

## SUGGESTED THREE-YEAR GRADUATION PLAN

Roadmap: Applied Engineering - Mechanical Engineering Technology - Bachelor of Science

AT-BS-AENG-MERT

College of Applied Engineering, Sustainability and Technology

Catalog Year: 2014-2015



This roadmap is a recommended semester-by-semester plan of study for this major. However, courses and milestones designed as critical (!) must be completed in the semester listed to ensure a timely graduation.

Critical	Course Subject and Title	Credit Hours	Upper Div.	Min. Grade	Major GPA	Type	Term Taken
<b>Post-Secondary Coursework or Credit By Examination Upon Entry as a Freshman: [30 Credit Hours]</b>							
	ECON 22060 Principles of Microeconomics <sup>1</sup>	3				KSS	
	MATH 11010 Algebra for Calculus <sup>1</sup>	3				KMC	
	MATH 11022 Trigonometry <sup>1</sup>	3				KMC	
	PHY 13001 General College Physics I <sup>1</sup>	4				KBS	
	PHY 13002 General College Physics II <sup>1</sup>	4				KBS	
	TECH 10001 Information Technology	3			■		
	TECH 13580 Engineering Graphics I	3			■		
	TECH 21021 Survey of Electricity and Electronics	4			■		
	TECH 23581 Computer-Aided Engineering Graphics	3			■		
<b>Semester One [15 Credits]</b>							
!	<b>TECH 20002 Materials and Processes</b>	<b>3</b>			■		
!	<b>TECH 33031 Programmable Logic Controllers</b>	<b>3</b>	■		■		
	MATH 12002 Analytic Geometry and Calculus I	5				KMC	
	MIS 24056 Fundamentals of Business Statistics	3			■		
	US 10097 Destination Kent State: First Year Experience <sup>2</sup>	1					
<b>Semester Two [15 Credits]</b>							
!	<b>TECH 31065 Cast Metals or TECH 33363 Metallurgy and Materials Science or TECH 43700 Computer Integrated Manufacturing</b>	<b>3</b>	■		■		
	CHEM 10050 Fundamentals of Chemistry	3				KBS	
	TECH 33033 Hydraulics/Pneumatics	3	■		■		
	Kent Core Requirement	3					
	Kent Core Requirement	3					
<b>Semester Three [16 Credits]</b>							
!	<b>TECH 33111 Strength of Materials</b>	<b>3</b>	■		■		
	MIS 24163 Principles of Management <sup>3</sup>	3			■		
	TECH 43550 Computer-Aided Manufacturing	3	■		■		
	TECH 46330 Visual Basic Programming in Engineering Technology	3	■		■		
	Kent Core Requirement	4					
<b>Semester Four [15 Credits]</b>							
!	<b>TECH 34002 Advanced CAD II</b>	<b>3</b>	■		■		
	ACCT 23020 Introduction to Financial Accounting	3					
	COMM 15000 Introduction to Human Communication	3				KAD	
	CS 10061 Introduction to Computer Programming	3			■		
	ENG 20002 Introduction to Technical Writing	3			■		
<b>Semester Five [15 Credits]</b>							
!	<b>TECH 31000 Cultural Dynamics of Technology</b>	<b>3</b>	■	C	■	WIC/DD	
!	<b>TECH 43080 Industrial and Environmental Safety</b>	<b>3</b>	■		■		
	MIS 34180 Human Resource Management	3	■		■		
	Kent Core Requirement	3					
	Kent Core Requirement	3					
<b>Semester Six [14 Credits]</b>							
!	<b>TECH 43580 Computer-Aided Machine Design</b>	<b>3</b>	■		■		
!	<b>TECH 43800 Applied Engineering Technology Seminar</b>	<b>3</b>	■		■		
	MIS 34060 Operations Management	3	■		■		
	Kent Core Requirement	3					
	General Electives	2					

### Graduation Requirements Summary

Minimum Total Hours	Minimum Upper-Division Hours	Minimum Kent Core Hours	Minimum	
			Major GPA	Overall GPA
120	39	36	2.250	2.000

- Credit for course may be earned through AP or CLEP; See list of Kent Core courses that can be earned through AP, CLEP or CBE exams on page 3
- US 10097 is not required of transfer students with 25 credits or students age 21+ at time of admission.
- Equivalent to BMRT 11009 Introduction to Management Technology

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### University Requirements Summary

Type	Categories	Course(s) Satisfying Category	Remaining Requirements
KCM	<b>Kent Core I. Composition</b> Enrollment based on placement test	visit <a href="http://www.kent.edu/catalog/kent-core">www.kent.edu/catalog/kent-core</a>	6
KMC	<b>Kent Core II. Mathematics and Critical Reasoning</b> Enrollment based on placement test	MATH 11010	fulfilled
KHU	<b>Kent Core III. Humanities</b> Minimum one course from humanities in Arts and Sciences; may fulfill diversity requirement	visit <a href="http://www.kent.edu/catalog/kent-core">www.kent.edu/catalog/kent-core</a>	3
KFA	<b>Kent Core IV. Fine Arts</b> Minimum one course from the fine arts; may fulfill diversity requirement	visit <a href="http://www.kent.edu/catalog/kent-core">www.kent.edu/catalog/kent-core</a>	3
KFH	<b>Kent Core V. Humanities or Fine Arts</b> One additional course from either the humanities or fine arts category, may fulfill diversity requirement.		3
KSS	<b>Kent Core VI. Social Sciences</b> Must be selected from two curricular areas; may fulfill diversity requirement	ECON 22060	3
KBS	<b>Kent Core VII. Basic Sciences</b> Must include one laboratory	PHY 13001, PHY 13002	1
KAD	<b>Kent Core VIII. Additional</b> May fulfill diversity requirement	COMM 15000, CHEM 10050, MATH 11022, MATH 12002,	fulfilled
DD	<b>Domestic Diversity Course Requirement</b> Either domestic or global diversity must be from Kent Core	visit <a href="http://www.kent.edu/catalog/kent-core">www.kent.edu/catalog/kent-core</a>	one course
DG	<b>Global Diversity Course Requirement</b> Either domestic or global diversity must be from Kent Core	visit <a href="http://www.kent.edu/catalog/kent-core">www.kent.edu/catalog/kent-core</a>	one course
ELR	<b>Experiential Learning Requirement</b> Either course or non-course experience approved by the appropriate faculty member.	visit <a href="http://www.kent.edu/catalog/elr">www.kent.edu/catalog/elr</a>	one course or activity
WIC	<b>Writing-Intensive Course Requirement</b> Minimum C (2.000) grade	TECH 31000	one course

## Kent Core Courses That Can Be Earned Through Exams

**LEGEND:** G – Global Diversity; D – Domestic Diversity; LAB – Laboratory

				Minimum AP score	Minimum CLEP score	Minimum CBE score
<b>COMPOSITION</b>						
ENG	11011	College Writing I (3)		3	50	C
ENG	21011	College Writing II (3)				C
<b>MATHEMATICS AND CRITICAL REASONING</b>						
CS	10051	Introduction to Computer Science (4)		3		
MATH	10041	Introductory Statistics (4)		3		C
MATH	11010	Algebra for Calculus (3)			50	
MATH	11012	Intuitive Calculus (3)				C
MATH	12001	Algebra and Trigonometry (5)			50	C
MATH	12002	Analytic Geometry and Calculus I (5)		3	50	C
MATH	14001	Basic Mathematical Concepts I (4)				C
MATH	14002	Basic Mathematical Concepts II (4)				C
<b>HUMANITIES AND FINE ARTS</b>						
<b>Humanities in Arts and Sciences</b>						
ENG	22073	Major Modern Writers: British and United States (3)		3	50	
G HIST	11050	World History: Ancient and Medieval (3)		3		C
G HIST	11051	World History: Modern (3)		3		C
D HIST	12070	History of the United States: The Formative Period (3)		3	50	C
D HIST	12071	History of the United States: The Modern Period (3)		3	50	C
HIST	1xxxx	European History (3)		3		
<b>Fine Arts</b>						
ARCH	10012	Survey of Architectural History II (3)				C
ARTH	22006	Art History: Ancient and Medieval Art (3)		3		
MUS	22111	The Understanding of Music (3)				C
G MUS	22121	Music as a World Phenomenon (3)				C
<b>SOCIAL SCIENCES</b>						
ECON	22060	Principles of Microeconomics (3)		3	50	C
ECON	22061	Principles of Macroeconomics (3)		3	50	C
GEOG	10160	Introduction to Geography (3)				C
G GEOG	17063	World Geography (3)				C
D GEOG	17064	Geography of the United States and Canada (3)				C
G GEOG	22061	Human Geography (3)		3		
G POL	10004	Comparative Politics (3)		3		
D POL	10100	American Politics (3)		3	50	
D PSYC	11762	General Psychology (3)		3	50	
D PSYC	20651	Child Psychology (3)			50	
D SOC	12050	Introduction to Sociology (3)			50	
<b>BASIC SCIENCES</b>						
BSCI	10001	Human Biology (3)				C
BSCI	10002	Life on Planet Earth (3)				C
BSCI	10110	Biological Diversity (4)		3	50	
BSCI	10120	Biological Foundations (4)		4	50	
LAB BSCI	11010	Anatomy and Physiology I for Allied Health (3)				C
LAB BSCI	11020	Anatomy and Physiology II for Allied Health (3)				C
BSCI	20020	Biological Structure and Function (5)				C
CHEM	10030	Chemistry in Our World (3)				C
CHEM	10050	Fundamentals of Chemistry (3)				C
CHEM	10052	Introduction to Organic Chemistry (2)				C
CHEM	10054	General and Elementary Organic Chemistry (5)				C
CHEM	10060	General Chemistry I (4)		3	50	C
CHEM	10061	General Chemistry II (4)		5	50	C
LAB CHEM	10062	General Chemistry I Laboratory (1)		4		
GEOL	11040	How the Earth Works (3)				C
GEOL	11042	Earth and Life Through Time (3)				C
GEOL	21062	Environmental Earth Science (3)		3		C
GEOL	21080	All about the Oceans (3)				C
PHY	11030	Seven Ideas that Shook the Universe (3)				C
PHY	12201	Technical Physics I (3)				C
PHY	12202	Technical Physics II (3)				C
PHY	13001	General College Physics I (4)		3		C
PHY	13002	General College Physics II (4)		3		C
PHY	13011	College Physics I (2)				C
PHY	13012	College Physics II (2)				C
LAB PHY	13021	General College Physics Laboratory I (1)		3		
LAB PHY	13022	General College Physics Laboratory II (1)		3		
PHY	21040	Physics in Entertainment and the Arts (3)				C
PHY	21430	Frontiers in Astronomy (3)				C
PHY	23101	General University Physics I (5)		3		C
PHY	23102	General University Physics II (5)		3		C

Visit the following websites for more information on the AP (<http://www.kent.edu/transfercenter/advanced-placement.cfm>); CLEP ([www.kent.edu/career/testing/clep.cfm](http://www.kent.edu/career/testing/clep.cfm)); and CBE ([www.kent.edu/registrar/info/cbe.cfm](http://www.kent.edu/registrar/info/cbe.cfm)) at Kent State. Visit [www.kent.edu/catalog/kent-core](http://www.kent.edu/catalog/kent-core) for the full Kent Core course list.

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