Through the completion of the Systems Engineering Certification, you will learn to define customer needs early in the development cycle; document requirements; and proceed with design synthesis and system validation, while considering the complete problem. This specialized certificate consists of four online courses and a capstone experience offered by the department of industrial engineering at the Ira A. Fulton Schools of Engineering.

**Systems Engineering Certification**

During the W. P. Carey MBA, you will take five courses in a lock-step (sequential) format as outlined below. These courses are applicable to the MEng degree and also make up your MBA elective requirements. Each semester, the Schools of Engineering will determine which classes you will register for.

<table>
<thead>
<tr>
<th>Year One</th>
<th>Fall</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CSE 591 – Software Engineering Principles</td>
<td>CSE 566 – Software Project, Process and Quality Management</td>
<td>CSE 598 – Distributed Software Development</td>
</tr>
<tr>
<td>Year Two</td>
<td>CSE 565 – Software Verification and Validation</td>
<td>CSE 593 – Software Applied Project</td>
<td></td>
</tr>
</tbody>
</table>

Review the most current list of courses offered through the Ira A. Fulton Schools of Engineering. Your MBA electives coordinator will discuss upcoming classes for your schedule prior to each semester.

**Certification Admissions Process**

Once admitted to the program, you should be contacted by the Schools of Engineering with information about your faculty advisor. If you do not hear from them by the start of your program, please contact your MBA electives coordinator. Several weeks before each semester your MBA electives coordinator will let you know when to register for your next certificate course. Courses may vary and are determined by the Fulton Schools of Engineering.

Your electives coordinator will also let you know which materials are required and available in the ASU Bookstore, if any. Material costs are included in your W. P. Carey MBA program fees, so you will not incur out-of-pocket costs for materials.

**More Information**

Octavio Heredia  
Global Outreach and Extended Education  
Ira A. Fulton Schools of Engineering  
(480) 965-9273  
Octavio.Heredia@asu.edu
MBA/MEng Concurrent Degree
Once you have completed the five certification courses, only nine additional credit hours are required (three classes) to complete an MEng and receive a concurrent degree from ASU, working directly with the Schools of Engineering to satisfy additional requirements.

Course options may include:
- IEE 505 - Database Structures
- IEE 530 - Enterprise Modeling
- IEE 545 - Simulating Stochastic Systems
- IEE 552 - Strategic Technology Management (management course meeting MEng requirements)
- IEE 572 - Design of Experiments (math course meeting MEng requirements)
- IEE 574 - Intro to Operations Research
- IEE 512 - Introduction to Financial Engineering
- IEE 598 - Rapid New Product Development
- IEE 598 - Introduction to Systems Engineering
- CSE 563 - Software Requirements and Specifications
- CSE 566 - Software Project, Process and Quality Management
- CSE 591 - Modeling and Simulation Theory and Application
- CSE 598 - Software Analysis and Design
- EEE 581 - Filtering of Stochastic Processes
- EEE 582 - Linear System Theory
- EEE 585 - Digital Control Systems
- EEE 586 - Nonlinear Control Systems
- EEE 587 - Optimal Control Systems

Courses are subject to availability and may not be offered each semester. Discuss your schedule with your Engineering faculty advisor to determine the best courses.

Program Costs
Please contact your admissions advisor to review current tuition and fees associated with certification courses and the MBA/MEng concurrent degree.