GRADUATE CERTIFICATE IN SOFTWARE ENGINEERING

For more information, including advice on how to apply and obtain the certificate, please visit the department’s website (https://cs.sfsu.edu/graduate-program/graduate-certificates).

Program Learning Outcomes

1. Learn modern software engineering technologies used to develop, test, deploy, and manage software (SW) applications.

2. Learn best practices of modern software engineering processes and organization including those applicable to global (distributed) organization of SW projects.

3. Learn to apply modern tools for team-based SW development.

4. Learn to apply best practices of effective SE teamwork in locally and globally organized projects.

5. Learn selected advanced SE technologies and topics via elective course offerings.

Graduate Certificate in Software Engineering - 12 units

Core Requirements (6 units)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 847</td>
<td>Cloud and Distributed Computing: Concepts and Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSC 848</td>
<td>Software Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

Core Options (3 units)
Select one:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 780</td>
<td>Application Development for Mobile Devices</td>
<td>3</td>
</tr>
<tr>
<td>CSC 867</td>
<td>Internet Application Design and Development</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective (3 units)
Select one:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 720</td>
<td>Advanced Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>CSC 746</td>
<td>High-Performance Computing</td>
<td>3</td>
</tr>
<tr>
<td>CSC 840</td>
<td>Software Metrics and Quality Assurance</td>
<td>3</td>
</tr>
<tr>
<td>CSC 841</td>
<td>Computer Performance Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>CSC 842</td>
<td>Human-Computer Interaction</td>
<td>3</td>
</tr>
<tr>
<td>CSC 846</td>
<td>Systems Architecture</td>
<td>3</td>
</tr>
<tr>
<td>CSC 847</td>
<td>Cloud and Distributed Computing: Concepts and Applications</td>
<td>3</td>
</tr>
<tr>
<td>CSC 849</td>
<td>Search Engines</td>
<td>3</td>
</tr>
<tr>
<td>CSC 868</td>
<td>Advanced Object Oriented Software Design and Development</td>
<td>3</td>
</tr>
<tr>
<td>CSC 874</td>
<td>Topics in Big Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CSC 899</td>
<td>Independent Study</td>
<td>3</td>
</tr>
</tbody>
</table>