

**B. A. Chemistry (CHM)***College: Arts & Sciences*

With\*\* or Without Teacher Licensure or Science Certification Option

**DEGREE REQUIREMENTS**

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

**(1) UNIVERSITY STUDIES**

See University Studies requirements online: <http://uncw.edu/uc/advising/unistudies.html>.

**(2) MAJOR REQUIREMENTS - CHM (Minimum 61 hours)****Core Courses: (61 hours)**

|       |                  |  |
|-------|------------------|--|
| _____ | +*CHM 101        | General Chemistry I (4) (Meets <b>Computer Requirement</b> with CHM 102)   |
| _____ | *CHM 102         | General Chemistry II (4) Prerequisite: CHM 101 (Meets <b>Computer Requirement</b> with CHM 101)  |
| _____ | *CHM 211         | Organic Chemistry I (3), Lab (1) Prerequisite: CHM 102   |
| _____ | *CHM 212         | Organic Chemistry II (3), Lab (1) Prerequisites: CHM *211  |
| _____ | *CHM 235         | Quantitative Analysis (2), Lab (2) Prereqs: CHM 101 and CHM 102 with a grade of "C" or better  |
| _____ | CHM 250          | Introduction to Chemical Research (1) Prerequisite: CHM 102  |
| _____ | *CHM 312         | Advanced Techniques Organic Chemistry (2), Lab (2) Prerequisites: CHM 212, with a grade of "C" or better in both CHM 211 and 212   |
| _____ | *CHM 321         | Fundamentals of Physical Chemistry (4), Lab (1) Prerequisites: CHM 102, MAT 161 and 162, with a grade of "C" or better in CHM 102 and a grade of "C-" or better in both MAT 161 and 162                            |
| _____ | *CHM 445         | Inorganic Chemistry (3) Prerequisite: CHM 321  |
| _____ | CHM 495          | Senior Seminar (1) Pre/Corequisite: CHM *445<br>(Meets <b>Oral Communication Requirement</b> )   |
| _____ | +*BIO 201        | Principles of Biology: Cells (4)   |
| _____ | +*MAT 161        | Calculus with Analytic Geometry I (4) Prerequisite: MAT 112 or 115 or equivalent preparation   |
| _____ | *MAT 162         | Calculus with Analytic Geometry II (4) Prerequisite: MAT 161   |
| _____ | +*PHY 101-102    | Elementary College Physics I, II (4, 4) Corequisite: MAT 111   |
| _____ | or +*PHY 201-202 | General Physics I, II (4, 4) Corequisites: MAT 161-162   |
| _____ | CHM _____        | Choose 7 hrs from the following, including one laboratory course: CHML 312, 321, 420, 445; CHM 365, 377, *380, 415, 417, *420, *425, *435, 466, 467, 475, *478, 485, 486, 490, 491, 498 and 499.                   |
| _____ | CHM _____        | <b>Note:</b> If CHM 491, 498, or 499 is used, the student must take a total of 3 credit hours in CHM 498, from 1-4 hours in CHM 491 or the student may count 4 of the 6 credit hours taken as CHM 499 for credit.) |

Recommended electives for particular areas of interest:

Environmental Chemistry: BIO +\*202, \*CHM 377, EVS +\*195, 495, GLY +\*120, STT +215

Marine Chemistry: BIO +\*202, \*362, CHM 475, GLY +150

Industrial Chemistry: CHM 365, \*435, 485, CHML 445, ACG \*201, QMM +280 or STT +215

Pre-Medical Science: BIO +\*202, CHM 365, 417, 466, 467

An overall grade point average of "C" (2.00) is required in all CHM courses counted toward the major.

**NOTE:** To satisfy the **Applied Learning Requirement**, a student must successfully complete at least one hour of CHM 491, 498, 499 or CHML 495.

**\*\*Requirements for Teacher Licensure in Chemistry:** In addition to completing the requirements for a major in chemistry, students must satisfy the professional education requirements. For Secondary Teacher Licensure in General Science as well as Chemistry, an additional BIO course, PHY 260, and 2 courses from GLY 101, 120, 150 are required. For information on the Teacher Education Program admissions criteria and the courses required for licensure in North Carolina, see the Watson School of Education section of the 2011-2012 undergraduate catalogue. Students planning to pursue licensure should apply to the Watson School of Education as soon as admissions requirements are met (typically in the sophomore year) and plan their programs in regular consultation with their advisors. Teacher Licensure requirements are established at the state level and may be changed at any time.

*#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.*

*\*These courses require a lab*

*+May also be used to satisfy University Studies Foundations & Approaches and Perspectives requirements*

*Highlighted courses may meet University Studies Cluster, Competency, Exploration and/or Capstone course 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 website: <http://www.uncw.edu/chem/> and <http://catalogue.uncw.edu>.

**MAJOR REQUIREMENTS WITHIN UNIVERSITY STUDIES**

Note: **Highlighted courses** are within the major requirements/electives and also meet University Studies Cluster, Competency, Exploration and/or Capstone Course requirements.

**THEMATIC TRANSDISCIPLINARY CLUSTERS**

*(At least 9 hours and 3 courses with at least 2 different prefixes – all eligible for multiple-counting.)*

*Students who complete a minor, a second major, or an approved concentration in their major are exempt from the requirement.)*

**Modeling:** ANT 105, 207, **BIO 201**, 366, **CHM 101**, CSC 112, 121, **EVS 195**, MAT 101, 151, 152, **161**, **162**, PSY 105, 256.

**Immigration:** ANT 316, 327, ENG 344, **FRH 421**, **HON 210**, **HST 106**, 340, **INT 105**, **SPN 323**, 490.

**Climate Change and Society:** ANT 312, **GGY 140**, 230, 333, 340, 436, **GLY 250**, 350, 420.

**Global Diversity:** ENG 341, 359, **HEA 320**, **HST 104**, 367, **INT 105**, **PAR 230**, 232, **PED 206**, 235, 350, **REC 265**, 351, 494.

**Foundations for Systems Thinking:** **BIO 105**, **201**, 345, 366, **ECN 221**, 250, **EXS 216**, 217, **RTH 468**.

**Evolution:** ANT 210, 320, 322, 324, 328, **BIO 105**, **202**, 430, 475, **GLY 132**, 135, 337, **PSY 257**.

**BUILDING COMPETENCIES**

**A. Writing Intensive:** *(9 hours with at least one at the 300 – 400-level and at least one in the major)*

ACG 445, ANT 305, 308, 312, **ARH 476**, **ART 476**, **ATR 445**, **BIOL 345**, 366, **CHM 250**, **CHML 321**, **420**, **CLA 209**, 210, 330, **COM 305**, **CRM 495**, **CRW 203**, 496, **CSC 385**, 450, **EBD 490**, **ECN 422**, **EDN 300**, 352, **ENG 110**, 111, 202, 204, 205, 211, 223, 224, 225, 226, 227, 230, 232, 233, 290, 313, 495, 496, **EVS 495**, **FIN 330**, **FRH 402**, 411, 421, 470, 485, 491, 498, 499, **FST 317**, 367, 440, 445, 496, **GER 495**, 499, **GGY 333**, 382, 435, 436, 499, **GLY 337**, 390, 420, 499, **HEA 305**, **HST 290**, 408, 412, 414, 418, 440, 442, 444, 446, 448, 450, 454, 456, 477, 478, 480, 481, 483, 485, 487, 495, 496, 497, **INT 490**, **MAT 346**, 495, **MGT 352**, 458, **MKT 343**, **MUS 351**, 352, **NSG 415**, **OCN 390**, 490, 499, **PAR 301**, 371, 373, 374, **PED 415**, **PLS 401**, **PSY 355**, 410, 412, 417, 423, 425, 464, **REC 375**, **SED 372**, **SOC 490**, 496, **SPN 497**, **SWK 320**.

**B. Information Literacy:** *(9 hours; First-Year Seminar and two additional courses with at least one in the major)*

ANT 308, 312, **ARH 476**, **ART 476**, **ATR 445**, **BIO 495**, **BIOL 495**, **CHM 250**, **COM 200**, **CRM 300**, 495, **CRW 204**, **CSC 385**, **ECN 422**, **ENG 103**, 200, 201, 202, 204, 205, **EVS 495**, **EXS 359**, **FRH 304**, 311, 318, 404, **FST 371**, 372, 376, 377, 378, 379, **GER 495**, **GGY 215**, 222, **GLY 350**, 390, **HEA 452**, **HON 110**, **HST 290**, **INT 490**, **MAT 495**, **NSG 415**, **OCN 350**, 390, 490, **PAR 300**, 301, 400, **PLS 201**, **PSY 355**, 410, 412, 417, 423, 425, 464, **SEC 430**, 431, **SOC 300**, 390, 490, 496, **SPN 497**, **SWK 321**, **UNI 101**.

**C. Quantitative and Logical Reasoning:** *(3 hours – may be taken as a major requirement)*

ANT 324, **BIOL 366**, **CHM 101**, **CSC 112**, 121, 133, **FST 445**, **GGY 215**, 222, 235, **GLY 226**, 350, 390, 426, **MAT 101**, 102, 111, 112, 115, 141, 142, 151, 152, **161**, **162**, **OCN 350**, 390, **OPS 370**, **PAR 110**, 218, **PHY 101**, **102**, **201**, **202**, **PLS 201**, **PSY 225**, **STT 210**, **215**.

**EXPLORATIONS BEYOND THE CLASSROOM**

*(1 approved experience from the options below – may be integrated into the major or any other component)*

**Discovery** (Directed Individual Study or Honors project), **Application** (Internships, Fieldwork Practicum, Student Teaching),

**Regional Engagement** (Service Learning Projects), **Exploration Away** (Study Abroad)

**ACG 491**, 498, **ANT 491**, 498, **ANTL 207**, **ART 491**, **BIO 291**, 480, 491, 493, 495, 498, **BIOL 495**, **BLA 491**, 498, **CHM 495**, **COM 491**, 498, **CRM 490**, **CSC 450**, 491, 498, **EBD 491**, 498, **ECN 491**, 498, **EDN 318**, 323, 335, 352, 338, 355, 409, 411, 465, 466, 467, **EDNL 200**, 300, 302, 332, 333, 388, 407, 450, 451, **ENG 202**, 204, 302, 498, **EVS 431**, 491, 497, 498, **EVSL 195**, **EXS 347**, **FIN 491**, 498, **FRH 491**, **FST 498**, **GER 491**, 498, **GGY 424**, 491, 498, **GLY 390**, 470, 491, 498, **INT 294**, 494, 491, 498, **MAT 498**, **MIS 411**, 413, 491, 498, **MGT 491**, 498, **MKT 491**, 498, **OCN 390**, 491, **OPS 491**, 498, **PAR 400**, **PHY 315**, 477, 481, **PLS 294**, 491, 494, 498, **PSY 291**, 451, 491, **REC 498**, **RTH 498**, **SEC 220**, 320, 421, 422, 431, **SED 250**, 350, 354, 355, 362, 367, 374, 375, 411, **SEDL 368**, 369, **SOC 390**, 496, **SPN 490**, 491, 498, **STA 294**, **SWK 496**, 497, **WMS 498**, 491, **xxx 499**.

**CAPSTONE COURSES**

*(1-4 hours – may be taken as a major requirement)*

**ANT 450**, **ARH 476**, **ART 476**, **BIO 495**, **BIOL 495**, **CHM 491**, **CRM 495**, **CRW 496**, **CSC 450**, 455, **ECN 422**, **EDN 409**, 411, 465, **ENG 495**, 496, **EVS 495**, **EXS 347**, **FRH 404**, 411, 421, 437, 448, 470, 485, **FST 495**, 496, **GER 495**, 499, **GGY 495**, **GLY 470**, 495, **HEA 498**, **HST 408**, 412, 414, 418, 440, 442, 444, 446, 448, 450, 454, 456, 477, 478, 480, 481, 483, 485, 487, 495, 496, 497, **INT 490**, **MAT 495**, **MGT 455**, **MUS 493**, 496, **NSG 403**, 405, **PAR 400**, **PHY 497**, **PLS 401**, **PSY 410**, 412, 417, 423, 425, 464, **REC 498**, **SED 411**, **SOC 490**, 496, **SPN 497**, **STT 490**, 498, **SWK 496**, 497.