

# Engineering Management

College of Engineering and Mines  
Department of Civil and Environmental Engineering  
(907) 474-6121  
[www.uaf.edu/esm/](http://www.uaf.edu/esm/)

## M.S. Degree

Minimum Requirements for Degree: 30 credits

The engineering management program is designed for graduate engineers who will hold executive or managerial positions in engineering, construction, industrial or governmental organizations. The program includes human relations, financial, economic, quantitative, technical and legal subjects useful in solving problems of management.

### Graduate Program—M.S. Degree

1. Complete the following admission requirements and recommendations:
  - a. Complete a bachelor's degree in an engineering discipline.
  - b. On-the-job experience in engineering is recommended.
2. Complete the general university requirements (page 168).
3. Complete the master's degree requirements (page 172).
4. Present project reports which provide comprehensive analysis and propose solutions to a situation in an engineering or scientific management setting. Pass an oral comprehensive examination.
5. Complete courses from the four main engineering management subject areas as follows:
  - a. Human Element (2 courses required)  
ESM 601—Managing and Leading Engineering Organizations ..... 3  
BA 607—Human Resources Management..... 3
  - b. Project Management (2 courses required)  
ESM 609—Project Management (3)  
ESM 608—Legal Principles for Engineering Management (3)  
CE 620—Civil Engineering Construction (3) ..... 6
  - c. Quantitative Methods (1 course required)  
ESM 622—Engineering Decisions (3)  
or ESM 620—Statistics for ESM (3)  
or ESM 621—Operations Research (3)..... 3
  - d. Financial (2 courses required)  
ACCT 602—Accounting for Managers ..... 3  
ESM 605—Engineering Economic Analysis\* ..... 3
6. Complete the following:  
ESM 684—Engineering/Science Management Project ..... 3
7. Minimum credits required .....30

\* May be waived with prior undergraduate engineering economics course.

Note: Balance of credits may be managerial or technical electives as approved by the student's graduate advisory committee.

See Arctic Engineering.

See Civil Engineering.

See Engineering for Ph.D. program.

See Science Management.

See Environmental Engineering and Environmental Quality Science.

Note: Page numbers refer to the UAF 2005-2006 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).