



**BELMONT
COLLEGE**



AAS IN INDUSTRIAL ELECTRONICS TECHNOLOGY TO BS IN ENGINEERING TECHNOLOGY, GREEN AND ALTERNATIVE ENERGY CONCENTRATION

SUGGESTED SEQUENCE AT BELMONT COLLEGE		
Semester One	15 Credits	KSU Equivalent
EIE 1101 DC Circuits	4	EERT 12000 Electric Circuits I, Applied Course
EIE 1201 Digital Electronics	4	EERT 22004 Digital Systems, Applied Course
ENG 1110 Composition I	3	# ENG 11011 College Writing I (KCOMP)
MAT 1130 College Algebra	4	# MATH 11010 Algebra for Calculus (KMCR)
Semester Two	15 Credits	KSU Equivalent
EIE 1102 AC Circuits	4	EERT 12001 Electric Circuits II, Applied Course
BUS 1125 Supervision and Management	3	BMRT 11009 Introduction to Management Technology
MAT 1140 Trigonometry	3	MATH 11022 Trigonometry (KMCR)
PHY 1110 Physics I	5	# PHY 13001 General College Physics I and PHY 13021 General College Physics I Lab (KBS, KLAB)
Semester Three	18-19 Credits	KSU Equivalent
COM 1110 Interpersonal Communications	3	COMM 20001 Interpersonal Communication
ECN 1110 Macroeconomics	3	# ECON 22061 Principles of Macroeconomics (KSS) Kent Core Additional
EIE 2105 Analog Electronics	4	EERT 12010 Introduction to Electronics, Applied Course and EERT 22011 Electronic Systems
PHY 1112 Physics II	5	# PHY 13002 General College Physics II and PHY 13022 General College Physics II Lab (KBS, KLAB)
Electronics Elective	3-4	Applied Course
Semester Four	15-16 Credits	KSU Equivalent
EIE 2120 NEC	2	ENGT 2X000, Applied Course
EIE 2301 DC & AC Machinery	4	ENGR 43220 Electrical Machinery
EIE 2190 Electronics Capstone	2	MERT 22009 Engineering Technology Project, Applied Course
FST 1116 Workplace Safety	1	TRAN 1X000, Applied Course
Arts & Humanities Elective	3	# Kent Core Humanities or Fine Arts
Electronics Elective	3-4	Applied Course

**63-65 Total Credit Hours to Complete
AAS from Belmont College**

SUGGESTED SEQUENCE AT KENT STATE UNIVERSITY	
Semester Five	15 Credits
EERT 32003 Technical Computing	3
MATH 11012 Intuitive Calculus	3
ENG 20002 Introduction to Technical Writing or ITAP 26638 Business Communications	3
Green and Alternative Energy Elective	3
EERT 21010 Engineering & Professional Ethics or TECH 31010 Engineering & Professional Ethics	3
Semester Six	15 Credits
TECH 33363 Metallurgy and Materials Science	3
ENG 21011 College Writing II	3
ECON 22060 Principles of Microeconomics	3
Kent Core Humanities	3
Kent Core Fine Arts	3
Semester Seven	16 Credits
GAE 32000 Fuel Cell Technology	3
COMM 15000 Introduction to Human Communication	3
Green and Alternative Energy Electives	6
General Elective (upper-division)	3
OTEC 26636 Project Management for Administrative Professionals	1
Semester Eight	17-18 Credits
TAS 47900 Applied Studies Capstone Seminar	3
GAE 42004 Advanced Fuel Cell Technology	3
TECH 31000 Cultural Dynamics of Technology (3) or TECH 33092 Cooperative Education— Professional Development (2)	2-3
TECH 43080 Industrial and Environmental Safety	3
Green and Alternative Energy Electives	3
Kent Core Social Science	3
123-126 Total Credit Hours to Complete BS from KSU, including Transfer Coursework	

Course will fulfill Kent State University's Kent Core (general education) requirement.

* Students should consult the [Kent State University Transfer Credit Guide](#) to ensure KHUM/KFA attribute.

@ Course may be taken at Belmont College and transferred to Kent State. However, please be aware of Kent State's residence policy.

GRADUATION REQUIREMENTS SUMMARY

Belmont College: Associate of Applied Science Degree, Industrial Electronics Technology

Kent State University: Bachelor of Science Degree, Engineering Technology, Green and Alternative Energy Concentration

Minimum Total Hours: 123

Minimum Upper-Division Hours (30000-40000 level course): 39

Minimum Kent Core Hours: 36

Minimum Major GPA: 2.0

Minimum Overall GPA: 2.0

It is recommended that students intending to pursue the Bachelor of Science Degree, Engineering Technology in Green and Alternative Energy through Kent State University consult with academic advisors at both Belmont College and Kent State University.

Kent Core Requirements

Bachelor's Requirements	
Requirement	Credits/Courses
• Kent Core Composition (KCMP)	6
• Kent Core Mathematics and Critical Reasoning (KMCR)	3
• Kent Core Humanities and Fine Arts (KHUM/KFA) (min one course each)	9
• Kent Core Social Sciences (KSS) (must be from two disciplines)	6
• Kent Core Basic Sciences (KBS/KLAB) (must include one laboratory)	6-7
• Kent Core Additional (KADL)	6
Total Credit Hours:	36-37

Green and Alternative Energy Concentration Requirements

Course List		
Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
• GAE 32000	FUEL CELL TECHNOLOGY	3
• GAE 42004	ADVANCED FUEL CELL TECHNOLOGY	3
• TECH 33363	METALLURGY AND MATERIALS SCIENCE	3
• TECH 43080	INDUSTRIAL AND ENVIRONMENTAL SAFETY	3
Choose from the following:		12
• FEERT 32005	INSTRUMENTATION	
• GAE 42002	ENERGY MANAGEMENT SYSTEMS	

Course List		
Code	Title	Credit Hours
or TECH 42100	TRAINING TOPICS IN TECHNOLOGY	
• GAE 42003	LEAN MANUFACTURING, SIX SIGMA AND OPERATIONS TECHNOLOGY	
• MERT 42000	THERMODYNAMICS FOR ENGINEERING TECHNOLOGY	
• TECH 31020	AUTOMATED MANUFACTURING	
• TECH 31032	POWER TECHNOLOGY	
Additional Requirements (courses do not count in major GPA)		
• MATH 11012	INTUITIVE CALCULUS (KMCR)	3
Physics Elective A, choose from the following:		3-5
• PHY 12201 & PHY 12202	TECHNICAL PHYSICS I (KBS) (KLAB) and TECHNICAL PHYSICS II (KBS) (KLAB)	
• PHY 13001 & PHY 13021	GENERAL COLLEGE PHYSICS I (KBS) and GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	
Physics Elective B, choose from the following:		3-5
• PHY 12202	TECHNICAL PHYSICS II (KBS) (KLAB)	
• PHY 13002 & PHY 13022	GENERAL COLLEGE PHYSICS II (KBS) and GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	
• PHY 13012 & PHY 13022	COLLEGE PHYSICS II (KBS) and GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	
Applied Courses from Associate Degree, Minor or Individualized Specialization ¹		27
• ENGT 12005	APPLICATIONS IN COMPUTER-AIDED DESIGN	
• ENGT 22006	ECONOMIC DECISION ANALYSIS	
• Any Electrical/Electronic and Related Technologies (EERT) Electives		
• Any Green and Alternate Energy (GAE) Electives		
• Any Mechanical Engineering and Related Technologies (MERT) Electives		
• Any other course by program director approval		
General Elective (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)		13
Minimum Total Credit Hours:		74
¹	Applied courses should be chosen from an approved associate degree or a declared minor or individualized specialization selected in consultation with an advisor.	

University Requirements

All students in a bachelor's degree program at Kent State University must complete the following university requirements for graduation.

NOTE: University requirements may be fulfilled in this program by specific course requirements. Please see Program Requirements for details.

Bachelor's Requirements	
Requirement	Credits/Courses
<u>Destination Kent State: First Year Experience</u>	1
<ul style="list-style-type: none">Course is not required for students with 25 transfer credits, excluding College Credit Plus, or age 21+ at time of admission.	
<u>Diversity Domestic/Global (DIVD/DIVG)</u>	2 courses
<ul style="list-style-type: none">Students must successfully complete one domestic and one global course, of which one must be from the Kent Core.	
<u>Experiential Learning Requirement (ELR)</u>	varies
<ul style="list-style-type: none">Students must successfully complete one course or approved experience.	
<u>Kent Core (see table below)</u>	36-37
<u>Writing-Intensive Course (WIC)</u>	1 course
<ul style="list-style-type: none">Students must earn a minimum C grade in the course.	
<u>Upper-Division Requirement</u>	39 (or 42)
<ul style="list-style-type: none">Students must successfully complete 39 upper-division (numbered 30000 to 49999) credit hours to graduate. Students in a B.A. and/or B.S. degree in the College of Arts and Sciences must complete 42 upper-division credit hours.	
<u>Total Credit Hour Requirement</u>	120
Some bachelor's degrees require students to complete more than 120 credit hours.	

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