

## CHEMISTRY BS – STEM TRACK

Fall 2009 – Spring 2010

### CONTACT INFORMATION

- Honors College Advisor: Kathleen Alligood (alligood@gmu.edu)
- Department Chair: Gregory Foster
- Department Undergraduate Coordinator: John Schreifels ([jschreif@gmu.edu](mailto:jschreif@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: 52
- 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 <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 (a placement exam is required) <sup>2</sup>	4
◆ CHEM 211H: Honors General Chemistry <sup>1</sup>	4
◆ Elective	3
Semester Total	15
1 <sup>st</sup> Year – 2 <sup>nd</sup> 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
◆ CHEM 212H: General Chemistry or Honors General Chemistry <sup>1</sup>	4
◆ Electives	6
Semester Total	17
2 <sup>nd</sup> Year – 1 <sup>st</sup> Semester (Fall)	
○ HNRS 131: Contemporary Society in Multiple Perspectives	3
◆ MATH 213 or MATH 215: Analytic Geometry and Calculus III	3
◆ CHEM 313 & CHEM 315: Organic Chemistry and Organic Chemistry Lab I	5
◆ PHYS 243 & PHYS 244: College Physics and College Physics Lab (required before CHEM 331)	4
Semester Total	15
2 <sup>nd</sup> Year – 2 <sup>nd</sup> Semester (Spring)	
◆ CHEM 350: Computer Techniques for Chemistry	3
◆ CHEM 314: Organic Chemistry	3

◆ CHEM 318: Organic Chemistry Lab II	2
◆ PHYS 245 & 246: College Physics and College Physics Lab (required before CHEM 331)	4
◆ MATH 214: Elementary Differential Equations	3
Semester Total	15
<b>3<sup>rd</sup> Year – 1<sup>st</sup> Semester (Fall)</b>	
○ HNRS 240: Reading the Past	3
◆ CHEM 321: Elementary Quantitative Analysis	4
◆ CHEM 331: Physical Chemistry I	3
◆ CHEM 336: Physical Chemistry Lab I	2
◆ Elective or see Department	3
Semester Total	15
<b>3<sup>rd</sup> Year – 2<sup>nd</sup> Semester (Spring)</b>	
○ HNRS 353: Technology in the Contemporary World (grade of C or better required)	3
◆ CHEM 332: Physical Chemistry II	3
◆ CHEM 337: Physical Chemistry Lab II	2
◆ Electives	6
Semester Total	14
<b>4<sup>th</sup> Year – 1<sup>st</sup> Semester (Fall)</b>	
◆ CHEM 422: Instrumental Analysis	3
◆ CHEM 441: Properties and Bonding of Inorganic Compounds	3
◆ CHEM 300-level and above	3
◆ Electives 300-level and above	6
Semester Total	15
<b>4<sup>th</sup> Year – 2<sup>nd</sup> Semester (Spring)</b>	
◆ CHEM 423: Instrumental Analysis Lab	2
◆ CHEM 445: Inorganic Preparations and Techniques	2
◆ CHEM 463: General Biochemistry I	4
◆ Electives	6
Semester Total	14
Total Hours	120

## 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. MATH 113 fulfills the quantitative reasoning requirement for Honors. MATH 113 requires a placement exam. See the Math department for exam days and times.