Course requirements for all UNCW degrees include: (1) University Studies, (2) specific major requirements, and (3) sufficient elective hours for a combined total of at least 120 hours.

### MAJOR REQUIREMENTS — CSC Option 2 – SE (Minimum 73 – 79 hours)

**Core Courses**: (55 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 131</td>
<td>Introduction to Computer Science (4)</td>
<td>Prerequisite: MAT 111 or 115, or equivalent, or sufficient math placement</td>
</tr>
<tr>
<td>+CSC 133</td>
<td>Discrete Mathematical Structures (3)</td>
<td>Prerequisite: MAT 111 or 115, or equivalent, or sufficient math placement</td>
</tr>
<tr>
<td>CSC 231</td>
<td>Introduction to Data Structures (4)</td>
<td>Prerequisite: CSC 131 with grade of “C” or better; Corequisite: CSC 133</td>
</tr>
<tr>
<td>CSC 242</td>
<td>Computer Organization (3)</td>
<td>Prerequisites: CSC 131 with a grade of “C” or better and 133</td>
</tr>
<tr>
<td>CSC 331</td>
<td>Object-Oriented Programming and Design (3)</td>
<td>Prerequisite: CSC 231 with a grade of “C” or better</td>
</tr>
<tr>
<td>___</td>
<td>Computer Networks (3)</td>
<td>Prerequisite: CSC 231 with a grade of “C” or better and 242</td>
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<tr>
<td>or</td>
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<tr>
<td>CSC 544</td>
<td>Network Programming (3)</td>
<td>Prerequisites: CSC 500 or approval of the graduate coordinator</td>
</tr>
<tr>
<td>CSC 360</td>
<td>Formal Languages and Computability (3)</td>
<td>Prerequisites: CSC 231 with a grade of “C” or better and 242</td>
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<tr>
<td>CSC 380</td>
<td>Design and Analysis of Algorithms (3)</td>
<td>Prerequisites: CSC 133, 231 with a grade of “C” or better, and MAT 161</td>
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<td>or</td>
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<tr>
<td>CSC 532</td>
<td>Design and Analysis of Algorithms I (3)</td>
<td>Prerequisites: CSC 500 or approval of the graduate coordinator</td>
</tr>
<tr>
<td>___</td>
<td>Professional and Ethical Issues in Computer Science (3)</td>
<td>Prerequisites: ENG 101 or equivalent and junior/senior standing in computer science or information technology (Meets Oral Communication Requirement)</td>
</tr>
<tr>
<td>___</td>
<td>Programming Languages (3)</td>
<td>Prerequisites: CSC 331 with a grade of “C” or better and 360</td>
</tr>
<tr>
<td>___</td>
<td>Software Engineering (3)</td>
<td>Prerequisites: CSC 331 with a grade of “C” or better and senior standing (Meets Applied Learning Requirement)</td>
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<td>or</td>
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<tr>
<td>CSC 450</td>
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<td>or</td>
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<tr>
<td>CSC 550</td>
<td>Software Engineering (3)</td>
<td>Prerequisites: CSC 500 or approval of the graduate coordinator</td>
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<tr>
<td>___</td>
<td>(Meets Applied Learning Requirement)</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>Database Design and Implementation (3)</td>
<td>Corequisite: CSC 331 with a grade of “C” or better (Meets Applied Learning Requirement)</td>
</tr>
<tr>
<td>___</td>
<td>Choose 6 additional hours in CSC at the 300-400 level; must be approved by advisor. 3 hours should be at the graduate level (500 or higher) §.</td>
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</tr>
<tr>
<td>__MAT 161</td>
<td>Calculus with Analytical Geometry I (4)</td>
<td>Prerequisite: MAT 112 or 115 or equivalent preparation</td>
</tr>
<tr>
<td>__MAT 162</td>
<td>Calculus with Analytical Geometry II (4)</td>
<td>Prerequisite: MAT 161</td>
</tr>
<tr>
<td>___</td>
<td>Statistical Analysis for Business and Economics (3)</td>
<td>Prerequisite: MAT 111</td>
</tr>
<tr>
<td>or</td>
<td>Introduction to Statistics (3)</td>
<td>Prerequisite: Satisfactory performance on the UNCW math test or MAT 105</td>
</tr>
</tbody>
</table>

A grade point average of “C” (2.00) or better computed over the CSC courses and all the courses used to fulfill the requirements of the major are required.

*These courses require a lab
+May also be used to satisfy University Studies Foundations & Approaches and Perspectives requirements
§ No more than 12 hours total of graduate-level courses may be applied to the undergraduate degree.
Concentration Courses: (18 – 21 hours)

Biology Concentration: (21 hours)
- *BIO 201 Principles of Biology: Cells (4)
- *BIO 202 Principles of Biology: Biodiversity (4)
- ** Additional 13 hours in BIO above the 200 level

Business Concentration: (21 hours)
- ACG 201 Financial Accounting (3), Lab(1) Pre/Corequisite: MAT 111, Corequisite: ACG 201
- ACG 201 Managerial Accounting (3), Prerequisite: ACG *201 and ACG 201
- ECN 221 Principles of Economics – Micro (3) Prerequisite: MAT 111
- FIN 335 Principles of Financial Management (3) Prerequisite: ACG 201, ECN 222, and BAN 280
- MKT 340 Principles of Marketing (3) Prerequisite: Junior standing or admission to CSB
- MGT 350 Principles of Management – Micro (3) Prerequisite: Junior standing or admission to CSB

Chemistry Concentration: (21 hours)
- *CHM 101 General Chemistry I (4)
- *CHM 102 General Chemistry II (4), Prerequisite: CHM *101
- CHM 211 Organic Chemistry I (3) Prerequisite: CHM *102 with a grade of “C” or better
- *CHM212 Organic Chemistry II (3) Prerequisite: CHM 211
- or
- *CHM 235 Quantitative Analysis (3), Lab (1), Prerequisite: CHM +*101 & *102 with a grade of “C” or better
- ** Choose 6 additional in CHM at the 300-400 level

Digital Arts Concentration: (24 hours)
- ARH 202 Renaissance Through Early Twentieth Century (3)
- ART 101 Two-Dimensional Design (3) Studio Art and Digital Arts minors only or instructor consent
- ART 260 Introduction to Graphic Design (3) Prerequisite: ART 101 or consent of instructor
- MIS 310 Web and Device Development Languages (3) Prerequisite: CIT 110 or CSC 131 or MIS 213.
- CSC 112 Introduction to Computer Programming (3) Prerequisite: MAT 111 or 115
- or
- CSC 131 Introduction to Computer Science (4) Prerequisite: MAT 111 or 115
- or
- MIS 216 Introduction to Business Application Development (3)
- or
- MIS 316 Business Application Development (3) Prerequisite: MIS 216 or CSC 112 or CSC 131
- CSC 220/ART220/FST 220 3-D Computer Graphics (3) Prerequisite: CSC 105,131 or instructor consent Coreq: ART 260
- **6 hours electives – at least 3 hours at the 300-400 level, and at least 3 hours outside major. Choose from

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.§ No more than 12 hours total of graduate-level courses may be applied to the undergraduate degree.
### Concentration Courses: (18 – 21 hours)

#### GIS Concentration: (21 hours)
- +GGY 215 The Digital Globe (3)
- or GGY 220 Cartography (3) Prerequisite: GGY 130 or GGY 140
- GGY 281 Intro to Geographic Information Systems (3) Prerequisite: GGY 130, 140, EVS 195 or instructor consent
- GGY 322 Introduction to Remote Sensing (3) Prerequisite: GGY 130 or GLY 120 or GGY 215
  - **Choose 12 additional hours of electives, 6 credit hours at 300-level, and at least 9 hours outside major, selected from the following: ANT 311, *BIO 366, 466, BIOL 366, CSC 370, 415, 455,
  - GGY 220, 222, 328, 333, 424, 426, 428, 433, GLY 390, 470, 471, MIS 315, OCN 390 or 471.

#### Neuroscience Concentration: (23 hours)
- BIO 201 Principles of Biology: Cells (0-4)
- PSY 105 General Psychology (3)
- PSY 256 Brain and Behavior (3) Prerequisite: BIO 105 and PSY 105 or higher
- BIO 443 Neurobiology (3) Prerequisite: BIO 240, BIO 345, or PSY 256
  - or PSY 456 Advanced Biological Psychology (3) Prerequisite: PSY 256 and BIO 105 or 201, or instructor consent
- BIO 495 Seminar (1-3) Prerequisite: Senior standing
  - or PSY 495 Topical Seminar (1-3) Prerequisite: PSY 105
  - **Choose at least 9 hours of the following with at least 3 hours at 400 level or higher, and at least 9 hours outside the major: BIO 240, 335, 368, 415, 440, 443, 459, 484, 491, 499, CHM 101, 102,
  - CSC 415, PAR 320, PSY 245, 356, 456, 457, 491 or 499.

#### Security Concentration: (18 hours)
- CYBR 201 Fundamentals of Cybersecurity (3)
- CSC 324 Cyber Operations (3). Prerequisite: CYBR 201 and CSC 242.
- CSC 342 Operating Systems (3) Prerequisite: CSC 231 and CSC 242.
- CSC 424 Computer Security (3) Prerequisite: CSC 331
- CSC 350 Secure Programming (3) Prerequisite: CSC 331 or
- CSC 354 Computer and Mobile Forensics (3) Prerequisite: CSC 242.
- CSC **Choose 3 hours from CSC 350, 354, 365, 465, 475, 491, 498. May double count with core electives**

#### Statistics Concentration: (18 hours)
- STT 215 Introduction to Statistics (3) Prerequisite: Satisfactory math placement or MAT 105
- STT 305 Statistical Programming (3) Prerequisite: STT 215 or equivalent
- **Choose 12 additional hours in STT at the 300-400 level.**

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*These courses require a lab*

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

§ No more than 12 hours total of graduate-level courses may be applied to the undergraduate degree.