Master of Engineering in Photonics (MEng PS) students must take 32 credits (500-level or above). The specific coursework requirements for the MEng PS degree are as follows: at least 24 credits must be structured coursework in ECE; 16 credits (4 courses) must be taken in one of the ECE concentration areas listed below. In addition, students also need to satisfy the advanced technical course requirement by taking at least two 700-level ECE courses. Students may take 4 credits of 900-level coursework (project, research, or directed study); 900-level credit may count towards the concentration requirement but not as an advanced technical elective. The remainder of the 32-credit requirement may be met through graduate technical electives, which include all courses at the 500-level or above in ENG, as well as courses in the following CAS departments: astronomy, biology, chemistry, cognitive and neural systems, computer science, mathematics, and physics (CAS courses require advisor approval and an approved petition). Note: Students are encouraged to explore graduate technical electives that embrace technical project management, entrepreneurship, or leadership development; some of these courses include: ENG EC 516 Project Management for Software-Intensive Systems, ENG EK 730 Technology Commercialization, ENG ME 502 Intellectual Assets: Creation, Protection, and Commercialization, ENG ME 525 Technology Ventures, GSM SI 851 Entrepreneurship, GSM SI 852 Starting New Ventures, GSM SI 853 Entrepreneurial Management.

MEng PS students must maintain a cumulative GPA of 3.00 to remain in good academic standing. All graduate courses taken are calculated into the student's GPA. Grades of "C-" or lower are not acceptable for the MEng PS degree. Up to 8 credits of coursework may be transferred from other approved graduate schools.

### Program Form

<table>
<thead>
<tr>
<th>Concentration Area</th>
<th>Course</th>
<th>Semester/Year</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses (Select four courses from one of the concentration areas below)</td>
<td>Course</td>
<td>Semester/Year</td>
<td>Grade</td>
</tr>
<tr>
<td>Advanced Technical Electives (700-level)</td>
<td>Course</td>
<td>Semester/Year</td>
<td>Grade</td>
</tr>
<tr>
<td>Graduate Technical Electives</td>
<td>Course</td>
<td>Semester/Year</td>
<td>Grade</td>
</tr>
</tbody>
</table>

### Concentrations

**Photonic Materials and Devices**
- ENG EC 560 Introduction to Photonics
- ENG EC 570 Lasers
- ENG EC 574 Semiconductor Materials
- ENG EC 575 Semiconductor Devices
- ENG EC 577 Electrical Properties of Materials
- ENG EC 591 Photonics Laboratory I
- ENG EC 760 Advanced Topics in Photonics
- ENG EC 764 Optical Measurement
- ENG EC 770 Guided-Wave Optoelectronics
- ENG EC 771 Comp Semi Devices
- ENG EC 774 Quantum Structures and Devices
- ENG EC 777 Nano-Optics

**Photonic Systems and Applications/Communications**
- ENG EC 515 Digital Communication
- ENG EC 560 Introduction to Photonics
- ENG EC 563 Fiber Optic Communication Systems
- ENG EC 568 Optical Fiber Sensors
- ENG EC 569 Introduction to Subsurface Imaging
- ENG EC 570 Lasers
- ENG EC 720 Biophotonic System Design and Prototyping
- ENG EC 765 Biomedical Optics and Biophotonics
- ENG EC 770 Guided-Wave Optoelectronics