

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: Chemical Education

Program effective **Fall 2018**

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	Y =	0-2 Introductory Instruction	Z =	0-4 Credit Hours
	1 Analytical	6 Chemical Education		3-5 Advanced Instruction		(modules)
	2 Biochemistry	7 Structural Biology		6-7 Special Topics or Electives		
	3 Inorganic	8 Unused		8 Practicum		
	4 Organic	9 Interdisciplinary or custom		9 Seminar		

COURSEWORK REQUIREMENTS

Department Courses and Seminar Requirements

Continuous enrollment in CHEM 5090 Departmental Colloquium is required (0 credit hours).

<input type="checkbox"/>	CHEM 5001	Practicum in General Chemistry Education	1 hour
<input type="checkbox"/>	CHEM 5011	Fundamentals I	1 hour
<input type="checkbox"/>	CHEM 5021	Fundamentals II	1 hour
<input type="checkbox"/>	CHEM 5080	Laboratory Rotations	2 hours
	Total		5 hours

Focus Area/Breadth Course Requirements

<input type="checkbox"/>	Minimum of 2 credit hours in letter-graded courses in the CHEM course inventory at the 5XYZ level (X=1-5, 7, 9, Y=0-2)	2+ hours
<input type="checkbox"/>	EDSC 5513 Teaching Science in Secondary Schools.....	3 hours
<input type="checkbox"/>	EDSC 5523 The Science of Learning Theories, or EDSC 6333 Research Paradigms for Scientific Investigations	3 hours
<input type="checkbox"/>	EIPT 5023 Analysis of Quantitative Data I	3 hours
<input type="checkbox"/>	EIPT 6043 Qualitative Research Methods	3 hours
<input type="checkbox"/>	EIPT 6223 Mixed Methods Research	3 hours
	<i>Breadth Course Requirement</i>	
<input type="checkbox"/>	Minimum 4 hours CHEM 5XY0 (X≠0 or 5, Y=3-8)	4+ hours
	Total	21+ hours

<input type="checkbox"/>	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.	

<input type="checkbox"/>	TOTAL	90 hours
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