

AAS IN CIVIL ENGINEERING TO BS IN ENGINEERING TECHNOLOGY, MECHANICAL SYSTEMS CONCENTRATION

SUGGESTED SEQUENCE AT BELMONT COLLEGE		
Semester One	15 Credits	KSU Equivalent
FYE 1110 Student Learning and Success	1	TRAN 1X000
ECE 1120 CAD	4	MERT 12001 Computer-Aided Design
ECE 1170 Computing for Engineers	3	EERT 22016 Productivity Software for Industry
ENG 1110 Composition I	3	# ENG 11011 College Writing I (KCMP)
MAT 1130 College Algebra	4	# MATH 11010 Algebra for Calculus (KCP1)
Semester Two	19 Credits	KSU Equivalent
CHM 1110 Chemistry Principles I	4	CHEM 10060 General Chemistry I
ECN 1110 Macroeconomics	3	# ECON 22061 Principles of Macroeconomics (KSS)
ECE 1160 Hydraulics & Hydrology	4	MERT 22012 Fluid Power
MAT 1140 Trigonometry	3	MATH 11022 Trigonometry (KMCR)
PHY 1110 Physics I	5	# PHY 13001 General College Physics and PHY 13021 General College Physics Laboratory I (KBS, KLAB)
Semester Three	16 Credits	KSU Equivalent
COM 1110 Interpersonal Communications	3	COMM 20001 Interpersonal Communication
ECE 2121 Surveying	4	CMGT 31023, Applied Course
ECE 2216 Statics	3	MERT 22005 Statics
ECE 2251 Construction Estimating	3	ENGT 2X000, Applied Course
Arts and Humanities*	3	# Kent Core Arts and Humanities
Semester Four	14 Credits	KSU Equivalent
ECE 2221 Strength of Materials	3	MERT 22007 Strength of Materials
ECE 2241 Soil Mechanics	3	ENGT 2X000, Applied Course
ECE 2261 Environmental Science	3	ENGT 2X000, Applied Course
ECE 2230 Engineering Materials/Concrete Design	3	MERT 12005 Properties of Materials
ECE 2282 Civil Engineering Capstone	2	MERT 22009 Engineering Technology Project
64 Total Credit Hours to Complete AAS from Belmont College		

SUGGESTED SEQUENCE AT KENT STATE UNIVERSITY	
Semester Five	19 Credits
MATH 11012 Intuitive Calculus @	3
TECH 31020 Automated Manufacturing	3
EERT 32003 Technical Computing	3
TECH 31010 Engineering and Professional Ethics	3
MERT 12000 Engineering Drawing	3
OTEC 26636 Project Management for Admin.	1
Kent Core Social Science	3
Semester Six	18 Credits
TECH 36620 Project Management in Engineering	3
TECH 33363 Metallurgy and Materials Science	3
ENG 20002 Intro to Technical Writing Or OTEC 26638 Business Communications	3
PHY 13012 College Physics II and PHY 13022 General College Physics Laboratory II @	3
Mechanical/Systems Elective	3
MERT 12001 Computer Aided Design	3
Semester Seven	18 Credits
MERT 32004 Machine Design Or TECH 43700 Computer Integrated Manufacturing	3
Kent Core Humanities @	3
Kent Core Fine Arts @	3
ENG 21011 College Writing II @	3
Mechanical/Systems Elective	6
Semester Eight	18 Credits
TAS 47900 Technical & Applied Studies Capstone	3
TECH 31000 Cultural Dynamics Or TECH 33092 Cooperative Education	3
TECH 43080 Industrial and Environmental Safety	3
ECON 22060 Microeconomics	3
Mechanical/Systems Elective	6
137 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, Civil Engineering

Kent State University: Bachelor of Science Degree, Engineering Technology, Mechanical/Systems

Minimum Total Hours: 137

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 Mechanical/Systems 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 (KCOMP)	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

Mechanical/Systems Concentration Requirements

Course List		
Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
• TECH 31020	AUTOMATED MANUFACTURING	3
or TECH 43700	COMPUTER INTEGRATED MANUFACTURING	
• TECH 32002	MATERIALS AND PROCESSES II	3
or TECH 33870	FACILITY DESIGN AND MATERIAL HANDLING	
• TECH 33363	METALLURGY AND MATERIALS SCIENCE	3
• TECH 43080	INDUSTRIAL AND ENVIRONMENTAL SAFETY	3

Course List		
Code	Title	Credit Hours
Choose from the following:		15
• EERT 32005	INSTRUMENTATION	
• GAE 32000	FUEL CELL TECHNOLOGY	
• GAE 42003	LEAN MANUFACTURING, SIX SIGMA AND OPERATIONS TECHNOLOGY	
• MERT 42000	THERMODYNAMICS FOR ENGINEERING TECHNOLOGY	
• MERT 43001	DYNAMICS FOR ENGINEERING TECHNOLOGY	
• TECH 31032	POWER TECHNOLOGY	
• TECH 32101	POLYMERS I	
• TECH 33016	PC/NETWORK ENGINEERING AND TROUBLESHOOTING	
• TECH 33031	PROGRAMMABLE LOGIC CONTROLLERS	
• TECH 33225	INDUSTRIAL CONTROL SYSTEMS	
• TECH 33700	QUALITY TECHNIQUES	
• TECH 34002	ADVANCED COMPUTER-AIDED DESIGN II	
• TECH 43220	ELECTRICAL MACHINERY	
• TECH 43550	COMPUTER-AIDED MANUFACTURING	
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	TECHNICAL PHYSICS I (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
• CADT 22003	• SOLID MODELING	
• EERT 22014	• MICROPROCESSORS AND ROBOTICS	
• ENGT 22006	• ECONOMIC DECISION ANALYSIS	
• Any Mechanical Engineering and Related Technologies (MERT) Electives		
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)		10

Course List		
Code	Title	Credit Hours
Minimum Total Credit Hours:		74
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
Destination Kent State: First Year Experience	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. 	
Diversity Domestic/Global (DIVD/DIVG)	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. 	
Experiential Learning Requirement (ELR)	varies
<ul style="list-style-type: none"> Students must successfully complete one course or approved experience. 	
Kent Core (see table below)	36-37
Writing-Intensive Course (WIC)	1 course
<ul style="list-style-type: none"> Students must earn a minimum C grade in the course. 	
Upper-Division Requirement	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. 	
Total Credit Hour Requirement	120
Some bachelor's degrees require students to complete more than 120 credit hours.	

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