BIOCHEMISTRY
SCHOOL OF SCIENCE
Beginning Fall 2017

YEAR	FALL SEMESTER	SPRING SEMESTER
FRESHMAN	DGN 1101 The Responsible Self 4cr. CHM 1110 General Chemistry I 4 cr. MTH 2221 Calculus I 4 cr.* ENG 1110 First Year Composition 4 cr. **	DGN 1102 And Dignity for All 4cr. MTH 2222 Calculus II 4 cr.* CHM 1120 General Chemistry II 4 cr. CTA 1101 Interpersonal Comm. 2 cr. **
SOPHOMORE	CHM 2200 Organic Chemistry I 4 cr. PSC 2011 General Physics I (calculus-based) 4 cr. ^ BIO 1125: Foundations in Biology 4 cr. Veritas Courses 4-8 cr.*	CHM 2210 Organic Chemistry II 4 cr. PSC 2012 General Physics II (calculus- based) 4 cr. ^ BIO 2020/2021 Microbiology 3+1 cr.† Veritas Course 4 cr.
Apply to the major no later than spring semester of the sophomore year.		
JUNIOR	CHM 3000 Analytical Chemistry 4 cr. (fall semesters only-instructor permission needed) CHM 3240 Biochemistry I 4 cr.† Elective 4 cr. *** Veritas Course 4 cr.	BIO 3500 Genetics 4 cr. CHM 3430 Biochemistry II 2 cr. CHM 3431 Biochemistry II Lab 2 cr.† Elective 4 cr. ***
SENIOR	CHM 3460 Physical Chemistry 4 cr.† #UD CHM/BIO Elective 4 cr. Veritas Courses 4 cr. Veritas Course 4 cr.	BIO 3600 Cell Biology 4 cr. #UD CHM/BIO Elective 4 cr. Veritas Course 4 cr. Elective 4 cr.* CHM 4000 Chemistry Assessment Exam 0 cr.

VERITAS REQUIREMENTS

Foundations 18 credits (plus language requirement)
Foundations courses need not all be completed in a student's first year.

1) DGN 1101 or HON 1111 (4 cr.)
2) DGN 1102 or HON 1112 (4 cr.)
3) CTA 1101 Interpersonal Communication (2 cr.)
4) ENG 1110 First Year Composition (4 cr.)
5) World Language+
6) Math (4 cr.) (Met by Calculus)

+The language requirement can be met by having completed three years of one language in high school, completing the 1112 in a language sequence, demonstrating equivalent proficiency at the same course levels through a placement exam, or being bilingual.

Conceptions & Integrations 32 credits
Students must complete 4 credits in each of the 7 disciplinary pathways plus 4 more credits in any pathway(s). 16 credits must be from Conceptions courses; 8 credits must be from Integrations courses.

1) Social Sciences
2) History
3) Literature
4) Fine Arts
5) Religious Studies (Must Be Conceptions Level)
6) Philosophy
7) Science (Met By General Chemistry – Conceptions Level)
8) Open

To graduate from The College of St. Scholastica, students must complete a total of **128** credits of which **42** need to be **upper division credits** and the last **32** credits must be earned through St. Scholastica. Upper division credits are those numbered **3000 or greater** and **cannot** include graduate level credits.

* If the student is not prepared to take calculus the prerequisite MTH 1122 (Elementary Functions II) should be taken in the first year. Calculus I and II, MTH 2221/2222 can then be taken in the spring of the 1st year and spring of the 2nd year or in consecutive semesters of the 2nd year.

** ENG 1110 and CTA 1101 can be taken in either semester. CTA 1101 may be deferred to sophomore year to fit a Fall MTH course.

*** Pre-med students choosing BIO 2510 and BIO 2520 as electives could take these courses as juniors or seniors instead of the sophomore year.

^ Physics I and II can be taken in either the sophomore or junior year. Calculus-based physics is required (see the CHM Chair if PSC 2001 is already completed).

† CHM 3240 and CHM 3000 require instructor permission, and CHM 3000 is only offered in the fall semesters. Please contact the instructor during advising week.
BIO 3500 is offered both fall and spring semesters. BIO 2020 is offered either semester, but the lab, BIO 2021 is only offered in the spring.
CHM 3430/3431 may be taken in the senior year. CHM 3460 is offered in the fall only and may be taken in the junior year.

\# Students planning to attend graduate school are recommended to take CHM 4060 (Undergraduate Research) as one of their electives or to do a summer research project. If research is done during the summer students may sign up for an independent study (CHM 4999 – Research Paper and Presentation – 1cr). Of the two UD Science electives, one must be either CHM, MTH, or PSC. Recommended courses include CHM 4060 (Undergraduate Research), CHM 3220 (Intermediate Organic Chemistry), CHM 4401/4402 (Medicinal Chemistry), CHM 4020 (Inorganic Chemistry); or others in consultation with the advisor. 04/2017