

CHEMISTRY – SECONDARY EDUCATION (CHEM_BS_02, 04, OR 06)

BS DEGREE – 32 COURSE UNITS

MAJOR COURSE REQUIREMENTS

Core Courses (9)	Specialization Courses* (9)	Correlate Courses (4)
CHE 201 – General Chemistry I	SED 099 – Education Seminar (0 units)	MAT 127 – Calculus A
CHE 202 – General Chemistry II	SED 224 – Adolescent Learning & Development	MAT 128 – Calculus B
CHE 310 – Analytical Chemistry	EFN 299 – Schools, Communities and Culture	PHY 201 – General Physics I
CHE 331 – Organic Chemistry I	SPE 103 – Social and Legal Foundations of Special Ed.	PHY 202 – General Physics II
CHE 332 – Organic Chemistry II	SED 399 – Pedagogy in Schools (1.5 units)	<p style="text-align: center;"><u>ACS Approved Degrees</u></p> <p>BS_CHEM_02 CHE 493 (2 units), and two 400 level courses with or without lab.</p> <p>BS_CHEM_04 two 400 level courses with lab.</p> <p><u>Non-ACS Approved Degree</u></p> <p>BS_CHEM_06 One 400 level course and one 300 or 400 level course (with or without lab).^a</p> <p>^aOne unit CHE 493 counts as a 300 level course.</p>
CHE 371 – Quantum Chemistry	PHY 390 – Methods of Teaching Science	
CHE 372 – Chem. Thermodynamics	RAL 328 – Reading in Secondary Education (0.5 units)	
CHE 430 – Biochemistry	CHE 490 – Student Teaching (2 units)	
	SED 498 – Collaborative Capstone for Prof. Inquiry	
CHE 451 – Inorganic Structure and Bonding or CHE 452 Inorganic Reactions and Mechanism	Options Courses (4/2/2)	
	CHE 365 – Chemical Aspects of the Environment	
	CHE 360 Forensic Chemistry	
Seminar Courses (Required)	CHE 370 Special Topics in Chemistry	
CHE 099 – Orientation Seminar (0)	CHE 410 Instrumental Analysis/Advanced Analytical	
CHE 316 – Sophomore Sem. (0.25)	CHE 451 – Inorganic Structure and Bonding or CHE 452 Inorganic Reactions and Mechanism (excludes course used to fulfill core requirements)	
CHE 317 – Junior Seminar (0.25)	CHE 470 Advanced Topics in Chemistry	
*See the Secondary Education Sequence Planning Sheet for the minimum standardized test scores, grades, and GPA required for advancement.	CHE 474 Special Topics in Biochemistry	
	CHE 476 Special Topics in Organic Chemistry	
	CHE 478 Special Topics in Condensed Matter	
	CHE 471 Forensic Applications of Mass Spectrometry	
	CHE 493 Independent Research	
	XXX Approved Outside Courses (For Physical Science certification, see the Undergraduate Bulletin)	

LIBERAL LEARNING REQUIREMENTS

Option 1 – Breadth Distribution from Approved List

Arts & Humanities (2-3 courses)	Social Science & History (2-3 courses)	Natural Sciences & Quantitative Reasoning (Requirements fulfilled by major course)
Literary, Visual, or Performing Arts course	SED 224 – Adolescent Learning & Development (Behavioral, Social, or Cultural Perspectives)	Natural Science course (with lab)
World Views/Ways of Knowing course	EFN 299 – Schools, Communities and Culture (Behavioral, Social, or Cultural Perspectives)	Quantitative Reasoning course
Literary, Visual, or Performing Arts course <u>or</u> World Views/Ways of Knowing course <u>or</u> Social Changes in Historical Perspective course		Natural Science course <u>or</u> Quantitative Reasoning course

Option 2 – Designated Interdisciplinary Concentration (see www.tcnj.edu/~liberal/concentrations/index.html), **Option 3– Self-designed Interdisciplinary Concentration** (see www.tcnj.edu/~liberal/concentrations/index.html), **Option 4 – Second Major**

CIVIC RESPONSIBILITIES, PROFICIENCIES & ELECTIVES

Civic Responsibilities	Intellectual & Scholarly Growth	Electives 5 or as needed to meet 32 course graduation requirement
IDS 103 – Community Engaged Learning (zero-credit requirement)	IDS 102 – Information Literacy online tutorial (zero-credit requirement)	Elective course
	(WRI 101 or 102 may be required freshmen year)	Elective course
Concepts – (fulfilled through liberal learning, other courses, or sustained experience)	Writing Intensive Courses	Elective course
Gender	FSP First Seminar course	Elective course
Global Perspective	Mid-level course (fulfilled by core courses, see bulletin)	Elective course
Race & Ethnicity (fulfilled by EFN 299)	Capstone course (fulfilled by CHE 4xx courses, see bulletin)	
	Second Language (0-3 based on placement) ^e	
^e Demonstrated proficiency at the low intermediate level (103) if continuation of language studied previously. Two courses (101 & 102), if new language is taken.		

Note: Full list of graduation requirements can be found in The College bulletin and department website.