

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	Min. Grade	Major GPA	Attribute	Notes
Semester One [17 Credits]						
Note: Students who have earned an associate degree will have 34 credits of technical coursework articulate to the bachelor's degree program and will not have to take the electives for a minor or individualized specialization.						
	CS 10061 Introduction to Computer Programming or DSCI 15310 Computational Thinking and Programming or EERT 22003 Technical Computing	3		■		
	MATH 11010 Algebra for Calculus	3			KMC	
	US 10097 Destination Kent State: First Year Experience ¹	1				
	Kent Core Requirement	3				
	Applied Courses from Associate Degree, Minor or Individualized Specialization ²	7				
Semester Two [18 Credits]						
	MATH 11012 Intuitive Calculus	3			KMC	
	MATH 11022 Trigonometry	3			KMC	
	Kent Core Requirement	3				
	Applied Courses from Associate Degree, Minor or Individualized Specialization ²	9				
Semester Three [15-17 Credits]						
	ENG 20002 Introduction to Technical Writing or ITAP 26638 Business Communications	3		■		
	PHY 12201 Technical Physics I (3) or PHY 13001 General College Physics I (4) <i>and</i> PHY 13021 General College Physics Laboratory I (1)	3 - 5			KBS	
	Applied Courses from Associate Degree, Minor or Individualized Specialization ²	9				
Semester Four [18-19 Credits]						
	EERT 21010 Engineering and Professional Ethics or TECH 31010 Engineering and Professional Ethics	3		■		
	PHY 12202 Technical Physics II (4) or PHY 13012 College Physics II (2) <i>and</i> PHY 13022 General College Physics Laboratory II (1)	3 - 4			KBS	
	Kent Core Requirement	3				
	Applied Courses from Associate Degree, Minor or Individualized Specialization ²	9				
Semester Five [13 Credits]						
!	TECH 31020 Automated Manufacturing	3		■		
	ECON 22060 Principles of Microeconomics	3			KSS	
	ITAP 26636 Project Management for Administrative Professionals	1				
	Mechanical/Systems Electives ³	3		■		
	Kent Core Requirement	3				
Semester Six [12 Credits]						
!	TECH 36620 Project Management in Engineering and Technology	3		■		
!	TECH 33363 Metallurgy and Materials Science	3		■		
	Mechanical/Systems Electives ³	6		■		
Semester Seven [12 Credits]						
!	TECH 32002 Materials and Processes II	3		■		
	Mechanical/Systems Electives ³	6		■		
	Kent Core Requirement	3				
Semester Eight [14-15 Credits]						
!	TAS 47900 Technical and Applied Studies Capstone	3	C	■	ELR	
!	TECH 31000 Cultural Dynamics of Technology or TECH 33092 Cooperative Education - Professional Development	2-3	C ⁴	■	DD/WIC ELR/WIC	
	TECH 43080 Industrial and Environmental Safety	3		■		
	Kent Core Requirement	3				
	Mechanical/Systems Electives ³	3		■		
	General Elective ⁵	0 - 1				

Graduation Requirements Summary

Minimum Total Hours	Minimum Upper-Division Hours 30000 – 40000 level course	Minimum Kent Core Hours	Minimum	
			Major GPA	Overall GPA
120	39	36	2.000	2.000

- US 10097 is not required of transfer students with 25 credits (excluding College Credit Plus and dual-enrollment credit) or students age 21+ at time of admission.
- Applied Courses from Associate Degree, Minor or Individualized Specialization (34 credit hours)

Choose from the following:

CADT 22003 Solid Modeling (2)	EERT 22014 Microprocessors and Robotics (3)
IERT 22006 Economic Decision Analysis (3)	Any MERT course
Others by program director approval	

- Mechanical/Systems Electives (9 credits from group 1 and 9 credits from group 2)

Group 1 (9 credits) choose from the following:

GAE 32000 Fuel Cell Technology (3)
MERT 42000 Thermodynamics for Engineering Technology (3)
MERT 43001 Dynamics for Engineering Technology (3)
TECH 31032 Power Technology (3)
TECH 31067 Machining Technology I (3)
TECH 33016 PC/Network Engineering and Troubleshooting (3)
TECH 33033 Hydraulics/Pneumatics (3)
TECH 33700 Quality Techniques (3)
TECH 34002 Advanced CAD II (3)
TECH 43220 Electrical Machinery (3)
TECH 43550 Computer-Aided Manufacturing (3)

Group 2 (9 credits) choose from the following:

EERT 32005 Instrumentation (3)
GAE 42003 Lean Manufacturing, Six Sigma and Operations Technology (3)
TECH 32101 Polymers I (3)
TECH 34002 Advanced CAD II (3)

- To fulfill the writing-intensive requirement, either TECH 31000 or TECH 33056 must be earned with minimum C (2.000) grade.
- Credits required depend on meeting minimum 120 credit hours and minimum 39 upper-division credit hours.

University Requirements: Bachelor's degree-seeking students must meet Kent Core (general education requirements), diversity, writing-intensive and experiential learning requirements. For more information about these requirements, please read the following sections in the University Catalog: Kent Core – www.kent.edu/catalog/kent-core; Diversity Course Requirement – www.kent.edu/catalog/diversity; Writing-Intensive Course Requirement – www.kent.edu/catalog/wic; Experiential Learning Requirement – www.kent.edu/catalog/elr.

Attribute Legend: **DD** Diversity–Domestic; **DG** Diversity–Global; **ELR** Experiential Learning; **KAD** Kent Core Additional; **KBS** Kent Core Basic Sciences; **KCM** Kent Core Composition; **KFA** Kent Core Fine Arts; **KHU** Kent Core Humanities; **KMC** Kent Core Mathematics and Critical Reasoning; **KSS** Kent Core Social Sciences; **WIC** Writing Intensive