

CURRICULUM GUIDE

Manufacturing Engineering, B.S. (All Concentrations)

2023-2024

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The schedule below is an **EXAMPLE** of how you can arrange your class schedule.

Please consult your advisor for specific changes that may need to be made.

	Fall Semester		Spring Semester	
Freshman Year	SCO 100	1	MAT 244	4
	° CHE 111 (fulfills Gen. Ed. 4)	3	° PHY 201 (fulfills Gen. Ed. 4)	5
	CHE 111L	1	MFE 195	3
	° MAT 234 (fulfills Gen. Ed. 2)	4	Gen. Ed 1B (ENG 102)	3
	MFE 150	3		
	Gen. Ed. 1A (ENG 101)	3		
	TOTAL	15	TOTAL	15
Sophomore Year	AEM 201	3	AEM 301	3
	CSC 174	3	° ECO 230 (fulfills Gen. Ed. 5B)	3
	MAT 353	3	PHY 221	3
	PHY 202	5	STA 270	4
	Gen. Ed. 1C (Comm.)	3	Gen. Ed. 3A (Arts)	3
	TOTAL	17	TOTAL	16
Junior Year	MFE 202	3	MFE 330	3
	PHY 360	3	MFE 349	1
	STA 340	3	PHY 315	4
	† Concentration Elective	3	PHY 375	3
	Gen. Ed. 3B (Humanities)	3	† Concentration Elective	3
			Gen. Ed. 6 (Diversity)	3
	TOTAL	15	TOTAL	17
Senior Year	MFE 407	3	MFE 499	3
	MFE 498	3	† Concentration Elective	3
	PHY 380	3	Gen. Ed. 6 (Diversity)	3
	Gen. Ed. 5A (History)	3	Free Elective (upper division)	2
			Free Elective	2
	TOTAL	12	TOTAL	13
TOTAL HOURS TO DEGREE COMPLETION				120

* **PREREQUISITES:** Consult with your advisor and/or the University catalog regarding prerequisites for upper division courses in your major.

Upper division courses: All students are required to have a minimum of 42 hrs. upper division (300 level or above) courses distributed throughout Major/Supporting/Gen Ed/Free Electives categories.

Refer to the University Catalog at <http://www.catalogs.eku.edu/> regarding University and General Education Requirements.

Course Number	Course Name
GENERAL EDUCATION & UNIVERSITY REQUIREMENTS (37)	
SCO 100	Student Success Seminar (1)
CORE COURSE REQUIREMENTS (47)	
AEM 201	Metallic Materials Processing (3)
AME 301	Non-Metallic Materials and Processing (3)
MFE 150	Intro to Manufacturing & Engineering Design (3)
MFE 195	Computer Aided Design (3)
MFE 202	Introduction to Quality (3)
MFE 330	Materials Testing and Metrology (3)
MFE 349	Internship in MFE (1)
MFE 407	Project Management (3)
MFE 498	Senior Capstone 1 (3)
MFE 499	Senior Capstone 2 (3)
PHY 221	Statics (3)
PHY 315	Electrical Circuits (4)
PHY 360	Engineering Dynamics (3)
PHY 375	Engineering Thermodynamics (3)
PHY 380	Fluid Dynamics (3)
CSC 174	Intro to Programming for Science & Engineering (3)
CONCENTRATION REQUIREMENTS (CHOOSE 1) (9)	
† NINE (9) HOURS selected from courses in one of the following concentrations (concentration elective)	
QUALITY AND LEAN MANUFACTURING CONCENTRATION	
MFE 308	Methods of Lean Operations (3)
MFE 332	Process Control and Auditing (3)
MFE 506	Six Sigma Quality (3)
STA 585	Experimental Design (3)
STA 570	Quality Control and Reliability (3)
ADVANCED MANUFACTURING CONCENTRATION	
MFE 352	Robotics and Automated Systems (3)
MFE 382	Advanced Material Processing (3)
MFE 390	3-D Parametric Solid Modeling (3)
MFE 453	Additive Manufacturing (3)
INDUSTRIAL SAFETY CONCENTRATION	
OSH 225	Legal Aspects of Occupational Safety (3)
OSH 261	Principles of Occupational Safety (3)
OSH 305	Hazardous Materials (3)
OSH 366	Hazard Identification and Control (3)
OSH 367	Human Factors in Occupations Safety (3)
SUPPORTING COURSE REQUIREMENTS (23)	
° ECO 230	Principles of Microeconomics (3)
[° CHE 111	General Chemistry I (3)
CHE 111L	General Chemistry I Lab (1)
° MAT 234	Calculus I (4)
MAT 244	Calculus II (4)
MAT 353	Differential Equations (3)
° PHY 201	University Physics I (5)
PHY 202	University Physics II (5)
STA 270	Applied Statistics (4)
STA 340	Applied Regression Analysis (3)
Bracketed items must be taken concurrently.	
FREE ELECTIVES (4)	

° Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement.