## BIOSYSTEMS ENGINEERING, PHD

**Requirements for Students Matriculating in or before Academic Year 2020-2021.** 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 Hours

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>BAE 5501</td>
<td>Seminar</td>
<td>1</td>
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<tr>
<td>BAE 6101</td>
<td>Teaching Practicum in Biosystems Engineering</td>
<td>1</td>
</tr>
<tr>
<td>Advanced Math (if the student didn't take any advanced math in the Master's program)</td>
<td>3</td>
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</tbody>
</table>

**Hours Subtotal** 5

### Specialization and Dissertation

Combination of Dissertation and Specialization to total 55 hours. 55

### Core Courses (By Specialty Area)

- **Machine Systems**
  - BAE 5413 Advanced Instrumentation and Control Systems for Biological Applications

- **Environment and Natural Resources**
  - BAE 6313 Stochastic Methods in Hydrology
  - BAE 6333 Fluvial Hydraulics
  - BAE 6343 Ground Water Contaminant Transport
  - BAE 6520 Problems in Soil and Water Engineering

- **Bioprocessing and Biotechnology**
  - BAE 5213 Renewable Energy Engineering
  - BAE 5283 Advanced Bioprocess Engineering
  - BAE 5413 Advanced Instrumentation and Control Systems for Biological Applications

- **CHE 5123 Advanced Chemical Reaction Engineering**
- **CHE 5373 Process Simulation**
- **CHE 5743 Chemical Engineering Process Modeling**
- **STAT 5303 Experimental Designs**

### Research and Additional Requirements

- BAE 6000 Doctoral Research and Dissertation

**Hours Subtotal** 55

**Total Hours** 60

1. Prerequisites: BAE 4313 or CIVEN 5843 and STAT 4053.
2. Prerequisites: ENGSC 3233 or equivalent.
3. Prerequisites: AGRON 5583 or CIVEN 5913.
4. Prerequisites: CHEM 1515, BAE 4313 or equivalent.

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**Graduate College Doctor of Philosophy (PhD) Requirements**

Learn more about Graduate College 2020-2021 Doctor of Philosophy (PhD) Degree Program Requirements ([http://catalog.okstate.edu/graduate-college/](http://catalog.okstate.edu/graduate-college/)). Check the General Graduate College academic regulations for minimal GPA, language proficiency and other general requirements.