

## COMPUTER SCIENCE BS – LASS TRACK

Fall 2008 – Spring 2009

### CONTACT INFORMATION

- Honors Program Advisor: Kathleen Alligood (alligood@gmu.edu)
- Department Chair: Hassan Gomaa (hgomaa@gmu.edu)
- Department Undergraduate Coordinator: Hakan Aydin (haydin@cs.gmu.edu)

### REQUIRED HOURS

- Hours Required in Major: 47
- 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 Program Requirement
- ◆ Department Requirement
- ▲ College Requirement

1 <sup>st</sup> Year – 1 <sup>st</sup> 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) <sup>1</sup>	4
◆ CS 112: Introduction to Computer Programming <sup>2</sup>	4
◆ CS 101: Preview of Computer Science	2
Semester Total	14
1 <sup>st</sup> Year – 2 <sup>nd</sup> Semester (Spring)	
○ HNRS 122: Reading the Arts	3
○ HNRS 130: Conceptions of Self	3
◆ MATH 114 or MATH 114H: Analytic Geometry and Calculus II (prerequisite: C or better in MATH 113) or MATH 116: Honors Analytic Geometry and Calculus II	4
◆ CS 211 or 211H: Object Oriented Programming <sup>2</sup>	3
◆ CS 105: Computer Ethics and Society	1
Semester Total	14
2 <sup>nd</sup> Year – 1 <sup>st</sup> Semester (Fall)	
○ HNRS 131: Contemporary Society in Multiple Perspectives	3
○ HNRS 227 or Natural Science Sequence I <sup>6</sup>	4
○ HNRS 240: Reading the Past	3
◆ CS 310: Data Structures	3
◆ MATH 125: Discrete Mathematics <sup>3</sup>	3
Semester Total	16
2 <sup>nd</sup> Year – 2 <sup>nd</sup> Semester (Spring)	
○ HNRS 228: Scientific Thought & Processes II or Natural Science Sequence II <sup>6</sup>	4
○ HNRS 230: Cross-Cultural Perspectives	3
○ HNRS 353: Technology in the Contemporary World (Grade of C or better)	3

required)	
◆ ECE 303: Digital Design/Intro Assembly Language	4
Semester Total	14
<b>3<sup>rd</sup> Year – 1<sup>st</sup> Semester (Fall)</b>	
◆ MATH 213: Analytic Geometry and Calculus III	3
◆ Natural Science Sequence II or HNRS 228 (see approved list in Department section of Catalog) <sup>6</sup>	4
◆ CS 330: Formal Methods and Models	3
◆ CS 365: Computer Systems Architecture	3
◆ CS 367: Computer Systems and Programming	3
Semester Total	16
<b>3<sup>rd</sup> Year – 2<sup>nd</sup> Semester (Spring)</b>	
◆ MATH 203: Matrix Algebra	3
◆ STAT 344: Probability and Statistics for Engineers and Scientists I	3
◆ Elective (see approved list in Department section of Catalog) <sup>5</sup>	3
◆ CS 421: Software Requirements and design Modeling	3
◆ CS Senior (see list below) <sup>7</sup>	3
Semester Total	15
<b>4<sup>th</sup> Year – 1<sup>st</sup> Semester (Fall)</b>	
◆ CS 483: Analysis of Algorithms	3
◆ OR 481 or MATH 446: Numerical Methods in Engineering or Numerical Analysis I	3
◆ CS Senior (see list below) <sup>7</sup>	1
◆ CS related elective	3
◆ Elective (arts, social sciences or humanities) <sup>9</sup>	3
Semester Total	13
<b>4<sup>th</sup> Year – 2<sup>nd</sup> Semester (Spring)</b>	
◆ CS Senior (see list below) <sup>7</sup>	6
◆ Elective	3
◆ CS 306: Synthesis of Ethics and Law for the Computing Professional (CS Synthesis Requirement)	3
◆ CS related elective	3
Semester Total	15
Total Hours	118 <sup>8</sup>

## NOTES

1. MATH 113 fulfills the quantitative reasoning requirement for the Honors Program
2. Students who take CS A AP Exam and score a 3 or better will receive credit for CS 112; students who take the CS AB Exam and score a 3 will receive credit for CS 112; and students who score a 4 or 5 will receive credit for CS 112 and CS 211. Students who take the Computing Studies HL IB Exam and score 4, 5, 6, or 7 will receive credit for CS 112 and CS 211.

3. MATH 125 is a prerequisite of CCS 330
4. ASTR 111/112, BIOL 103, CHEM 103, GEOL 101, PHYS 103 or 243/244 will substitute for HNRS 227
5. Most CS related electives require completion of all 300 level courses (see list in catalog)
6. CS majors need 12 hours of Natural Science (HNRS 227 & 228 + 4 additional credits or another natural science sequence intended for scientists and engineers (ASTR 111/112, BIOL 103, CHEM 103, GEOL 101, PHYS 103 or 243/244 will NOT substitute for HNRS 227.
7. CS Senior List: CS 440, 450, 451, 455, 471, 475, 480, and 490
8. A grade of C or better is required in all CS, ECE, and ENGR courses.
9. College requirements (VS) include 24 credit hours of department-approved, liberal arts and social science electives.