# Master of Science and Post-Baccalaureate Certificate: Systems Engineering Academic Planning Form

### General Information

**Student Name:**

**Program Advisor:** Tom Moore, Ph.D., 410-455-3617 | mooretg@umbc.edu

**Admission Date:**

**Projected Graduation Date:**

**NOTE:** This form serves as unofficial guidance in planning your program. In coordination with the Program Director you may edit or modify your desired courses (where possible & appropriate) at any point while at UMBC.

### Academic Plans and Record (Program requires 10 courses, 30 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Title</th>
<th>Semester Planned/Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENEE 660</td>
<td>Systems Engineering Principles</td>
<td></td>
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<tr>
<td>ENEE 661</td>
<td>System Architecture and Design</td>
<td></td>
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<tr>
<td>ENEE 669 (1 credit)</td>
<td>Mathematics and MATLAB Fundamentals for Engineers</td>
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<tr>
<td>prerequisite for ENEE 662</td>
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<tr>
<td>ENEE 662</td>
<td>System Modeling, Simulation and Analysis</td>
<td></td>
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<tr>
<td>ENEE 663</td>
<td>System Implementation, Integration and Test</td>
<td></td>
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<tr>
<td>ENEE 670</td>
<td>Systems Engineering Project</td>
<td></td>
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</tbody>
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**SYSTEMS ENGINEERING BREADTH AND DEPTH ELECTIVES (15 CREDITS)**

**Systems Engineering Breadth - (Up to 9 credits) - Choose up to three courses from a range of engineering management cybersecurity and related courses. Some suggestions are listed below.**

- ENMG 652 Management, Leadership, and Communication
- ENMG 668 Project and Systems Engineering Management
- ENMG 664* Quality Engineering and Management
- CYBR 620* Introduction to Cybersecurity
- CYBR 621 Cyber Warfare

**Systems Engineering Depth - (At least 6 credits) - Choose at least two courses from the following fields: Systems Engineering, Electrical Engineering, Computer Engineering, Computer Science, Mechanical Engineering or other related fields with permission of program director. Some suggestions are listed below.**

- ENEE 664 Advanced Systems Architecture
- ENEE 666 Architecting Security
- ENEE 667 (2 credits) Advanced Systems Engineering Processes
- ENEE 672* Decision and Risk Analysis
- CMPE 685 Principles of Communication Networks
- CMPE 687 Introduction to Network Security
- CMPE 691 Wireless Sensor Networks
- CMSC 626 Principles of Computer Security

* *Course can be counted as breadth or depth course.*

**Special Note:** For more details on SE courses, please visit: umbc.edu/se/course_descriptions

**Note:** The Graduate School has a “continuous registration” policy which states you must register each fall and spring semester until you have completed your program of study. If you do not register you are automatically placed on a Leave of Absence (LOA). After three consecutive semesters of LOA, your student account will be discontinued. You may have to reapply to the Graduate School to be reinstated.