

Messiah College
Engineering with Mechanical Concentration (B.S.E.)
Requirements for students matriculating in 2015-2016

		HACC Course Options	
Major requirements	Credits		Credits
[ENGR 101] Engineering Graphics	2	CAD 154, 164	
[ENGR 102] Introduction to Engineering	2	ENGR 102	
[ENGR 201] Group Orientation	1		
[ENGR 231] Engineering Statics	3	ENGR 213	
[ENGR 236] Circuits I	4		
[ENGR 242] Experimental Methods	3		
[ENGR 254] Materials Engineering	4		
[ENGR 290] Engineering Economics	2		
[ENGR 301] Seminar I*	1		
[ENGR 302] Seminar II*	1		
[ENGR 366] Control Systems	4		
<i>Six credits from the following:</i>	6		
[ENGR 288] Project I (1)			
[ENGR 388] Project II (1-2)			
[ENGR 488] Project III (2-3)			
[ENGR 489] Project IV (2-3)			
[CHEM 105] General Chemistry I	4	CHEM 101	
[MATH 111] Calculus I	4	MATH 121	
[MATH 112] Calculus II	4	MATH 122	
[MATH 211] Calculus III	4	MATH 221	
[MATH 261] Linear Algebra	3		
[MATH 308] Differential Equations	3	MATH 222	
[PHYS 211] General Physics I	4	PHYS 211	
[PHYS 212] General Physics II	4	PHYS 212	
Mechanical Concentration (26)			
[ENGR 232] Engineering Dynamics	3	ENGR 214	
[ENGR 233] Mechanics of Materials	3		
[ENGR 371] Thermodynamics	3		
[ENGR 372] Fluid Mechanics	4		
[ENGR 373] Instrumentation and Measurement	3		
[ENGR 374] Heat Transfer Analysis and Design	4		
[ENGR 381] Mechanical Design	3		
[ENGR 384] Manufacturing Processes	3		
Experiential Learning requirement	0		

QuEST requirements	Credits	HACC Courses	
First Year Seminar	3	ENGL 101 (if taken after high school)	3
Oral Communication	3	COMM 101 or SPCH 101	3

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Created and Called for Community (W)	3	<i>Messiah Course</i>	
Mathematical Sciences (MATH 111)	met/major	-	-
Laboratory Science (CHEM 105)	met/major	-	-
Science, Technology & the World	waived	-	-
Two of the following (6 credits total): Social Science European History United States History	6	<u><i>Social Science:</i></u> ECON 201, GP 201, 208, PSYC 101, SOCI 120, 201, 203, CJ 101 <u><i>European History:</i></u> HIST 111, 201, 202 <u><i>US History:</i></u> HIST 103, 104, 107	6
Literature	3	Any ENGL Literature 201 or higher	3
Philosophy and Religion	3	PHIL 101	3
Arts	waived	-	-
First Semester of Language	3	Any Modern Language 1 st Level	4
Second Semester of Language	3	Any Modern Language 2 nd Level	4
One of the following**: Third Semester of Language Cross Cultural (Messiah Course) Non-Western Studies	2 or 3	Any Modern Language Intermediate Level OR ANTH 205, 210, HIST 101, 102	3-4
Bible	3	<i>Messiah Course</i>	
Christian Beliefs	3	<i>Messiah Course</i>	
Wellness	1	Any two Messiah WELL 100 Equivalent Courses	2
Ethics, World Views or Pluralism	3	<i>Messiah Course</i>	
QuEST requirements	39-40		31-32
Major requirements (inclusive of concentration)	89		
Total credits	128-129		

*Fulfills Writing Enriched course requirement for major.

The choice of either a third semester of a language, a cross cultural, or a non-western studies course applies **only to the Engineering major.

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