APPLIED MANUFACTURING ENGINEERING - AUTOMATION AND ROBOTICS (BACHELOR OF SCIENCE)

Applied Engineering Core

Course	Title	Credits
EH 322	Technical Writing (WI)	3
or CBA 350	Business Communications (WI)	
CS 201	Introduction to Information Technology	3
AE 210	Manufacturing Fundamentals	3
AE 211	AC/DC Circuits	3
AE 343	Engineering and Technology Management	3
or MGT 301	Principles of Management	
AE 344	Engineering Economy and Cost Analysis	3
AE 372	Statistical Analysis for Quality Control	3
AE 380	Industrial Safety and Health	3
AE 393	Applied Engineering Junior Seminar	1
AE 494	Applied Engineering Senior Internship (WI)	2
Total Hours		27

Applied Manufacturing Engineering Major

Course	Title	Credits
AE 251	Computer-Aided Design	3
AE 361	Materials and Processes of Industry	3
AE 366	Control Systems Technology	3
AE 440	Manufacturing Management Systems	3
Total Hours		12

Automation and Robotics Concentration

Title	Credits	
Engineering Computation	3	
Programmable Controllers	3	
Manufacturing Automation and Robotics	3	
Advanced Programmable Controllers	3	
Select either Manufacturing or Electrical focus:		
	24	
	Engineering Computation Programmable Controllers Manufacturing Automation and Robotics Advanced Programmable Controllers	

Manufacturing Focus Requirements

Course	Title	Credits
AE 355	Advanced Computer-Aided Design	3
AE 365	Strength of Industrial Materials	3
AE 460	Computer-Aided Manufacturing	3
AE 477	Additive Manufacturing	3
Total Hours		12

Electrical Focus Requirements

Course	Title	Credits
AE 225	Solid State Devices I	4
AE 311	Digital Circuits	4
AE 326	Solid State Devices II	4
& AE 327	and Solid State Devices II Lab	
Total Hours		12

In addition to courses noted below, candidates for graduation must successfully complete all JSU Academic Regulations. More information about general education requirements can be found in the Summary of Degrees/Requirements (https://catalog.jsu.edu/undergraduate/summary-degrees-requirements/) section of the catalog.

Fall Hours EH Composition sequence 3 History sequence 3 SC 201 Introduction to Information Technology 3 MS 125 Calculus I 4 AE 210 Manufacturing Fundamentals 3 SSC010 First Year Experience 0 Formal Private Reperience 10 Spring EH Composition sequence 3 Fine Arts 3 AE 211 AC/DC Circuits 3 Fine Arts 3 AE 211 AC/DC Circuits 3 Septemental Electives 15 Foliamental Electives 15 Electrical Electives 3 AE 231 Computer-Aided Design 3 AE 232 Statistical Analysis for Quality Control 3 Sepring 4 Literature 3 AE 30 Industrial Safety and Health 3 AB 30 Industrial Safety and Heal	Freshman			
History sequence CS 201 Introduction to Information Technology 3 MS 125 Calculus I AE 210 Manufacturing Fundamentals SSC101 First Year Experience 0 Hours 16 Spring EH Composition sequence Fine Arts History sequence AE 211 AC/DC Circuits 3 General Electives 4 Hours 15 Sophomore Fall EH 141 Speech EC 221 Principles of Microeconomics AE 251 Computer-Aided Design 3 AE 372 Statistical Analysis for Quality Control General Electives 3 General Electives 3 General Electives 3 Hours 15 Spring Literature Natural Science ¹ 4 Social/Behavioral Science AE 380 Industrial Safety and Health Manufacturing Focus or Electrical Focus Course ² 3,4 4E 252 Programmable Controllers AE 393 Applied Engineering Junior Seminar Manufacturing Focus or Electrical Focus Course ² 3,4 Hours 10 Fall Natural Science 4 AE 252 Programmable Controllers AE 393 Applied Engineering Junior Seminar Manufacturing Focus or Electrical Focus Course ² 3,4 Hours 14-15 Spring EH 322 Technical Writing (W) or CBA 350 or Business Communications (Wi) AE 343 Engineering and Technology Management or MGT 301 or Principles of Management AE 366 Control Systems Technology AE 365 Engineering Computation 36 BG 255 Engineering Computation	Fall		Hours	
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Hours 15	AE 372	Statistical Analysis for Quality Control	3	
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Senior

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	Total Hours	120
	Hours	14-12
General Electives		6,3
Manufacturing Focus or Electrical Focus Course ²		3,4
AE 494	Applied Engineering Senior Internship (WI)	2
AE 440	Manufacturing Management Systems	3
Spring		
	Hours	15
General Elective		3
Manufacturing Focus or	General Elective ²	3
AE 416	Manufacturing Automation and Robotics	3
AE 344	Engineering Economy and Cost Analysis	3
Literature		3

The student must have earned an overall grade point average of 2.75 based upon a 4.00 scale to include all AE courses and MS courses with a "C" or better.

- Select from: CY 105 General Chemistry I (3), CY 106 General Chemistry II (3), CY 107 General Chemistry Laboratory I (1), and CY 108 General Chemistry Laboratory II (1) or PHS 201 College Physics I (3), PHS 202 College Physics II (3), PHS 203 College Physics Laboratory Techniques I (1), and PHS 204 College Physics Laboratory Techniques II (1).
- Please refer to the Program Requirements tab for the listing of Focus courses.