

**Five Year BS/MS Programs in SEAS
Leading to the BS Degrees in either Civil, Computer, Electrical,
Mechanical, Systems Engineering or Computer Science and
the MS Degree in Engineering Management**

Concept: Students will take 3 graduate level courses in EMSE as technical electives during their undergraduate programs. These will be applied towards the MS degree. After completing the BS degree, students will take 9 courses to complete the program. These 9 courses must be completed within one and one half years after graduation from the BS program. This is an accelerated program intended for full time on campus students.

During the undergraduate program, students will be required to take the following 3 courses:

EMSE 6001 The Management of Technical Organizations
EMSE 6005 Organizational Behavior for the Engineering Manager
EMSE 6020 Decision Making with Uncertainty

Then in the Summer, Fall and Spring Semester following the completion of the BS degree, students will make their schedules so as to include the following courses:

Two Additional Core Course Requirements:

EMSE 6410 Survey of Finance and Engineering Economics*
EMSE 6801 Systems Engineering I

Two Additional Focus Course Requirements:

EMSE 6820 Program and Project Management
EMSE 6099 Problems in Engineering Management and Systems Engineering**

Five Additional Approved Electives, at least three from the following list:

EMSE 6014 Management of Engineering Contracts
EMSE 6010 The Human Resources Function for Engineering Managers
EMSE 6018 Engineering Law
EMSE 6070 Management of Research and Development
EMSE 6430 Finance for Engineers
EMSE 6505 Knowledge Management I
EMSE 6760 Discrete Systems Simulation
EMSE 6805 Systems Engineering II
EMSE 6023 Technology Issue Analysis
EMSE 6026 Technical Enterprises
EMSE 6035 Marketing of Technology I
EMSE 6030 Technological Forecasting and Management
EMSE 6992 Special Topics (as approved by advisor)

*Undergraduate Systems Engineering majors may substitute a course for EMSE 6410

* Must be taken in the final semester of study

**Five Year BS/MS Programs in SEAS
Leading to the BS Degrees in either Civil, Computer, Electrical,
Mechanical, or Computer Science and
the MS Degree in Systems Engineering**

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During the undergraduate program, students will be required to take the following 3 courses:

EMSE 6801 Systems Engineering I
EMSE 6410 Survey of Finance and Engineering Economics
EMSE 6820 Program and Project Management

Then in the Summer, Fall and Spring Semester following the completion of the BS degree, students will make their schedules so as to include the following courses:

Two Additional Core Course Requirements:

EMSE 6001 The Management of Technical Organizations
EMSE 6020 Decision Making with Uncertainty

Four Additional Focus Course Requirements:

EMSE 6850 Quantitative Models in Systems Engineering
EMSE 6805 Systems Engineering II
EMSE 6810 Systems Analysis and Management I
EMSE 6099 Problems in Engineering Management and Systems Engineering

Three Additional Approved electives, at least two from the following list:

EMSE 6540 Management of Information and Systems Security
EMSE 6740 Systems Thinking and Policy Modeling I
EMSE 6580 Information and Software Engineering
EMSE 6825 Project Cost and Quality Management
EMSE 6830 Human Factors Engineering
EMSE 6840 Applied Enterprise Systems Engineering
EMSE 6855 Reliability Analysis and Infrastructure Systems
EMSE 6023 Technology Issue Analysis
EMSE 6992 Special Topics (as approved by advisor)

Note that this program is not offered for students in the BS in Systems Engineering Program.