DOCTORAL DEGREE REQUIREMENTS

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

DOCTOR *of* PHILOSOPHY D170/R101

MAJOR: Chemistry and Biochemistry **CONCENTRATION:** Chemistry

DISCIPLINARY EMPHASIS: Structural Biology 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:

X = 0 Departmental Requirements; 1 Analytical; 2 Biochemistry; 3 Inorganic; 4 Organic; 5 Physical; 6 Chemical Education; 7 Structural Biology; 8 Unused; 9 Interdisciplinary or custom

Y = 0-2 Introductory Instruction; 3-5 Advanced Instruction; 6-7 Special Topics or Electives; 8 Practicum; 9 Seminar

Z = 0-4 Credit Hours (modules)

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, or
  CHEM 5791 Seminar in Structural Biology ..... 1-12 hours

Continuous enrollment in 5291/5791 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.

- ❑ CHEM 5210 Molecular Biology ..... 2+ hours
- ❑ Minimum 7 hours from:
  CHEM 5730 Macromolecular Crystallography, and/or
  CHEM 5740 Biological NMR Spectroscopy, and/or
  CHEM 5750 Macromolecular Structure and Function, and/or
  CHEM 5780 Practicum in Structural Biology ..... 7+ hours
- ❑ Minimum 3 hours CHEM 5XY0 (Y=6 or 7) ..... 3+ hours

Breadth Course Requirement

- ❑ Minimum 4 hours CHEM 5XY0 (X≠0 or 7, 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**