

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

		<b>HACC Course Options</b>	
<b>Major requirements</b>	<b>Credits</b>		<b>Credits</b>
<a href="#">[ENGR 101]</a> Engineering Graphics	2	CAD 154, 164	
<a href="#">[ENGR 102]</a> Introduction to Engineering	2	ENGR 102	
<a href="#">[ENGR 201]</a> Group Orientation	1		
<a href="#">[ENGR 231]</a> Engineering Statics	3	ENGR 213	
<a href="#">[ENGR 236]</a> Circuits I	4		
<a href="#">[ENGR 242]</a> Experimental Methods	3		
<a href="#">[ENGR 254]</a> Materials Engineering	4		
<a href="#">[ENGR 290]</a> Engineering Economics	2		
<a href="#">[ENGR 301]</a> Seminar I*	1		
<a href="#">[ENGR 302]</a> Seminar II*	1		
Six credits from the following: <a href="#">[ENGR 288]</a> Project I (1) <a href="#">[ENGR 388]</a> Project II (1-2) <a href="#">[ENGR 488]</a> Project III (2-3) <a href="#">[ENGR 489]</a> Project IV (2-3)	6		
<a href="#">[CHEM 105]</a> General Chemistry I	4	CHEM 101	
<a href="#">[MATH 111]</a> Calculus I	4	MATH 121	
<a href="#">[MATH 112]</a> Calculus II	4	MATH 122	
<a href="#">[MATH 211]</a> Calculus III	4	MATH 221	
<a href="#">[MATH 270]</a> Advanced Math for the Sciences	3		
<a href="#">[PHYS 211]</a> General Physics I	4	PHYS 211	
<a href="#">[PHYS 212]</a> General Physics II	4	PHYS 212	
<b>Civil Concentration (33)</b>			
<a href="#">[ENGR 321]</a> Environmental Engineering	4		
<a href="#">[ENGR 322]</a> Water Resources Engineering	3		
<a href="#">[ENGR 233]</a> Mechanics of Materials	3		
<a href="#">[ENGR 351]</a> Analysis and Dynamics of Structures	4		
<a href="#">[ENGR 352]</a> Design of Concrete Structures	3		
<a href="#">[ENGR 355]</a> Soil Mechanics and Foundation Design	3		
<a href="#">[ENGR 357]</a> Transportation Engineering	3		
<a href="#">[ENGR 358]</a> Construction Methods and Materials	3		
<a href="#">[ENGR 372]</a> Fluid Mechanics	4		
<a href="#">[ENGR 452]</a> Design of Steel Structures	3		
<b>Experiential Learning requirement</b>	0		

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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
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	-	-
<b>Two of the following (six credits total)</b> 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 <sup>st</sup> Level	4
Second Semester of Language	3	Any Modern Language 2 <sup>nd</sup> Level	4
<b>One of the following**:</b> Third Semester of Language Cross Cultural (Messiah Course) Non-Western Studies	2 or 3	Any Modern Language Intermediate Level Language Course <b>OR</b> ANTH 205, 210, HIST 101, 102	3-4
Bible	3	<i>Messiah Course</i>	
Christian Beliefs	3	<i>Messiah Course</i>	

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Wellness	1	Any <b>two</b> Messiah WELL 100 Equivalent Courses	2
Ethics, World Views <b>or</b> Pluralism	3	<i>Messiah Course</i>	
QuEST requirements	39-40		31-32
Major requirements (inclusive of concentration)	89		
<b>Total credits</b>	<b>128-129</b>		

\*Fulfills Writing Enriched course requirement for Major and the capstone.

\*\*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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