

CIVIL AND INFRASTRUCTURE ENGINEERING BS – STEM TRACK

Fall 2009 – Spring 2010

CONTACT INFORMATION

- Honors College Advisor: Kathleen Alligood (alligood@gmu.edu)
- Department Chair: Debra Goodings
- Department Undergraduate Coordinator: Mohan Venigalla (mvenigal@gmu.edu)
- Please see CIE Undergraduate Coordinator for advising as soon as possible

Once students begin attending Mason and declare a major they should see both their Honors College and their major department advisor for advising.

REQUIRED HOURS

- Hours Required in Major: 51
- Hours Required in Honors: see honors advisor
- This major requires a total of 120 credits to graduate, 45 of which must be at the 300-level and above.

ADVISING SHEET

- Honors College Requirement
- ◆ Department Requirement
- ▲ College Requirement

1 st Year – 1 st Semester (Fall)	Credits
○ HNRS 110: Introduction to Research (grade C or better required)	4
◆ MATH 113: Analytic Geometry and Calculus I (a placement exam is required) ¹	4
◆ ENGR 107: Introduction to Engineering	2
◆ CHEM 251: General Chemistry for Engineers ²	4
◆ ENGR 183: Engineering Computer Graphics	3
Semester Total	17
1 st Year – 2 nd Semester (Spring)	
○ HNRS 122: Reading the Arts	3
◆ MATH 114: Analytic Geometry and Calculus II (prerequisite: C or better in MATH 113) or MATH 116: Honors Analytic Geometry and Calculus II ³	4
◆ ENGR 117: Computing in Engineering (CS 112 may substitute)	3
◆ PHYS 160 or 160H and PHYS 161: University Physics I ³	4
Semester Total	14
2 nd Year – 1 st Semester (Fall)	
○ HNRS 131: Contemporary Society in Multiple Perspectives	3
◆ MATH 213: Analytic Geometry and Calculus III or MATH 215 ³	3
◆ CEIE 290: Engineering Computation and Design	3
◆ PHYS 260 or 260H and 261: University Physics II (Corequisite: MATH 213) ³	4
◆ ECON 103 or 103H: Contemporary Microeconomics ³	3
Semester Total	16
2 nd Year – 2 nd Semester (Spring)	
◆ HNRS 353: Technology in the Contemporary World (grade of C or better)	3

required)	
◆ MATH 214: Elementary Differential Equations	3
◆ ENGR 210: Statics and Dynamics	3
◆ CEIE 230: Hydraulics	3
◆ STAT 344: Probability and Statistics for Engineers and Scientists I	3
Semester Total	15
3rd Year – 1st Semester (Fall)	
○ HNRS 240: Reading the Past	3
◆ ENGR 310: Mechanics of Materials	3
◆ CEIE 305: Soil Mechanics	3
◆ CEIE 301: Engineering and Economic Models in Civil Engineering	3
◆ CEIE 340: Water Resource Engineering	3
◆ PHYS 266: Introduction to Thermodynamics	1
Semester Total	16
3rd Year – 2nd Semester (Spring)	
◆ CEIE 370: Construction Systems	3
◆ CEIE 355: Environmental Engineering and Science	3
◆ BIOL 377: Applied Ecology	3
◆ CEIE 311: Structural Analysis	3
◆ CEIE 360: Introduction to Transportation Engineering	3
Semester Total	15
4th Year – 1st Semester (Fall)	
◆ department-approved liberal arts and social science electives ⁴	3
◆ department-approved liberal arts and social science electives ⁴	3
◆ ENGR 401: Professional Practice	1
◆ CEIE 400: Civil Engineering Planning and Management	3
◆ CEIE 4xx: Technical Elective ⁵	3
◆ CEIE 4xx: Technical Elective ⁵	3
Semester Total	16
4th Year – 2nd Semester (Spring)	
◆ CEIE 490: Senior Design Project	3
◆ CEIE 4xx: Technical Elective ⁵	3
◆ CEIE 4xx: Technical Elective ⁵	3
◆ CEIE 4xx: Technical Elective ⁵	3
◆ xxxx: CEIE Technical Elective ⁵	3
Semester Total	15
Total Hours	124

NOTES

1. MATH 113 fulfills the quantitative reasoning requirement for the Honors College. A placement exam is required for registering for the course. See the Math department for placement test days and times.
2. CHEM 211 or 211H will substitute for CHEM 251

3. To complete the STEM Track, students must take two (2) of the following courses:
 - BIOL 213H
 - BIOL 303H
 - ECON 103H
 - CHEM 211H
 - CHEM 212H
 - CS 211H
 - MATH 116
 - MATH 215
 - PHYS 160H
 - PHYS 260H
 - PHYS 262H
4. College requirements (VS) include 24 credit hours of department-approved liberal arts and social science electives.
5. A total of six CEIE Technical Elective courses must be selected. The first four CEIE Technical Elective courses must be selected to satisfy a requirement of at least one additional course in four technical areas: structural engineering (CEIE 412 or 413), water resources engineering (CEIE 440 or 442), environmental engineering (CEIE 450, 452, or 456), and transportation engineering (CEIE 461 or 462). The fifth CEIE Technical Elective course may be selected from and CEIE 4xx course. The sixth CEIE Technical Elective course may be selected from any CEIE 4xx course or related advanced science or engineering course approved by the student's faculty advisor.