CHEMISTRY (CHE)

Degree offered: B.A. or B.S.

Requirements for the Chemistry Major (B.A. and B.S.)

The **Major in Chemistry for the B.A. Degree** consists of the following **39 hours**:

A.	CHE 101	General Chemistry I	(4 hours)
	CHE 103	General Chemistry II	(4 hours)
	CHE 201	Organic Chemistry I	(5 hours)
	CHE 202	Organic Chemistry II	(5 hours)
	CHE 303	Quantitative Analysis	(4 hours)
	CHE 400	Chemistry Seminar	(1 hour)
	CHE 402	Elementary Physical Chemistry	(4 hours)
B.	MAT 151	Calculus I	(3 hours)
C.	PHY 201	General Physics I	(4 hours)
	PHY 202	General Physics II	(4 hours)

The **Major in Chemistry for the B.S. Degree** consists of the following **42 hours**:

A.	CHE 101	General Chemistry I	(4 hours)
	CHE 103	General Chemistry II	(4 hours)
	CHE 201	Organic Chemistry I	(5 hours)
	CHE 202	Organic Chemistry II	(5 hours)
	CHE 303	Quantitative Analysis	(4 hours)
	CHE 400	Chemistry Seminar	(1 hour)
	CHE 402	Elementary Physical Chemistry	(4 hours)
B.	MAT 151	Calculus I	(3 hours)
	MAT 161	Calculus II	(3 hours)
C.	PHY 201	General Physics I	(4 hours)
	PHY 202	General Physics II	(4 hours)

Requirements for the Chemistry Minor

The **Minor in Chemistry** consists of the following **30 hours**:

A.	CHE 101	General Chemistry I	(4 hours)
	CHE 103	General Chemistry II	(4 hours)
	CHE 201	Organic Chemistry I	(5 hours)
	CHE 202	Organic Chemistry II	(5 hours)
B.	MAT111	Precalculus Algebra Or any course above MAT 111	(3 hours)
C.	PHY 201	General Physics I	(4 hours)
	PHY 202	General Physics II	(4 hours)

Course Descriptions

CHE 100 INTRODUCTORY CHEMISTRY: Four hours
A general course in the fundamental facts, principles, and theories of chemistry with emphasis on those topics most useful to students who are in the pre-nursing program. (Lec. 3, Lab. 2).

CHE 101 GENERAL CHEMISTRY I: Four hours
A general course in the fundamental facts, principles and theories of chemistry with emphasis on those topics most useful to students who are science majors or minors. For chemistry majors and minors, and to satisfy the chemistry requirements of non-science majors. (Lec. 3, Lab. 3).
Prerequisite: MAT 111 or higher

CHE 103 GENERAL CHEMISTRY II: Four hours
This course, a continuation of CHE 101, includes qualitative analysis and an introduction to quantitative analysis. (Lec. 3, Lab. 3).
Prerequisite: CHE 101

CHE 105 ELEMENTARY ORGANIC AND PHYSIOLOGICAL CHEMISTRY: Four hours
The second semester of a two-semester course, the first semester of which is CHE 100, designed primarily for pre-nursing students. This course provides an introduction to organic chemistry and biochemistry. Not counted toward a chemistry major or minor. (Lec. 3, Lab. 3).
Prerequisite: CHE 100 and MAT 111 or higher or concurrent enrollment

CHE 201, 202 ORGANIC CHEMISTRY I AND II: Five hours per course
A course dealing with the theories and principles of organic chemistry. The first semester of laboratory work deals with the preparation of organic compounds, and the second semester of laboratory work includes qualitative organic analysis. (Lec. 3, Lab. 6).
Prerequisite: CHE 103 and a grade of "C" or better in CHE 101 and CHE 103

CHE 303 QUANTITATIVE ANALYSIS (CT): Four hours
A survey course continuing the quantitative analysis part of Chemistry 103. Both gravimetric and volumetric methods of analysis are covered. Also covered are general operating principles of the commonly used analytical instruments. (Lec. 2, Lab. 6).
Prerequisite: CHE 103

CHE 307 BIOCHEMISTRY I: Four hours
A study of the chemistry of life. Emphasis is placed on the structure and metabolism of carbohydrates, proteins, lipids, nucleic acids, nucleoproteins, vitamins, and minerals. Principles of enzymology are also emphasized. This course has a clinical biochemistry orientation. (Lec. 3, Lab 2)
Prerequisite: CHE 202
(Cross-listed with BIO 307)

CHE 308 BIOCHEMISTRY II: Four hours
A continuation of topics discussed in Biochemistry I. Emphasis is placed on the structure and metabolism of complex organic molecules, as well as detailed analysis of mechanisms of gene expression and function. Endocrine regulation of metabolism will also be emphasized. This course is recommended for students planning to apply to Medical School.
(Lec. 2, Lab 4)
Prerequisite: CHE 307
(Cross-listed with BIO 308)

CHE 400 CHEMISTRY SEMINAR (CT): One hour
Course content varies with the needs of the students.
Prerequisite: CHE 202

CHE 402 ELEMENTARY PHYSICAL CHEMISTRY: Four hours
A course based largely on the concept of energy and the fundamental properties of matter. A general course not requiring extensive

mathematical preparation. (Lec. 3, Lab. 3).
Prerequisite: CHE 103, PHY202, and MAT 161 or concurrent enrollment

CHE 405 **SCIENCE OUTREACH:** One hour
A community service program designed to train upper- level science students to host a molecular or environmental science laboratory for high school students. Students will function as a group to organize, prepare, and operate at least one laboratory for a visiting high school group. Students will be graded on their participation and submit a written reflection of their experience. This course mainly serves students preparing for allied health careers and postgraduate work.
Prerequisite: BIO 103 or BIO 104 or BIO 105, CHE 103, completion of at least 40 semester hours of coursework
(Cross-listed with BIO 405)

CHE 411 **SPECIAL STUDIES:** Three hours
A course for upperclassmen seeking to complete requirements in their major or minor disciplines. Subjects will be taught that do not appear in the College catalog but are of value to a student in her career objectives and/or graduate studies.
Prerequisite: Approval by the Department Head

CHE 412 **SPECIAL STUDIES:** Three hours
A course for upperclassmen seeking to complete requirements in their major or minor disciplines. Subjects will be taught that do not appear in the College catalog but are of value to a student in her career objectives and/or graduate studies.
Prerequisite: Approval by the Department Head

CHE 413 **SPECIAL STUDIES**: Three hours
A course for upperclassmen seeking to complete requirements in their major or minor disciplines. Subjects will be taught that do not appear in the College catalog but are of value to a student in her career objectives and/or graduate studies.
Prerequisite: Approval by the Department Head

CHE 414 **SPECIAL STUDIES:** Three hours
A course for upperclassmen seeking to complete requirements in their major or minor disciplines. Subjects will be taught that do not appear in

the College catalog but are of value to a student in her career objectives and/or graduate studies.
Prerequisite: Approval by the Department Head

CHE 449, 450 INDEPENDENT STUDIES: One hour to Two hours
Course content varies with the needs of the students
Prerequisite: CHE 202 and approval of the Department Head and Academic Dean.