Chemistry Licensure  
(South Carolina – Grades 9 – 12)

**Specialty Area Preparation, Chemistry:**  (General Education)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 110</td>
<td>4</td>
<td>Foundations of Chemistry</td>
</tr>
<tr>
<td>CHM 115</td>
<td>4</td>
<td>Kinetics, Thermodynamics and the Environment</td>
</tr>
</tbody>
</table>

*Note: Bold type indicates General Chemistry sequence (CHM 110 and CHM 115)*

**One of the Following:**

- CHM 120  (4) Organic Chemistry (Pre/Corequisite: CHM 115)
- CHM 220  (4) Bio-Orga nic Chemistry (Prequisite: CHM 120)
- CHM 230  (4) Inorganic Chemistry (Prerequisite: CHM 120)
- CHM 240  (4) Experimental Techniques (Prerequisite: CHM 120)
- CHM 310  (4) Physical Chemistry I (Prequisites: CHM 120, MTH 151, PHY 111)
- CHM 330  (4) Analytical Chemistry (Prerequisite: CHM 310)
- CHM 340 OR CHM 460 (4) Physical Chemistry II (Prequisites: CHM 310, MTH 160 and PHY 112) OR Biological Chemistry

*Prerequisites: BIO 111, CHM 220, CHM 240, and PHY 111*

- CHM___  (4) Select from CHM: 410, 420, 430, 440, 450, 460, 470, or 471
- CHM 075  (0) Seminar in Chemistry

*Note: Bold type indicates Organic Chemistry sequence (CHM 120 and CHM 220)*

**Courses Outside the Department:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 150</td>
<td>4</td>
<td>Analytic Geometry and Calculus I</td>
</tr>
<tr>
<td>MTH 151</td>
<td>4</td>
<td>Analytic Geometry and Calculus II</td>
</tr>
<tr>
<td>MTH 160 or 241</td>
<td>4</td>
<td>Vectors and Matrices OR Intro to Statistics</td>
</tr>
<tr>
<td>PHY 111</td>
<td>4</td>
<td>General Physics I (Prerequisites: MTH 150 or 140/141 strongly recommended)</td>
</tr>
<tr>
<td>PHY 112</td>
<td>4</td>
<td>General Physics II (Prerequisites: PHY 111 and MTH 141 or 150. MTH 151 strongly recommended)</td>
</tr>
<tr>
<td>EES 110</td>
<td>4</td>
<td>Earth Systems; OR</td>
</tr>
<tr>
<td>EES 112</td>
<td>4</td>
<td>Environmental Science; OR</td>
</tr>
<tr>
<td>EES 113</td>
<td>4</td>
<td>Natural Hazards and Natural Disasters</td>
</tr>
</tbody>
</table>

**Professional Preparation:**

- EDU 111  (4) Perspectives on American Education (EDU 001 Lab included)
- EDU 120  (4) Human Growth and Development
- EDU 221  (4) Education of Students with Exceptionalities (Prerequisites: EDU 111, 120)

**Senior Year (Prerequisites: EDU 111, 120, 221):**

- EDU 350  (2) Curriculum and Methods of Teaching in Grades 9-12 (Fall Term of Senior Year)

**Spring Term of Senior Year (16 Credit Hours):**

- EDU 433  (3) Foundations of Literacy Instruction
- EDU 434  (3) Content Literacy Strategies and Modifications for Diverse Learners
- EDU 454  (4) Teaching Science in Grades 9-12
- EDU 460  (2) Critical Issues in Secondary Education
- EDU 472  (4) Practicum: Secondary Teaching

**Teaching Internship (Fall Term after graduation):**

- EDEP 670  (6) Teaching Internship

**The Following:**  (See Education Department)

- Apply for Admission to Furman Teacher Education Program.
- Praxis Core Academic Skills for Educators (Computerized): Reading (Test Code 5712); Writing (Test Code 5722); and Mathematics (Test Code 5732) to be taken prior to junior year. Teacher candidates who attain an 1100 or above on the two-part SAT or a comparable score of 24 on the ACT are exempt from taking the Praxis Core; teacher candidates who attain a 1650 or above on the three-part SAT taken after March 1, 2005 are also exempt.
- Praxis Test (Computerized): Chemistry: Content Knowledge (Test Code 5245 – SC minimum required score: 152) to be taken November or January of senior year (Registration information provided in August of the senior year).
- Praxis Test (Computerized): Principles of Learning and Teaching: Grades 7-12 (Test Code 5624) (SC minimum required score: 157) to be taken March of senior year (Registration information provided in August of the senior year).
- Apply for Approved South Carolina Teaching Licensure in Chemistry (Application and fingerprinting information provided Fall of the senior year).