# CHEMICAL ENGINEERING, PHD

**Requirements for Students Matriculating in or before Academic Year 2023-2024.** Learn more about Graduate College Academic Regulation 7.0 ([http://catalog.okstate.edu/graduate-college/#70](http://catalog.okstate.edu/graduate-college/#70)).

**Total Hours:** 60 (Beyond the Bachelor's Degree)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 5123</td>
<td>Advanced Chemical Reaction Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CHE 5213</td>
<td>Advanced Transport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>CHE 5743</td>
<td>Chemical Engineering Process Modeling</td>
<td>3</td>
</tr>
<tr>
<td>CHE 5843</td>
<td>Principles of Chemical Engineering Thermodynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

Two hours from:

- CHE 5302 | Introduction to Science and Engineering Research     |
- OR
- CHE 5303 | Introduction to Science and Engineering Research     |

**Hours Subtotal:** 14

**Seminar**

- Seven hours from:
  - CHE 6010 | Chemical Engineering Seminar                        | 7     |

**Hours Subtotal:** 7

**Electives**

- Approved elective (CHE or other) courses, selected by the student, with approval of the student’s advisory committee.  

**Suggested Elective Courses**

- CHE 5073 | Tissue Engineering                                  |
- CHE 5133 | Catalysis and Photocatalysis                        |
- CHE 5283 | Advanced Bioprocess Engineering                     |
- CHE 5293 | Advanced Biomedical Engineering                     |
- CHE 5323 | Electrochemical Engineering                         |
- CHE 5373 | Process Simulation                                  |
- CHE 5493 | Molecular Modeling and Simulation                    |
- CHE 5523 | Colloid Processing                                  |
- CHE 5603 | Membrane Separations                                |
- CHE 5753 | Applied Numerical Computing for Scientists and Engineers |
- CHE 5273 | Basic Physiology and Physiological System Analysis for Engineers |

**Hours Subtotal:** 15

**Thesis**

- CHE 6000 | Doctoral Thesis                                    | 17    |

**Hours Subtotal:** 17

**Total Hours:** 30 (Beyond the Master's Degree, 60 hours on the Plan of Study)

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**Requirements for Students Matriculating in or before Academic Year 2014-2015.** Learn more about Graduate College Academic Regulation 7.0 ([http://catalog.okstate.edu/graduate-college/#70](http://catalog.okstate.edu/graduate-college/#70)).

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Two hours from:

- CHE 5302 | Introduction to Science and Engineering Research     |
- OR
- CHE 5303 | Introduction to Science and Engineering Research     |

**Hours Subtotal:** 14

**Seminar**

- Seven hours from:
  - CHE 6010 | Chemical Engineering Seminar                        | 7     |

**Hours Subtotal:** 7

**Electives**

- Graduate-approved elective (CHE or other) courses, selected by the student, with approval of the student’s advisory committee.  

**Suggested Elective Courses**

- CHE 5073 | Tissue Engineering                                  |
- CHE 5133 | Catalysis and Photocatalysis                        |
- CHE 5283 | Advanced Bioprocess Engineering                     |
- CHE 5293 | Advanced Biomedical Engineering                     |
- CHE 5323 | Electrochemical Engineering                         |
- CHE 5373 | Process Simulation                                  |
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- CHE 5523 | Colloid Processing                                  |
- CHE 5603 | Membrane Separations                                |
- CHE 5753 | Applied Numerical Computing for Scientists and Engineers |
- CHE 5273 | Basic Physiology and Physiological System Analysis for Engineers |

**Hours Subtotal:** 15

**Thesis**

- Sixteen hours from:
  - CHE 6000 | Doctoral Thesis                                    | 16    |

**Hours Subtotal:** 16

**Total Hours:** 42

1 With approval of the student’s advisory committee, additional elective courses may be taken, with a corresponding reduction in required credits in CHE 6000; but the number of CHE credits may be no less than 15.

**Total Hours:** 42 (Beyond the Master's Degree, 60 hours on the Plan of Study)

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2 With at least 18 transfer credit hours, transfer credits must have grades of "B" or better, be less than ten years old at the time of the student’s graduation, and approved by the Graduate Program Advisory Committee.
Graduate College Doctor of Philosophy (PhD) Requirements

Learn more about Graduate College 2023-2024 Doctor of Philosophy (PhD) Degree Program Requirements (http://catalog.okstate.edu/graduate-college/). Check the General Graduate College academic regulations for minimal GPA, language proficiency and other general requirements.