DOCTORAL DEGREE REQUIREMENTS

General policies for all University of Oklahoma doctoral programs are available in the Graduate College Bulletin.

DOCTOR of PHILOSOPHY

MAJOR: Chemistry and Biochemistry

CONCENTRATION: Chemistry

DISCIPLINARY EMphasis: Biochemistry

Program effective Fall 2015

Graduate courses that are a part of Programs of Study in the Department of Chemistry and Biochemistry are denoted as CHEM G5XYZ, where X is the program of study, Y is the sequence of number within that Program of Study (for Y= 0-9), and Z is the number of credit hours as follows:

<table>
<thead>
<tr>
<th>X</th>
<th>Departmental Requirements</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5 Physical</td>
<td>0-2</td>
<td>0-4 Credit Hours</td>
</tr>
<tr>
<td>1</td>
<td>Analytical</td>
<td>3-5</td>
<td>(modules)</td>
</tr>
<tr>
<td>2</td>
<td>Biochemistry</td>
<td>6-7</td>
<td>Special Topics or Electives</td>
</tr>
<tr>
<td>3</td>
<td>Inorganic</td>
<td>8</td>
<td>Practicum</td>
</tr>
<tr>
<td>4</td>
<td>Organic</td>
<td>9</td>
<td>Seminar</td>
</tr>
</tbody>
</table>

COURSEWORK REQUIREMENTS

Department Courses and Seminar Requirements
Continuous enrollment in CHEM 5090 Departmental Colloquium is required (0 credit hours).

- CHEM 5011 Fundamentals I ............................................................... 1 hour
- CHEM 5021 Fundamentals II ............................................................ 1 hour
- CHEM 5080 Laboratory Rotations .................................................... 2 hours
- CHEM 5291 Seminar in Biochemistry ................................................. 1-12 hours

Continuous enrollment in 5291 is required after the first semester, up to 12 credits.

Total ......................................................................................................... 5-16 hours

Focus Area/Breadth Course Requirements .................................................. 16+ hours

Minimum of 16 credit hours in letter-graded courses in the CHEM course inventory at the G5XYZ level (X≠0, Y=0-8) including:

Focus Area Course Requirements—Up to 3 credits of student advisory committee-approved graduate coursework outside the department may count for focus area credit.

- Minimum 6 hours from:
  - CHEM 5200 Principles of Biochemistry, and/or
  - CHEM 5210 Molecular Biology, and/or
  - CHEM 5240 Biochemical and Biophysical Methods ........................................... 6+ hours

- Minimum 6 hours from:
  - CHEM 5260 Special Topics in Biochemistry I, and/or
  - CHEM 5270 Special Topics in Biochemistry II, and/or
  - CHEM 5280 Practicum in Biochemistry ......................................................... 6+ hours

Breadth Course Requirement
- Minimum 4 hours CHEM 5XY0 (X≠0 or 2, Y=0-8) ........................................ 4+ hours

Directed Studies/Dissertation Research .................................................... 2+ hours

2 hours minimum CHEM 6980 Research for Doctoral Dissertation.
Up to 9 credits CHEM 5990 Independent Studies. Up to 6 credits CHEM 5960 Directed Readings in Chemistry.

TOTAL ...................................................................................................... 90 hours