

# Science Management

College of Natural Science and Mathematics  
Department of Civil and Environmental Engineering  
(907) 474-6121  
www.uaf.edu/esm/

## M.S. Degree

Minimum Requirements for Degree: 30 credits

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

### Graduate Program—M.S. Degree

1. Complete the following admission requirements:
  - a. Complete a bachelor's degree in a scientific field.
  - b. On-the-job professional experience is recommended.
2. Complete the general university requirements (page 176).
3. Complete the master's degree requirements (page 180).
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 (two courses required)  
ESM 601—Managing and Leading Engineering Organizations ..... 3  
BA 607—Human Resources Management..... 3
  - b. Project Management (two 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 (one course required)  
ESM 622—Engineering Decisions (3)  
or ESM 620—Statistics for ESM (3)  
or ESM 621—Operations Research (3)..... 3
  - d. Financial (two 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

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

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

See Arctic Engineering.

See Civil Engineering for Ph.D. program.

See Engineering for Ph.D. program.

See Engineering Management.

See Environmental Engineering and Environmental Quality Science.

*Note: Page numbers refer to the UAF 2006-2007 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).*