CHEMISTRY MAJOR  2014-2015
This checklist is for reference only. Please see the College Catalog and check with your major
adviser or department chair to assure compliance with graduation requirements.

**Note: Pre-requisites in parentheses**

I. Required Courses

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<th>Sem. Taken</th>
<th>Cr. Earned</th>
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a. Chemistry Core Courses (28 credit-hours)

- CHEM 106  General Chemistry II *(pre-requisite CHEM 103 or successful completion of the placement exam)*
- CHEM 305  Quantitative Analysis *(CHEM 106)*
- CHEM 311  Organic Chemistry I *(CHEM 106), (CHEM 312)*
- CHEM 312  Organic Chemistry II *(CHEM 311)*
- CHEM 405  Inorganic Chemistry *(CHEM 312)*
- CHEM 451  Physical Chemistry I *(CHEM 106, PHYS 131, MATH 152)*
- CHEM 452  Physical Chemistry II *(CHEM 451)*

b. Cognate Courses (16 semester-hours)

- MATH 151  Calculus I
- MATH 152  Calculus II *(MATH 151)*
- PHYS 141  General Physics I (recommended) or PHYS 151 Fundamentals of Physics
- PHYS 142  General Physics II (recommended) or PHYS 152 Fundamentals of Physics

c. Elective Courses selected from the following list of options:

**Option 1:** ACS-Certified Major

- CHEM 325  Chem Literature *(CHEM 312)*
- CHEM 420  Biochemistry I *(CHEM 312)*

**Option 2:** non-ACS-Certified Major (4 semester-hours)

Course 1:

Courses (4 semester-hours) selected from the following list:

- CHEM 306  Instrumental Analysis *(CHEM 305, 312)*
- PHYS 462  Quantum Mechanics *(PHYS 231, MATH 256)*
- CHEM 480  Topics in Chemistry
- CHEM 397, CHEM 399, CHEM 497, CHEM 499 Directed Research/Independent Study (as approved by the Chemistry Faculty)

II. Every Chemistry major must complete a St. Mary’s Project

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- CHEM 493  St. Mary’s Project
- CHEM 494  St. Mary’s Project