

COMPUTER ENGINEERING BS – STEM TRACK

Fall 2008 – Spring 2009

CONTACT INFORMATION

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

REQUIRED HOURS

- Hours Required in Major: 80
- Hours Required in Honors: see honors advisor

ADVISING SHEET

- Honors Program 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 (designated placement score required)	4
◆ CS 112: Introduction to Computer Programming	4
◆ ENGR 107: Introduction to Engineering	2
◆ ECON 103 or 103H: Contemporary Microeconomic Principles ¹	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	4
◆ CS 211H: Object Oriented Programming ¹	3
◆ PHYS 160 or 160H: University Physics I ¹	4
Semester Total	14
2 nd Year – 1 st 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	3
◆ PHYS 260H and 261: University Physics II (Corequisite: MATH 213) ¹	4
Semester Total	16
2 nd Year – 2 nd 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	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: University Physics III ²	3
◆ Approved Social Science/Humanities Elective ³	3
Semester Total	16
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: Senior Status in Electrical Engineering) ⁴	1
◆ 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
◆ Technical Elective	3
◆ Technical Elective Laboratory	1
Semester Total	13
Total Hours	121

NOTES

- To complete the STEM Track, students must take two (2) of the following courses:
 - BIOL 213H
 - ECON 103H
 - CHEM 211H
 - CHEM 212H

- CS 211H
 - MATH 116
 - PHYS 160H
 - PHYS 260H
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 prerequisites 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.