

B. S. Chemistry (CHM)

With Biochemistry Option

*College: Arts & Sciences***DEGREE REQUIREMENTS**

Course requirements for all UNCW degrees include: (1) Basic Studies, (2) specific major requirements, and (3) sufficient elective hours for a combined total of a minimum of 124 hours.

(1) BASIC STUDIES (45 semester hours)

See Basic Studies sheet and/or information on the WEB at <http://www.uncw.edu/uc/basicstudies.htm>

(2) MAJOR REQUIREMENTS - CHM (Minimum 81 hours, Biochemistry Option)

Check when complete:

___ +*CHM 101	General Chemistry (4) (With CHM 102, meets Computer Competency Requirement)
___ +*CHM 102	General Chemistry (4) Prerequisite: CHM 101. (With CHM 101, meets Computer Competency Requirement)
___ *CHM 211	Organic Chemistry I (3) CHML 211. Lab (1) Prerequisite: CHM 102
___ *CHM 212	Organic Chemistry II (3) CHML 212. Lab (1) Prerequisite: CHM and CHML 211
___ *CHM 235	Quantitative Analysis (2) CHML 235. Lab (2) Prerequisite: CHM 102
___ CHM 250	Introduction to Chemical Research (1)
___ *CHM 312	Advanced Techniques of Organic Chemistry (2) CHML 312. Lab (2) Prerequisite: CHM 212
___ * ¹ CHM 321	Fundamentals of Physical Chemistry (4) CHML 321. Lab (1) Prerequisite: CHM 102, 255 or equivalent, PHY 202
___ CHM 365	Biochemistry (3) Prerequisites: BIO 204, CHM 312, and CHM 321
___ * ¹ CHM 420	Physical Chemistry (3) CHML 420. Lab (1) Prerequisite: CHM 102, 255 or equivalent, PHY 202, and MAT 261
___ *CHM 435	Advanced Analytical Chemistry (2) CHML 435. Lab Prerequisite: CHM 235 and 321
___ *CHM 445	Inorganic Chemistry (3) CHML 445. Inorganic Synthesis (1) Prerequisite: CHM 321
___ CHM 466	Biochemistry II. (3) Prerequisite: CHM 365
___ CHM 467	Biochemical Techniques and Instrumentation (2) Prerequisite: CHM 365 or permission of instructor
___ CHM 495	Senior Seminar (1-3) Prerequisite: CHM 255 and 25 semester hours of CHM courses (Meets Oral Communication Competency Requirement)
___ +*BIO 204	Principles of Biology: Cells (4)
___ + ² MAT 161	Calculus with Analytic Geometry I (4) Prerequisite: MAT 112 or 115 or equivalent preparation in algebra and trigonometry
___ +MAT 162	Calculus with Analytic Geometry II (4) Prerequisite: MAT 161
___ MAT 261	Multivariate Calculus (4) Prerequisite: MAT 162
___ MAT 335 or 361	Linear Algebra and Matrices (3) Prerequisite: MAT 162 or Differential Equations (3) Prerequisite: MAT 261
___ *+PHY 101-102 and *+201	PHY 101-102 Elementary College Physics (4-4) Prerequisite: MAT 111 PHY 201 General Physics (4) Corequisite: MAT 161
or	
___ *+PHY 201-202	General Physics (4-4) Corequisite: MAT 161-162
___ BIO/CHM ___	Choose 3 hours from BIO 325, 425; CHM 491, or CHM 499 (for either CHM 491 or 499, the subject matter must be biochemical in focus and a comprehensive written report and oral presentation are required; if 491 or 499 is used, student must take a total of 3 hrs in 491 and may count only 3 of the 6 credit hrs taken as 499 for credit toward the major)

¹ Students should arrange their work to take CHM 321 and 420 in the junior year. Two years of German are recommended.

² Students interested in the degree program in CHM are encouraged to begin w/ MAT 161. Initial placement is based on high school background and the MAT Placement Test. Students not prepared for MAT 161 should begin w/ MAT 115 or 111-112, as appropriate.

A "C" (2.00) or better is required on each CHM course, and an overall average of "C" (2.00) is required in all CHM courses.

*These courses require a lab

+May also be used to satisfy Basic Studies requirements

(3) ELECTIVES

___ Elective hours to equal a minimum of 124 hours

Requirements to declare CHM: Completion of 24 hours

For further information see the CHM WEB site: <http://www.uncw.edu/chem/> and <http://www.uncw.edu/catalogue/COURSES/Chm.htm>

CHEMISTRY COURSES

- CHM 101. General Chemistry (4)**
CHM 102. General Chemistry (4) Prerequisite: CHM 101.
CHM 105. Basic Concepts of Chemistry (3)
CHM 211-212. Organic Chemistry (3-3) CHML 211-212. Lab (1-1) Prerequisite: CHM 102
CHM 235. Quantitative Analysis (2) CHML 235. Lab (2) Prerequisite: CHM 101 and CHM 102.
CHM 250. Introduction to Chemical Research (1)
CHM 291. Introductory Research (1-3) Prerequisite: Freshman or sophomore standing, and consent of instructor and department chair
CHM 312. Advanced Techniques of Organic Chemistry (2) CHML 312. Lab (2)
Prerequisite: CHM 212
CHM 321. Fundamentals of Physical Chemistry (4) CHML 321. Lab (1) Prerequisite: CHM 102, 250, PHY 201, and MAT 161
CHM 365. Biochemistry I (3) Prerequisite: BIO 204, CHM 212 and CHM 321
CHM 377. Environmental Chemistry (3) CHML 377. Lab (1) Prerequisite: CHM 102
CHM 380. Forensic Chemistry (4) Prerequisite: CHM 211 w/ lab, CHM 235 w/ lab
CHM 415. Physical Organic Chemistry (3) Prerequisite: CHM 212; prerequisite or corequisite: CHM 321 or permission of instructor
CHM 417. Medicinal Chemistry (3) Prerequisite: CHM 212
CHM 420. Quantum Mechanics (3) CHML 420. Lab (1) Prerequisite: CHM 321
CHM 425. (525) Computational Chemistry (3) Prerequisite: CHM 321
CHM 435. Analytical Chemistry (4) Prerequisite: CHM 235 and CHML 235, CHM 312, and CHM 321 and CHML 321
CHM 445. Inorganic Chemistry (3) CHML 445. Inorganic Synthesis (1) Prerequisite: CHM 321
CHM 466. Biochemistry II. (3) Prerequisite: CHM 365
CHM 467. (567) Biochemical Techniques and Instrumentation (2) Prerequisite: CHM 365 or permission of instructor
CHM 475. Introduction to Chemical Oceanography (3) Prerequisite: CHM 235 and CHML 235 or permission of instructor
CHM 478. (578) Marine Ecotoxicology (2) Prerequisite: CHM 212
CHM 485. (585) Industrial and Polymer Chemistry (3) Prerequisites: CHM 321 and CHM 211-212
CHM 490. (590) Special Topics in Chemistry (1-3) Prerequisite: Junior or senior standing and consent of instructor
CHM 491. Directed Individual Study (1-3) Prerequisite: Overall GPA of at least 2.00, junior or senior standing, and consent of instructor, department chair and dean
CHM 495. Senior Seminar (1-3) Prerequisite: CHM 255 and 25 semester hours of CHM courses
CHM 498. Internship in Chemistry (3-12) Prerequisite: CHM 212 w/ lab and 235 w/ lab; junior or senior standing in CHM; consent of instructor; and GPA of at least 2.80 in CHM
CHM 499. Honors Work in Chemistry (2-3) Prerequisite: Second semester junior or senior standing