**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).

**Total Hours:** 60 Hours

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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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>
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<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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**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.

**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/). Check the General Graduate College academic regulations for minimal GPA, language proficiency and other general requirements.