M.S. in Engineering Management

Degree Requirements

Students who lack appropriate academic preparation may be required to take bridge courses in the areas of statistics, cost analysis and engineering economics.

The program requires 30 credits, 18 of which are taken in a required core. A purpose of the core is to provide knowledge in the functional areas that are the cornerstones of the discipline: organization and people management, cost management, and systems management. The remaining 12 credits are elective courses, which may be within an area of specialization to meet the individual's specific professional and personal objectives. A 3-credit project or a 6-credit thesis are optional electives. In some cases, students may select courses to enhance their technical competency. In other cases, individuals may select courses to prepare for a change in responsibilities or job function. At least half of the elective courses must be selected from those having an IE or EM prefix.

M.S. in Engineering Management (courses only)

Code	Title	Credits
Core Courses		
ACCT 615	Management Accounting	3
EM 602	Management Science	3
EM 636	Project Management	3
HRM 601	Managing Organizational Behavior in Technology-Based Organizations	3
IE 673	Total Quality Management	3
MIS 645	Information Technology and Competitive Advantage	3
Electives [1]		
Select four of the following:		12
EM 634	Legal, Ethical and Intellectual Property Issues for Engineering Managers	
EM 637	Project Control	
EM 691	Cost Estimating for Capital Projects	
IE 651	Industrial Simulation	
IE 659	Supply Chain Engineering	
IE 618	Engineering Cost and Production Economics	
IE 621	Systems Analysis and Simulation	
EM 640	Distribution Logistics	
EM 641	Engineering Procurement and Materials Management	
EM 674	Benchmarking and Quality Function Deployment	
IE 605	Engineering Reliability	
IE 672	Industrial Quality Control	
MNE 654	Design for Manufacturability	
EM 632	Legal Aspects in Construction	
IE 653	Facility Maintenance	
MNE 601	Computerized Manufacturing Systems	
MNE 602	Flexible and Computer Integrated Manufacturing	
MNE 655	Concurrent Engineering	
EM 655	Management Aspects of Information Systems	
IE 661	Man-Machine Systems	
EM 635	Management of Engineering Research and Development	
EM 631	Legal Aspects in Environmental Engineering	
Total Credits		**30**

1 School of Management courses with a FIN, MRKT, MIS, HRM or MGMT prefix may be taken as electives

M.S. in Engineering Management (Master's project)

Code	Title	Credits
Core Courses		
ACCT 615	Management Accounting	3
EM 602	Management Science	3
EM 636	Project Management	3
HRM 601	Managing Organizational Behavior in Technology-Based Organizations	3
IE 673	Total Quality Management	3
MIS 645	Information Technology and Competitive Advantage	3
Project		
EM 700B	Master's Project	3
Electives [1]		
Select three of the following:		9
EM 634	Legal, Ethical and Intellectual Property Issues for Engineering Managers	
EM 637	Project Control	
EM 691	Cost Estimating for Capital Projects	
IE 651	Industrial Simulation	
IE 659	Supply Chain Engineering	
EM 632	Legal Aspects in Construction	
IE 618	Engineering Cost and Production Economics	
IE 621	Systems Analysis and Simulation	
EM 640	Distribution Logistics	
EM 641	Engineering Procurement and Materials Management	
EM 674	Benchmarking and Quality Function Deployment	
IE 605	Engineering Reliability	
IE 672	Industrial Quality Control	
MNE 654	Design for Manufacturability	
IE 653	Facility Maintenance	
MNE 601	Computerized Manufacturing Systems	
MNE 602	Flexible and Computer Integrated Manufacturing	
MNE 655	Concurrent Engineering	
EM 655	Management Aspects of Information Systems	
IE 661	Man-Machine Systems	
EM 635	Management of Engineering Research and Development	
EM 631	Legal Aspects in Environmental Engineering	
Total Credits		**30**

1 School of Management courses with a FIN, MRKT, MIS, HRM or MGMT prefix may be taken as electives

M.S. in Engineering Management (Master's thesis)

Code	Title	Credits
Core Courses		
ACCT 615	Management Accounting	3
EM 602	Management Science	3
EM 636	Project Management	3
HRM 601	Managing Organizational Behavior in Technology-Based Organizations	3
IE 673	Total Quality Management	3
MIS 645	Information Technology and Competitive Advantage	3
Thesis		
EM 701B & 701B	Master's Thesis and Master's Thesis	6
or EM 701C	Master's Thesis	

Electives [1]		
Select two of the following:		6
EM 634	Legal, Ethical and Intellectual Property Issues for Engineering Managers	
EM 637	Project Control	
EM 691	Cost Estimating for Capital Projects	
IE 651	Industrial Simulation	
IE 659	Supply Chain Engineering	
EM 632	Legal Aspects in Construction	
IE 618	Engineering Cost and Production Economics	
IE 621	Systems Analysis and Simulation	
EM 640	Distribution Logistics	
EM 641	Engineering Procurement and Materials Management	
EM 674	Benchmarking and Quality Function Deployment	
IE 605	Engineering Reliability	
IE 672	Industrial Quality Control	
MNE 654	Design for Manufacturability	
IE 653	Facility Maintenance	
MNE 601	Computerized Manufacturing Systems	
MNE 602	Flexible and Computer Integrated Manufacturing	
MNE 655	Concurrent Engineering	
EM 655	Management Aspects of Information Systems	
IE 661	Man-Machine Systems	
EM 635	Management of Engineering Research and Development	
EM 631	Legal Aspects in Environmental Engineering	
Total Credits		**30**

1 School of Management courses with a FIN, MRKT, MIS, HRM or MGMT prefix may be taken as electives

Students may also have graduate courses in their undergraduate engineering degree or other technical discipline.