

ENGINEERING MANAGEMENT AND SCIENCE MANAGEMENT

University Center, UC 153 (907) 786-1924
www.uaa.alaska.edu/espm

The Engineering Management and Science Management curriculum is designed for graduate engineers and 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 problems of management.

MASTER OF SCIENCE, ENGINEERING MANAGEMENT

MASTER OF SCIENCE, SCIENCE MANAGEMENT

ADMISSION REQUIREMENTS

Students who are working toward the Master of Science in Engineering Management must hold a Bachelor of Science or Master of Science in an engineering discipline. Students enrolling in the Master of Science in Science Management must hold a Bachelor of Science or Master of Science in a scientific field. Students are expected to be proficient in the use of computers for word processing, spreadsheet analysis, and scientific calculations. A candidate should have had on-the-job experience in engineering or science.

GRADUATION REQUIREMENTS

Students must earn a 3.00 GPA in graduate courses that are part of the program. No course included in the credits of a student's program may be counted toward another degree. A student may not repeat a course that is part of their program if they have received a "C" or better in that course.

Students who have not successfully completed an engineering economy course as undergraduates or in other graduate work must include either ESM A605 or ESM A606 in their academic programs.

PROGRAM REQUIREMENTS

Note: Substitutions for one or more of the courses listed below may be permitted if similar courses are included in the student's previous academic background. No more than nine (9) semester credits of appropriate graduate-level course work completed at other institutions with a grade of "A" or "B" may be transferred and applied toward the total 30 credits of required and elective courses. Both substitutions and transfer of credit must be approved by the department.

- Complete the following Area requirements:
 - Management Area** (9 credits minimum)
 - ESM A601 Engineers in Organizations 3
 - Choose one course from the following: 3
 - ESM A609 Project Management (3)
 - ESM/
 - BA A617 Technology Management (3)
 - Choose one course from the following: 3
 - ESM A608 Legal Environment for Engineering Management (3)
 - ESM A609 Project Management (3)
 - ESM A613 Management of Technical People (3)

- ESM/
- BA A617 Technology Management (3)
- ESM/
- BA A623 Total Quality Management (3)
- ESM/
- BA A625 Marketing of Business Products and Services (3)

Fiscal Area (6 credits minimum)

- Complete two of the following courses: 6
- ESM A605 Engineering Economy (3)
- ESM A606 Advanced Engineering Economy (3)
- ESM A610 Cost Estimating (3)

Quantitative Area (6 credits minimum)

- Choose one course from the following: 3
- ESM A620 Statistics for ESM (3)
- ESM A621 Operations Research (3)
- Choose one course from the following: 3
- ESM/
- BA A619 Computer Simulation of Systems (3)
- ESM A620 Statistics for ESM (3)
- ESM A621 Operations Research (3)
- ESM A622 Management Decisions Under Uncertainty (3)

- To register for ESM A684 or ESM A699 students must have a 3.0 GPA or better in courses listed on their official graduate studies plans:

Non-Thesis Option

Complete ESM A684 and six (6) credits of electives in the student's technical specialty and/or additional courses in A, B, or C above. Electives must have the approval of the department and may include advanced courses in computer science.

Thesis Option

Complete six to nine (6-9) credits of ESM A699 and zero to three (0-3) credits of electives in the student's technical specialty and/or additional courses in A, B or C above. Electives must have the approval of the department and may include advanced courses in computer science.

- A total of 30 credits is required for the degree.

Questions:

Jang W. Ra, Ph.D. (Chair)
School of Engineering
Engineering, Science & Project Management Department
University of Alaska Anchorage
3211 Providence Drive
Anchorage, AK 99508-4614
(907) 786-1924

FACULTY

Jang Ra, Professor, Chair, AFJWR@uaa.alaska.edu

ENGINEERING MANAGEMENT AND SCIENCE MANAGEMENT

<http://www.engr.uaa.alaska.edu/esm>

Engineering Building (ENGR), Room 201, (907) 786-1900

The Engineering Management and Science Management curriculum is designed for graduate engineers and 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 problems of management.

MASTER OF SCIENCE, ENGINEERING MANAGEMENT MASTER OF SCIENCE, SCIENCE MANAGEMENT

ADMISSION REQUIREMENTS

Students who are working toward the Master of Science in Engineering Management must hold a Bachelor of Science or Master of Science in an engineering discipline. Students enrolling in the Master of Science in Science Management must hold a Bachelor of Science or Master of Science in a scientific field. Students are expected to be proficient in the use of computers for word processing, spreadsheet analysis, and scientific calculations. A candidate should have had on-the-job experience in engineering or science.

Students must formally apply for admission to the program. No more than 9 semester credits may be taken before applying for admission.

GRADUATION REQUIREMENTS

Students must earn a 3.00 GPA in graduate courses that are part of the program. No course included in the credits of a student's program may be counted toward another degree. A student may not repeat a course that is part of their program if they have received a "C" or better in that course.

Students who have not successfully completed an engineering economy course as undergraduates or in other graduate work must include either ESM A605 or ESM A606 in their academic programs.

PROGRAM REQUIREMENTS

Note: Substitutions for one or more of the courses listed below may be permitted if similar courses are included in the student's previous academic background. No more than 9 semester credits of appropriate graduate-level course work completed at other institutions with a grade of "A" or "B" may be transferred and applied toward the total 30 credits of required and elective courses. Both substitutions and transfer of credit must be approved by the department.

1. Complete the following Area requirements:

Management Area (9 credits minimum):

ESM A601	Engineers in Organizations	3
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Choose one course from the following:	3
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ESM A609	Project Management (3)
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ESM/BA A617	Technology Management (3)
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Choose one course from the following:	3
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ESM A608	Legal Environment for Engineering Management (3)
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ESM A609	Project Management (3)
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ESM A613	Management of Technical People (3)
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ESM/BA A617	Technology Management (3)
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ESM/BA A623	Total Quality Management (3)
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ESM/BA A625	Marketing of Business Products and Services (3)
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Fiscal Area (6 credits minimum):

Complete two of the following courses:	6
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ESM A605	Engineering Economy (3)
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ESM A606	Advanced Engineering Economy (3)
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ESM A610	Cost Estimating (3)
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Quantitative Area (6 credits minimum):

Choose one course from the following:	3
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ESM A620	Statistics for ESM (3)
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ESM A621	Operations Research (3)
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Choose one course from the following:	3
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ESM/BA A619	Computer Simulation of Systems (3)
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ESM A620	Statistics for ESM (3)
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ESM A621	Operations Research (3)
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ESM A622	Management Decisions Under Uncertainty (3)
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2. To register for ESM A684 or ESM A699 students must have a 3.0 GPA or better in courses listed on their academic program plans:

Non-Thesis Option

Complete ESM A684 and 6 credits of electives in the student's technical specialty and/or additional courses in A, B, or C above. Electives must have the approval of the department and may include advanced courses in computer science.

Thesis Option

Complete 6-9 credits of ESM A699 and 0-3 credits of electives in the student's technical specialty and/or additional courses in A, B or C above. Electives must have the approval of the department and may include advanced courses in computer science.

3. A total of 30 credits is required for the degree.

Questions:

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