## Requirements for the Doctor of Philosophy

**Dodge College of Arts and Sciences**  
**The University of Oklahoma**

### General Requirements

For Students Entering the Oklahoma State System for Higher Education  
Summer 2023 through Spring 2024

Minimum Total Hours .................................................. 90

## Program Requirements

- Continuous enrollment in CHEM 5090 Departmental Colloquium is required for all Doctoral students.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 5011</td>
<td>Fundamentals I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 5021</td>
<td>Fundamentals II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 5080</td>
<td>Laboratory Rotations</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 5491</td>
<td>Seminar in Organic Chemistry (Continuous enrollment, up to 12 credit hours, is required after the first semester)</td>
<td>1-12</td>
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</tbody>
</table>

### Core Courses

At least 6 hours from the following:

- CHEM 5400 Organic Chemistry I: Mechanisms and Reactivity (2 hours)
- CHEM 5430 Organic Chemistry II: Reactions and Synthesis (2-3 hours)
- CHEM 5460 Special Topics in Chemical Reactivity and Physical Organic Chemistry (1-3 hours)

### Dissertation Research

CHEM 6980 Research for Doctoral Dissertation (minimum 2 credits)  
2

### Elective Coursework

Electives as approved by doctoral advisory committee to bring student to 90 post-baccalaureate hours. This may include up to 9 credits of CHEM 5990, Independent Study or up to 6 credits CHEM 5960, Directed Readings in Chemistry.  
66-77

### Total Credit Hours

90

1 The total number of letter-graded hours of Core and Electives combined must total at least 16 hours.  
The additional coursework may include other concentrations in CHEM; out-of-department coursework; or transfer credits from an accredited college or university.  
At least 1 course (2 credit hours) must come from within the department (CHEM), but from a concentration outside the student’s core courses.