

# SCIENCE MANAGEMENT

College of Engineering and Mines  
Department of Civil and Environmental Engineering  
907-474-7694  
[www.uaf.edu/esm/](http://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 202).
3. Complete the master's degree requirements (page 206).
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 F601—Managing and Leading Engineering Organizations ..... 3
      - BA F607—Human Resources Management ..... 3
    - b. Project Management (two courses required)
      - ESM F609—Project Management (3)
      - ESM F608—Legal Principles for Engineering Management (3)
      - CE F620—Civil Engineering Construction (3)..... 6
    - c. Quantitative Methods (one course required)
      - ESM F622—Engineering Decisions (3)
      - or ESM F620—Statistics for ESM (3)
      - or ESM F621—Operations Research (3) ..... 3
    - d. Financial (two courses required)
      - ACCT F602—Accounting for Managers ..... 3
      - ESM F605—Engineering Economic Analysis\* ..... 3
  6. Complete the following:
    - ESM F684—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 Engineering for Ph.D. program.  
See Engineering Management.  
See Environmental Engineering and Environmental Quality Science.