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: Analytical Chemistry

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**: 5 Physical  
  - 1 Analytical  
  - 2 Biochemistry  
  - 3 Inorganic  
  - 4 Organic

- **Y = 0-2 Introductory Instruction**:  
  - 6 Chemical Education  
  - 7 Structural Biology

- **Z = 0-4 Credit Hours**:  
  - 3-5 Advanced Instruction (modules)  
  - 8 Unused  
  - 9 Interdisciplinary or custom Seminar

- **Z = 0-4 Credit Hours**:  
  - 1-12 hours Practicum

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 5191 Seminar in Analytical Chemistry..................................... 1-12 hours

Continuous enrollment in 5191 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 5100 Instrumental Methods of Analysis, and/or
  - CHEM 5110 Spectroscopic Chemical Analysis, and/or
  - CHEM 5120 Separation Methods.........................................................6+ hours

- Minimum 4 hours from:
  - CHEM 5160 Special Topics in Analytical Chemistry: Instrumentation, and/or
  - CHEM 5170 Special Topics in Analytical Chemistry: Methodology, and/or
  - CHEM 5180 Practicum in Analytical Chemistry.....................................4+ hours

**Breadth Course Requirement**
- Minimum 4 hours CHEM 5XY0 (X≠0 or 1, 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**

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