## Photonics, 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 (Beyond the Master’s Degree)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td><strong>Course Requirements</strong> 1</td>
<td>Select 3 hours from Electromagnetics:</td>
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</tr>
<tr>
<td>PHYS 5313</td>
<td>Electromagnetic Theory</td>
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<tr>
<td>ECEN 5613</td>
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<tr>
<td>PHYS 4813</td>
<td>Electromagnetic Radiation</td>
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<td>Select 3 hours from Lasers:</td>
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<tr>
<td>ECEN 4843</td>
<td>Design of Lasers and Systems</td>
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<td>Select 6 hours from Optics:</td>
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<td>PHYS 3213</td>
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<tr>
<td>PHYS 5123</td>
<td>Geometrical Optics</td>
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</tr>
<tr>
<td>or ECEN 5803 Geometrical Optics</td>
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<tr>
<td>PHYS 5303</td>
<td>Physical Optics</td>
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<td>or ECEN 5823 Physical Optics</td>
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<tr>
<td>Select 3 hours from Quantum Mechanics:</td>
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<tr>
<td>PHYS 4513</td>
<td>Introductory Quantum Mechanics</td>
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<td>ECEN 5853</td>
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<td>PHYS 5133</td>
<td>Laser Spectroscopy</td>
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<td>Solid State Physics I</td>
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<td>PHYS 6243</td>
<td>Semiconductors I</td>
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</tr>
<tr>
<td>PHYS 4263</td>
<td>Introduction to Solid State Physics</td>
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<tr>
<td>ECEN 5333</td>
<td>Semiconductor Devices</td>
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<tr>
<td>ECEN 5833</td>
<td>Fiber-Optic Communication Systems</td>
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<tr>
<td>PHYS 4313</td>
<td>Molecular Biophysics 2</td>
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<tr>
<td>PHYS/ECEN 68X0 Photonics Lab courses: Topics Vary (Lab)</td>
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**Hours Subtotal** 30

**Dissertation** 1

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<tr>
<td>PHYS 6000</td>
<td>Doctoral Dissertation Research</td>
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</table>

**Hours Subtotal** 30

**Total Hours** 60

1 Combined Coursework and Dissertation to total 60 hours beyond the Master’s Degree and 72 hours beyond the Bachelor’s Degree.

2 For students pursuing the bio/nano photonics option, additional courses from departments other than ECEN and PHYS may be included.

**Total Hours:** 72 Hours (Beyond the Bachelor’s Degree)

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**Hours Subtotal** 42

**Dissertation** 1

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<tr>
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**Hours Subtotal** 42

**Total Hours** 72

1 Combined Coursework and Dissertation to total 60 hours beyond the Master’s Degree and 72 hours beyond the Bachelor’s Degree.
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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/). Check the General Graduate College academic regulations for minimal GPA, language proficiency and other general requirements.