BACHELOR OF SCIENCE IN ENGINEERING -MANUFACTURING SYSTEMS

Manufacturing Systems

Manufacturing Systems is a multidisciplinary engineering program that combines narrow, focused depth in several fields: industrial engineering and mechanical engineering with a little computer engineering. First, students complete a core set of engineering courses to provide a solid foundation in computer, electrical, industrial, and mechanical engineering principles. Then, Manufacturing Systems students complete a set of twelve upper-level concentration courses. Seven required concentration courses provide depth in mechanical engineering, industrial engineering, and math. Students customize their program's depth with a selection of five concentration electives from a range of computer engineering, computer science, industrial engineering, and mechanical engineering.

The plan of study shown below incorporates the seven required Manufacturing Systems courses into the BSE's general plan of study. The five courses labeled "CONCENTRATION ELECTIVE COURSE" refer to the selections from the "Select Two of the Following" and "Select Three of the Following" categories shown on the Engineering's Curriculum page.

Course	Title	Credit Hours
Freshman I		
CILE-101	First Year Foundations	1
COMM-101	Rhetoric & Writing	4
CHEM-135	Principles of Chemistry	3
CHEM-136	Principles of Chemistry Lab	1
MATH-101	Calculus I	4
IME-100 or ECE-100	Interdisciplinary Design and Manufacturing or Principles of Electrical and Computer Engineering	4
	Credit Hours	17
Freshman II		
LA-201	Sophomore Seminar: Exploring the Human Condition	4
MATH-102	Calculus II	4
PHYS-114	Newtonian Mechanics	3
PHYS-115	Newtonian Mechanics Laboratory	1
IME-100 or ECE-100	Interdisciplinary Design and Manufacturing or Principles of Electrical and Computer Engineering	4
	Credit Hours	16
Sophomore I		
ECON-201	Economic Principles	4
MATH-203	Multivariate Calculus	4
PHYS-224	Electricity and Magnetism	3
PHYS-225	Electricity and Magnetism Laboratory	1
ECE-101	MATLAB and C Programming	4
	Credit Hours	16

Sophomore II

EE-210 Circuits I Lab 1 IME-201 Circuits I Lab 1 IME-200 Introduction to Industrial Engineering 4 MATH-204 Differential Equations & Laplace Transforms 4 Credit Hours 16 Junior I IME-300 Manufacturing Processes 4 MATH-258 Probability and Statistics 4 MECH-211 Circuits and Mechatronics 4 MECH-310 Dynamics 4 Advanced Humanities or Social Science Elective 4 Credit Hours 20 Junior II IME-351 Engineering Economics 4 MECH-212 Mechanics of Materials 4 MATH-305 Numerical Methods and Matrices 4 CONCENTRATION ELECTIVE COURSE 4 Advanced Humanities or Social Science Elective 4 Concentration Elective Course 4 Concentration Elective Course 4 Advanced Humanities or Social Science Elective 4 Credit Hours	MECH-210	Statics	4	
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		Credit Hours	4	
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