

Recommended Academic Plan – Mechanical Engineering (ME BD at Penn State Erie, The Behrend College) Effective Program Year Fall 2013

Semester 1	Credits	Semester 2	Credits
<i>EDSGN 100S (FYS) Introduction to Engineering Design¹</i>	3	<i>CMPSC 200 (GQ) Programming for Engineers MATLAB</i>	3
CHEM 110 (GN) Chemical Principles I*	3	<i>ECON 102 or 104 (GS) Intro. Micro-Macroeconomics Analy. & Policy</i>	3
<i>CHEM 111 (GN) Experimental Chemistry²</i>	1	MATH 141 (GQ) Calculus With Analytic Geometry II*	4
<i>ENGL 015 or 030 (GWS) Rhetoric and Composition or Honors</i>	3	MATH 220 (GQ) Matrices	2
MATH 140 (GQ) Calculus With Analytic Geometry I*	4	PHYS 211 (GN) General Physics: Mechanics*	4
Arts (GA), Humanities (GH), or Social & Behavioral Science (GS) Note: IL preferred	3		
Total Credits:	17	Total Credits:	16
Semester 3	Credits	Semester 4	Credits
E MCH 211 Statics	3	<i>E E 211 Electrical Circuits and Power Distribution³</i>	3
<i>MATH 230 Calculus and Vector Analysis</i>	4	E MCH 212 Dynamics	3
MATH 251 Ordinary & Partial Differential Equations	4	E MCH 213 Strength of Materials	3
<i>PHYS 212 (GN) General Physics: Electricity & Magnetism</i>	4	M E 300 Engineering Thermodynamics	3
Health and Physical Activity (GHA)	1.5	<i>PHYS 214 (GN) General Physics: Wave Motion/Quantum Physics²</i>	2
		Arts (GA), Humanities (GH), or Social & Behavioral Science (GS)	3
Total Credits:	16.5	Total Credits:	17
Semester 5	Credits	Semester 6	Credits
<i>ENGL 202C (GWS) Effective Writing: Technical Writing</i>	3	<i>CAS 100 (GWS) Effective Speech</i>	3
M E 320 Fluid Flow	3	M E 357 System Dynamics	3
M E 345W Instrumentation, Measurements & Statistics	4	M E 367 Machine Design	3
M E 349 Intermediate Mechanics of Materials	3	M E 410 Heat Transfer	3
Students whose last name begins with A-la take M E 380 Machine Dynamics	3	Students whose last name begins with A-La take both M E 365 Materials Lab and	1
Students whose last name begins with Le-Z take both M E 365 Materials Lab and MATSE 259 Properties & Processes of Engineering Material	1 3	MATSE 259 Properties & Processes of Engineering Materials Students whose last name begins with Le-Z take M E 380 Machine Dynamics	3 3
Total Credits:	16 or 17	Total Credits:	15 or 16
Semester 7	Credits	Semester 8	Credits
M E 468 Engineering for Manufacturing	3	M E 449 Mechanical Design Projects³	3
Lab Elective (300, 400-level)	1	Health and Physical Activity (GHA)	1.5
M E 448 Engineering Design Concepts³	3	Arts (GA), Humanities (GH), or Social & Behavioral Science (GS)	3
Arts (GA), Humanities (GH), or Social & Behavioral Science (GS)	3	Arts (GA), Humanities (GH), or Social & Behavioral Science (GS)	3
Technical Elective (300, 400-level)	3	Technical Elective (300, 400-level)	3
Technical Elective (300, 400-level)	3	Technical Elective (300, 400-level)	3
Total Credits:	16	Total Credits:	16.5

- An asterisk (*) indicates an entrance to major requirement.
- **Bold type** indicates courses requiring a quality grade of C or better.
- *Italics* indicates courses that satisfy both major and General Education requirements.
- ***Bold Italics*** indicates courses requiring a quality grade of C or better and that satisfy both major and General Education requirements.
- GWS, GHA, GQ, GN, GA, GH, and GS are codes used to identify General Education requirements.
- US, IL, and US;IL are codes used to designate courses that satisfy University United States/International Cultures requirements. Students must complete 3 credits in US and 3 credits in IL. If a student takes a 3 credit course that is both US and IL, to complete the requirement, he/she must take another 3-credit course that is US, IL, or both US and IL. Education abroad courses and other credit-bearing experiences such as internships that meet this requirement, will be designated US, IL or both US and IL.
- W is the code used to designate courses that satisfy University Writing Across the Curriculum requirements.
- Students who have not met the admission requirement of two units of a high school foreign language must complete a college level-one foreign language within their first 60 credits. This is a pre-admission requirement – credits will not count toward degree requirements.

Program Notes: ¹Students starting at a location other than Penn State Behrend must take EDSGN 100 plus a seminar course. ²Interested students may substitute BIOL 141 (spring only) or CHEM 112 for both CHEM 111 and PHYS 214. ³Course is offered only in the semester shown.

Academic Advising Notes: Only students who have gone through the entrance to major process and have been accepted into this major may register for junior and senior-level M E courses.