

COMPUTER ENGINEERING BS – STEM TRACK

Fall 2009 – Spring 2010

CONTACT INFORMATION

- Honors College Advisor: Kathleen Alligood (alligood@gmu.edu)
- Department Chair: Andre Manitiu (amanitiu@gmu.edu)
- Department Associate Chair (Advising Contact): William Sutton (wsutton@gmu.edu)

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: 80
- Hours Required in Honors: see honors advisor

ADVISING SHEET

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

1st Year – 1st 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)		4
◆ CS 112: Introduction to Computer Programming		4
◆ ENGR 107: Introduction to Engineering ²		2
◆ ECON 103 or 103H: Contemporary Microeconomic Principles ¹		3
Semester Total		17
1st Year – 2nd 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 ¹		4
◆ CS 211H: Object Oriented Programming ¹		3
◆ PHYS 160/161 or 160H/161: University Physics I ¹		4
Semester Total		14
2nd Year – 1st Semester (Fall)		
◆ ECE 201: Introduction to Signal Analysis (prerequisite: "C" or better in MATH 113) (Grade C or better required)		3
◆ MATH 125: Discrete Mathematics I		3
◆ MATH 203: Matrix Algebra (Prerequisite MATH 114)		3
◆ MATH 213: Analytic Geometry and Calculus III or MATH 215 ¹		3
◆ PHYS 260H and 261: University Physics II (Corequisite: MATH 213) ¹		4
Semester Total		16
2nd Year – 2nd Semester (Spring)		
◆ ECE 220: Signals and Systems I (Prerequisite ECE 201, Corequisites MATH 203 and 214)		3

◆ ECE 280: Electric Circuit Analysis (Prerequisite PHYS 260 and 261, Corequisite ECE 220)	5
◆ ECE 331/332: Digital Systems Design (Corequisite ECE 280)	4
◆ MATH 214: Elementary Differential Equations or MATH 216	3
Semester Total	15
3rd Year – 1st Semester (Fall)	
○ HNRS 131: Contemporary Society in Multiple Perspectives	3
◆ ECE 333/334: Linear Electronics I (Prerequisite C or Better in ECE 280)	4
◆ ECE 445: Computer Organization (Prerequisite C or better in ECE 331)	3
◆ PHYS 262 or PHYS 262H: University Physics III ¹	3
◆ CS 262: Intro to Low Level Programming	1
Semester Total	14
3rd Year – 2nd Semester (Spring)	
◆ Department-approved elective ³	3
◆ ECE 465: Computer Networking Protocol	3
◆ CS 471: Operating Systems	3
◆ CS 367: Computer Systems and Programming	3
◆ STAT 346: Probability for Engineers (Prerequisite MATH 213)	3
Semester Total	15
4th Year – 1st Semester (Fall)	
○ HNRS 240: Reading the Past	3
◆ ECE 447: Single-Chip Microcomputers	4
◆ ECE 491: Engineering Seminar (Prerequisites: 90 credits applicable to electrical engineering) ⁴	1
◆ ECE 492: Senior Advanced Design Project I (Prerequisites: 90 credits applicable to computer engineering) ⁴	1
◆ Approved Technical Electives	6
Semester Total	15
4th Year – 2nd Semester (Spring)	
○ HNRS 353: Technology in the Contemporary World (grade of C or better required)	3
◆ ECE 448: FPGA and ASIC Design with VHDL	4
◆ ECE 493: Senior Advanced Design Project II	2
◆ Approved Technical Elective	3
◆ Approved Social Science/Humanities Elective ³	3
Semester Total	15
Total Hours	121

NOTES

- 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
2. A grade of C or better is required in all CS, ECE, and ENGR courses.
 3. College requirements (VS) include 24 credits of department-approved liberal arts and social science electives.
 4. The Honors Program requirements fulfill the ENGL 302 prerequisite for ECE 491 and 492 but the prerequisite requirement is not automatically applied. Please contact Prof. William Sutton (wsutton@gmu.edu) to request a prerequisite override before attempting to register for these courses.