Master of Science in Engineering Management

Engineering Management Graduate Program

KU Edwards Campus

The Engineering Management M.S. program provides superior graduate education for technical managers from engineering, science, mathematics, and computer science. EMGT graduates are more effective managers in technology-based organizations and are better able to promote entrepreneurial activities for new businesses.

The EMGT program integrates management with technology by focusing on 3 dimensions:

1. Technical: an understanding of and proficiency in engineering and science.
2. Human: the ability to build a collaborative effort within a group.
3. Conceptual: the ability to apply analytical thought to the management process and to the enterprise as a total system.

The EMGT program offers these emphasis areas: consulting engineering services, manufacturing/process engineering and systems and information technology.

Courses are taught on weekday evenings or Saturdays on the KU Edwards Campus by Graduate Faculty members of the School of Engineering. All courses are available by e-learning.

Graduate Admission

KU Edwards Campus

For admission to KU’s Master of Science in Engineering Management program, applicants must have:

1. Bachelor of Science undergraduate degree in engineering or related science from an accredited institution. Technology degrees are considered only with a very high (e.g. 3.8) GPA and substantial experience (8-10 years).
2. A 3.0 or higher undergraduate grade point average (on a 4.0 scale). Admission may be granted on a provisional basis if an applicant’s GPA is between 2.50 and 2.99.
3. Two years full-time, post-undergraduate work experience in a technological environment.
4. International students must also meet the English requirement by taking either the Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS) or have a degree from an English speaking institution. Financial support requirements must also be met.

Engineering Management (EMGT) does not require the GRE or GMAT.

A completed application includes the application fee, application form, résumé, 1 original transcript, and 3 recommendation forms. International students must also meet English and financial requirements. Course schedules, faculty biographical information, and other program information may be requested from the EMGT office or downloaded from the program’s website.

Admissions Information & Deadline

Our program priority deadlines for admission are:

Fall Admission: December 15 (all applicants)
Spring Admission: September 30 (all applicants)

*The department will accept applications after the priority deadline, but those applicants will not be considered for additional funding options. Graduate applications should be submitted online (http://www.graduate.ku.edu).

International students and students who indicated English as a second language, are required to show proof of English proficiency for admission purposes and must check-in at the Applied English Center (http://www.aec.ku.edu) upon arrival on campus for orientation. This process serves to confirm each student’s level of English proficiency and determine whether English courses will be included as a requirement of the student’s academic program. Note: Students who demonstrate English proficiency at the waiver level or who have earned a degree from one of the specified English-speaking countries listed in the policy (http://policy.ku.edu/graduate-studies/english-proficiency-international-students) are not required to check-in at the AEC (see eligibility requirements on the Graduate Studies website (https://graduate.ku.edu/english-proficiency-requirements)).

M.S. Degree Requirements

KU Edwards Campus

The Master of Science program in Engineering Management has two options available:

Option A requires 30 hours of credits (21 credits in required core courses, 6 credits in electives and a field project of 3 hours) with a final oral examination. This option is recommended for students who plan to pursue additional degrees or who have a specific work-related project that needs further exploration.

Option B requires 34 hours of credits (22 credits in required core courses and 12 credits in elective courses) with an oral examination. It does not require a field project.

Option A (Field project) Research Option - TOTAL 30 CREDITS

Required Core Courses including the Field Project - 24 Credits

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMGT 802</td>
<td>Statistical Analysis and Prediction of Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 806</td>
<td>Finance for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>EMGT 809</td>
<td>Personal Development for the Engineering Manager</td>
<td>4</td>
</tr>
<tr>
<td>EMGT 821</td>
<td>Strategic Analysis of Technology Projects (prerequisite: EMGT 806)</td>
<td>3</td>
</tr>
</tbody>
</table>
### Master of Science in Engineering Management

**EMGT 830**  
Case Studies in Engineering Management  
(prerequisite: complete 21 credits hours)  
2

Select one of the following for Core Quantitative Course Requirement:  
- **EMGT 810** Applications of Quantitative Analysis in Decision Making  
- **EMGT 811** Engineering Systems Simulation

Select one of the following for Core Project Management Course Requirement:  
- **EMGT 813** Design Project Management in Professional Practice  
- **EMGT 823** Management of Internal Engineering Projects

Capstone:  
- **EMGT 835** Field Project (M.S.) (prerequisite: complete XX number of hours)  
3

Total Hours 24

### Required Electives (6 credits)

**Option B: Non-Research Option - TOTAL 34 CREDITS**

**Required Core Courses - 22 Credits**

- **EMGT 806** Finance for Engineers  
  3
- **EMGT 809** Personal Development for the Engineering Manager  
  4
- **EMGT 821** Strategic Analysis of Technology Projects  
  (prerequisite: EMGT 806)  
  3

Select one of the following for Core Quantitative Course Requirement:  
- **EMGT 810** Applications of Quantitative Analysis in Decision Making  
- **EMGT 811** Engineering Systems Simulation

Select one of the following for Core Project Management/Leadership Course Requirement:  
- **EMGT 801** Management Theory and Practice for Engineering Managers  
- **EMGT 814** Leadership Techniques and Methods for the Engineering Manager

Select one of the following for Core Project Management Course Requirement:  
- **EMGT 813** Design Project Management in Professional Practice  
- **EMGT 823** Management of Internal Engineering Projects

Capstone:  
- **EMGT 830** Case Studies in Engineering Management  
  (prerequisite xx number of hours)  
  3

Total Hours 22

### Required Electives (12 credits)

**Electives**

All elective courses outside of the EMGT program must be listed as graduate courses, taken for graduate credit, and approved by an EMGT faculty member in order to apply toward the Master of Science in

### Engineering Management degree. Approved EMGT elective courses are listed below:

- **EMGT 801** Management Theory and Practice for Engineering Managers  
  3
- **EMGT 802** Statistical Analysis and Prediction of Engineering Systems  
  3
- **EMGT 803** Technological Forecasting and Assessment  
  3
- **EMGT 804** Business Development and Marketing of Professional Services  
  3
- **EMGT 805** Management of Innovation  
  3
- **EMGT 807** Labor and Employee Relations for the Engineering Manager  
  3
- **EMGT 808** Quality Management  
  3
- **EMGT 812** Law and the Design Professional  
  3
- **EMGT 814** Leadership Techniques and Methods for the Engineering Manager  
  3
- **EMGT 815** Business Relationships and Selling Skills  
  3
- **EMGT 816** Energy Management  
  3
- **EMGT 817** Mathematics for the Engineering Manager  
  3
- **EMGT 818** Advanced Mathematics for the Engineering Manager  
  2
- **EMGT 824** Product Marketing for Engineering Managers  
  3
- **EMGT 840** Systems Approach to Engineering  
  3
- **EMGT 850** Environmental Issues for Engineering Managers  
  3
- **EMGT 860** Special Problems in Engineering Management  
  1-4
- **EMGT 862** Manufacturing Systems Integration  
  3
- **EMGT 867** Advanced Operations Management  
  3