Master of Science in Electrical Engineering (MSEE)

Either a thesis option or a course option may be selected. The special requirements for these options are as follows:

Course Option

The Master of Science in Electrical Engineering is an academic master’s degree designed mainly for both full-time and part-time students interested in proceeding to the departmental full-time doctoral program and/or an industrial career. Under the course option, students may not take ESE 599 Masters Research. With faculty permission, they may take up to 3 units of graduate-level independent study.

Thesis Option

This option is intended for those pursuing full-time study and engaged in research projects. Candidates for this degree must complete a minimum of 24 units of course instruction and 6 units of thesis research (ESE 599); 3 of these units of thesis research may be applied toward the 15 core electrical engineering units required for the MSEE program. Any of these 6 units of thesis research may be applied as electives for the MSEE, MSSSM, and MSDAS programs. The student must write a master’s thesis and defend it in an oral examination.

Degree Requirements

Students pursuing the degree Master of Science in Electrical Engineering (MSEE) must complete a minimum of 30 units of study consistent with the residency and other applicable requirements of Washington University and the McKelvey School of Engineering and subject to the following departmental requirements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESE 415, 513</td>
<td>Optimization category</td>
<td></td>
</tr>
<tr>
<td>ESE 520-529</td>
<td>Applied probability category</td>
<td></td>
</tr>
<tr>
<td>ESE 530-539</td>
<td>Applied physics and electronics category</td>
<td></td>
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<tr>
<td>ESE 540-549</td>
<td>Control category</td>
<td></td>
</tr>
<tr>
<td>ESE 550-559, ESE 5590-5599</td>
<td>Systems category</td>
<td></td>
</tr>
<tr>
<td>ESE 560-569</td>
<td>Computer engineering category</td>
<td></td>
</tr>
<tr>
<td>ESE 570-579</td>
<td>Communications category</td>
<td></td>
</tr>
<tr>
<td>ESE 580-589, ESE 591-596, ESE 5931-5933</td>
<td>Signal and image processing category</td>
<td></td>
</tr>
<tr>
<td>ESE 599</td>
<td>Masters Research (thesis option only)</td>
<td></td>
</tr>
</tbody>
</table>

- Please consult the ESE departmental website for a list of allowable electives.
- At least 15 units of the 30 total units applied toward the MSEE degree must be in ESE courses which, if cross-listed, have ESE as the home department.
- A maximum of 6 credits may be transferred from another institution and applied toward the master’s degree. Regardless of the subject or level, all transfer courses are treated as electives and do not count toward the core requirements for the degree.
- ESE 590 Electrical & Systems Engineering Graduate Seminar must be taken by full-time graduate students each semester. This course is taken with the unsatisfactory/satisfactory grade option.
- The degree program must be consistent with the residency and other applicable requirements of Washington University and the McKelvey School of Engineering.
- Students must obtain a cumulative grade-point average of at least 3.0 out of a possible 4.0 overall for courses applied toward the degree. Courses that apply for the degree must be taken with the credit/letter grade option.