

Sample 5-year BS/MSE Mechanical Engineering Program

Note that these courses are one sample curriculum out of several possibilities.
Actual coursework is determined by the student in consultation with the advisor.

(updated 7/7/2014)

WHITING SCHOOL OF ENGINEERING – POLICY ON BACHELOR’S / MASTER’S DOUBLE COUNTING OF COURSES
(see <http://engineering.jhu.edu/graduate-studies/academic-policies-procedures-graduate/> for information)

FRESHMAN YEAR			
FALL		SPRING	
110.108 Calculus I	4	110.109 Calculus II	4
530.101 Freshman Exp in ME I	2	530.102 Freshman Exp in ME II	2
530.103 Intro to Mechanics I	2	530.104 Intro to Mechanics II	2
530.105 MechE Freshman Lab I	1	530.106 MechE Freshman Lab II	1
510.101 Intro to Materials Chemistry	3	H/S (2) Elective	3
H/S (1) Writing Elective	3	H/S (3) Elective	3
Total credits	15	Total credits	15
SOPHOMORE YEAR			
FALL		SPRING	
110.202 Calculus III	4	550.291 L.A./D.E. *	4
530.201 Statics and Mechanics	3+1	560.202 Dynamics	3+1
530.231 Thermodynamics	3+1	530.215 Mechanics Based Design	3+1
171.102 General Physics II	4	530.241 Electronics and Instrumentation	3+1
173.112 General Physics II Lab	1		
Total credits	17	Total credits	16
JUNIOR YEAR			
FALL		SPRING	
530.327 Intro. Fluid Mechanics	3+1	530.334 Heat Transfer	3+1
530.352 Materials Selection	3+1	530.343 D. & A. Dynamic Systems ▲	3+1
H/S (4) Elective	3	M. E. Elective (1) ☑	3
530.414 CAD	3	Technical Elective (1) ☑	3
xxx.3xx or .4xx H/S (5) Elective	3	Statistics elective	3
Total credits	17	Total credits	17
SENIOR YEAR			
FALL		SPRING	
530.403 Eng. Design Project I	4	530.404 Eng. Design Project II	4
530.454 Manufacturing Engineering	3	M. E. Elective (2) ☑	3
Eng. Business and Mgmt. options**	3	Technical Elective (2) ☑	3
M. E. Elective (3) ☑	3	Technical Elective (3) ☑	3
xxx.3xx or .4xx H/S (6 or 7 ☑) Elective	3		
Total credits	16	Total credits	13
5th YEAR – MASTER’S DEGREE			
FALL		SPRING	
Either four Graduate Courses or combination of grad courses and .300/.400-level courses not counted toward the MSE degree. Up to a total of 4 courses can be upper-level undergrad level, including the 2 double-counted courses below, if counted.		Graduate Course	
		Graduate Course	
		Graduate Course	
		Graduate Course	
...plus any two double-counted .400 courses or higher marked ☑ above, or two more Graduate Courses, or a Thesis			

* - Students are encouraged to take 110.302 Differential Equations (4) and 110.201 Linear Algebra (4) instead of the combined 550.291 L.A./D.E. course (4) if they can work the additional four credits into their schedule. An advantage of taking the courses separately is that 110.302 Differential Equations can be counted as a Technical Elective and could help count toward the Mathematics minor.

** - Students must take either 660.461 Engineering Business and Management or 660.105 Introduction to Business and Management and 660.341 Business Process and Quality Management.

▲ - 530.343 Design and Analysis of Dynamic Systems requires concurrent enrollment in or prior completion of 560.202 Dynamics with a minimum C- grade.

☑ - Any two of these courses can be double-counted toward the MSE degree only if they are .400-level or higher and are approved by the master's faculty advisor.