as Calculus III, or Discrete Mathematics may be suggested by program advisement to better meet student's career choices.