

# SYSTEMS ENGINEERING, POST-BACCALAUREATE CERTIFICATE (P.B.C.)

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## 12 credits required

All Graduate Certificate in Engineering Programs consist of 4 courses/12 credits. All students are expected to complete a preliminary course plan for their intended degree program. Degree planning worksheets can be found here: <https://mage.umd.edu/degree-planning-sheets> (<https://mage.umd.edu/degree-planning-sheets/>)

| Course                                    | Title                                                              | Credits   |
|-------------------------------------------|--------------------------------------------------------------------|-----------|
| Systems Core Courses (Required):          |                                                                    | 9         |
| ENSE621                                   | Systems Engineering Concepts and Processes: A Model-Based Approach |           |
| ENSE622                                   | System Trade-off Analysis, Modeling, and Simulation                |           |
| ENSE623                                   | System Development, Verification, and Validation                   |           |
| Systems Technical Electives (Choose One): |                                                                    | 3         |
| ENSE624                                   | Human Factors in Systems Engineering                               |           |
| ENSE626                                   | System Life Cycle Analysis and Risk Management                     |           |
| <b>Total Credits</b>                      |                                                                    | <b>12</b> |