



Student Name and ID Number \_\_\_\_\_

Estimated Graduation Date \_\_\_\_\_

Major Requirements: 98-105 Credits		
Course Number	Credits	Course Status Code M, R, P, WVD, SUB*
<b>Major Requirements: 37-39 Credits</b>		
CH 1150	3	
CH 1151	1	
EE 3010	3	
ENG 1101 or ENG 1001 and ENG 1100	3/4	
ENG 1102	3	
MA 1160 or MA 1161	4/5	
MA 2160	4	
MA 2320 or MA 2321	2/2	
MA 3160	4	
MA 3710 or CE 3710	3	
PH 1100	1	
PH 2100	3	
<b>Multidisciplinary Senior Design Project: 3 Credits</b>		
ENG 4905	3	

**BSE PATHWAY OPTIONS: See Pages 2 - 4**  
Students must choose one of the following options:  
Geospatial, Mining, Systems, or Faculty Defined

Free Electives: 6 credits		

Additional Information: check all that apply	
<b>Currently Enrolled in:</b>	
<input type="checkbox"/>	Certificate Program _____
<input type="checkbox"/>	Double Major _____
<input type="checkbox"/>	Minor _____
<input type="checkbox"/>	Additional Degree _____

\*M-Passed with valid grade, transfer, or Advance Placement credit;  
Registered in course; P-plan to take in future, WVD-Waived course or credit  
(does not reduce total degree credits required), SUB-Petitioned as

General Education: 24 Credits		
Course Number	Credits	Course Status Code M, R, P, WVD, SUB*

Courses used to complete General Education may not be used to complete other degree requirements.

Core: 12 credits		
UN 1015	3	
UN 1025 or upper level modern language	3	
Critical and Creative Thinking	3	
Social Responsibility and Ethical Reasoning	3	

- ✓ Each course can satisfy only one requirement
- ✓ No more than three credits may come from the Restricted List
- ✓ Six credits must be at the 3000- or 4000- level (an upper level language course in place of UN1025 does not meet this)

Humanities, Fine Arts/Social & Behavioral Sciences (HASS): 12 credits		
Communication/ Composition	3	
Humanities and Fine Arts	3	
Social and Behavioral Sciences	3	
Course from any list above or Restricted List	3	

Co-curricular Activities		
Required for graduation, but not included in the GAP calculation or in the overall credits required for the degree.		
	.5	
	.5	
	.5	
	.5	
	.5	
	.5	

<b>GEOSPATIAL EMPHASIS: 63 Credits</b>		
<b>Core Modifications</b>		
CEE 3332	3	
CS 1121	3	
EC 3400	3	
ENG 2120	4	
ENG 3200	4	
ENG 3830	1	
<b>Technical Emphasis</b>		
SU 2000	2	
SU 2050	3	
SU 2220	3	
SU 3540	4	
SU 3600	4	
SU 4140	3	
<b>Technical Elective</b>		
SU 4010 or SU 4045 or SU 4480	3	
<b>Pre-approved Geospatial Directed Electives: 16 credits</b>		
SU 4060	3	
<b>Select 13 credits from the following:</b>		
ACC 2000	3	
BUS 2200	3	
CS 1122	3	
CS 2321	3	
FW 4540	3	
GE 3250	3	
PH 1200	1	
PH 1600	2	
PH 1610	1	
PH 2200	3	
SU 3110	4	
SU 3180	3	
SU 4045	3	
SU 4100	3	
SU 4142	3	
SU 4990	3	
UN 3002	1-2	
UN 4000	1	

<b>GEOSPATIAL EMPHASIS, Cont.</b>		
<b>Pre-approved Geospatial Mathematics and/or Science Electives: 7 Credits</b>		
MA 3520 or MA 3521	2/2	
<b>Select remaining 5 credits with approval by academic advisor</b>		

<b>Advisor Use Only</b>	
Total Credits Required	
Total Credits Completed	
Total Credits Needed	

**MINING EMPHASIS: 64 Credits**

<b>Core Modifications - 18 credits</b>		
EC 3400	3	
ENG 2120	4	
ENG 3200	4	
ENG 3830	1	
GE 2020	3	
GE 2320	3	
<b>Mining Technical Emphasis - 19 credits</b>		
CEE 3810	4	
CM 2200	3	
GE 3400	3	
GE 4360	3	
GE 3860	3	
MEEM 2700	3	
<b>Pre-approved Mining Directed Electives - 13 credits</b>		
GE 1100	1	
GE 3430	1	
GE 3870	3	
GE 3880	3	
SU 2000	2	
GE 4290	3	
<b>Pre-approved Mining Mathematics and/or Science Electives - 8 cr.</b>		
GE 2000	3	
GE 2300	3	
MA 3520 or MA 3521	2/2	

**Mining Technical Electives - 6 credits**


<b>Advisor Use Only</b>	
Total Credits Required	
Total Credits Completed	
Total Credits Needed	

**SYSTEMS EMPHASIS: 67 Credits**

<b>Core Modification - 17 credits</b>		
EC 2001 or EC 3400	3	
ENG 2120	4	
ENG 3200	4	
CEE 3332	3	
MY 2100	3	
<b>Systems Pre-approved Technical Emphasis - 23 credits</b>		
BE 2700	3	
CEE 3501 or CEE 3503	3	
CEE 4506	3	
ENG 1505	1	
ENG 2505	3	
ENG 3505	1	
ENG 4300	3	
ENG 4505	3	
ENG 4510	3	
<b>Systems Electives Core - 9 credits in a coherent plan of study, with BSE program approval</b>		

**Systems Pre-Approved Mathematics and/or Science Electives: 6 Credits Minimum**

BE 2400 or (BL 1010 and BL 1020)	3 4/4	
FW 4260 or FW 3410	3	

**Systems Pre-Approved Directed Electives: Select one of the following options:**

**Enterprise - 12 Credits**

ENT 3950	1	
ENT 3960	1	
ENT 4950	2	
ENT 4960	2	
ENT 2961	2	
ENT 2962	1	
ENT 3984 or ENT 3959 and ENT 3967 and ENT 3982	3 1 1 1	

**Minor: Select 12 credits in a coherent plan of study as partial fulfillment of a university minor, with BSE program approval**


**FACULTY DEFINED EMPHASIS: 61 Credits**

A coherent plan of study that is approved by the Academic Advisor for the Bachelor of Science in Engineering program, Department Chair of Engineering Fundamentals, and Academic Dean for the College of Engineering.

**Required Core Courses**

EC 3400	3	
ENG 3830	1	

**Core Modifications - Select One Course**

CEE 3101	3	
CS 1121	3	
GE 2310	3	
MY 2100	3	

**Select - Minimum 4 credits**

ENG 2120 or (MEEM 2110 and MEEM 2150)	4	
	3	
	3	

**Select - Minimum 4 credits**

ENG 3200 or (MEEM 2200 or MEEM 2201) and (MEEM 3201 or MEEM 3210)	4	
	3	
	3	
	4	
	3	

**Design Implementation - Select One Course**

CEE 3332	3	
GE 2020	4	
MEEM 3600	3	
SSE 3730	3	

**Technical Emphasis: 22-23 credits**

Select 22 to 23 engineering credits in a coherent plan of study that is approved by the Academic Advisor for the Bachelor of Science in Engineering program, Department Chair of Engineering Fundamentals and Academic Dean for the College of Engineering.


**FACULTY DEFINED EMPHASIS, CONT.**

**Directed Electives: 13 Credits**

Select 13 credits in a coherent plan of study such as partial fulfillment of a university approved minor, or a self-defined program with the advice of Michigan Tech faculty.


**Faculty Defined Mathematics and/or Science Electives: 7 credits**


**Advisor Use Only**

Total Credits Required	128 - 131
Total Credits Completed	
Total Credits Needed	