

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
<b>Semester One [19 Credits]</b>						
!	<b>EERT 22000 Electricity/Electronics With Applications</b>	3		■		
!	<b>MERT 12000 Engineering Drawing</b>	3		■		
	EERT 22003 Technical Computing	3				
	MATH 11010 Algebra for Calculus	3			KMC	
	US 10097 Destination Kent State: First Year Experience <sup>1</sup>	1				
	Kent Core Requirement	3				
	Kent Core Requirement	3				
<b>Semester Two [17 Credits]</b>						
!	<b>EERT 22002 Industrial Controls</b>	3		■		
!	<b>MERT 12001 Computer-Aided Drafting</b>	3		■		
!	<b>MERT 12005 Properties of Materials</b>	3		■		
!	<b>MFGT 12010 Safety in the Workplace</b>	2		■		
	COMM 15000 Introduction to Human Communication	3			KAD	
	MATH 11022 Trigonometry	3			KMC	
<b>Semester Three [19 Credits]</b>						
!	<b>IERT 12005 Applications in Computer-Aided Design</b>	2		■		
!	<b>IERT 22010 Computer Integrated Manufacturing</b>	3		■		
!	<b>MERT 22012 Fluid Power</b>	3		■		
	ENG 20002 Introduction to Technical Writing	3				
	PHY Series <sup>2</sup>	5			KBS	
	Automated Machining or Industrial Automation Option <sup>3</sup>	3		■		
<b>Semester Four [16-18 Credits]</b>						
!	<b>MERT 12004 Manufacturing Processes</b>	3		■		
!	<b>MFGT 21001 Standard Design Practice for Manufacturing Technology</b>	3		■		
	IERT 22000 Statistical Process Control	4				
	PHY Series <sup>2</sup>	0 - 2			KBS	
	Automated Machining or Industrial Automation Option <sup>3</sup>	3		■		
	Kent Core Requirement	3				

### Graduation Requirements Summary

Minimum Total Hours	Minimum	
	Major GPA	Overall GPA
71	2.000	2.000

- US 10097 is not required of transfer students with 25 credits (excluding College Credit Plus and dual-enrollment) or students age 21+ at time of admission.
- Physics Series – choose from one of the following options (5-7 credit hours)

#### Physics Option I

PHY 13001 General College Physics I*(4) <b>and</b>
PHY 13012 College Physics II*(2) <b>and</b>
PHY 13021 General College Physics Laboratory I (1)

#### Physics Option II

PHY 13002 General College Physics II*(4) <b>and</b>
PHY 13022 General College Physics Laboratory II (1)

\*Students who successfully completed PHY 13001 and 13002 will have met the requirement for PHY 13011 and 13012. PHY 13012 will be taken in Semester 4

- Automated machining or industrial automation option (6 credit hours), choose one option:

#### Automated Machining Option (6 credits)

MFGT 13001 Computer Numerical Control Programming (3)
MFGT 23001 Computer-Aided Manufacturing (3)

#### Industrial Automation Option (6 credits)

EERT 22007 Industrial Motor Control and Application (3)
MFGT 22014 Advanced Industrial Electronics (3)

**University Requirements:** Applied and technical associate degree-seeking students must fulfill selected Kent Core (general education requirements).  
For more information about this requirement, please read the following section in the University Catalog: Kent Core – [www.kent.edu/catalog/kent-core](http://www.kent.edu/catalog/kent-core).

**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