



Environmental Engineering and Environmental Quality Science

College of Science, Engineering and Mathematics
Department of Civil and Environmental Engineering
(907) 474-6129

www.uaf.edu/civileng/cee.html

Degree: M.S.

Minimum Requirements for Degree: 30-31 credits

The Environmental Engineering and Environmental Quality Science program offers an M.S. degree in Environmental Engineering for engineers and an M.S. degree in Environmental Quality Science for scientists.

Career opportunities for graduates include water supply, treatment and distribution, waste treatment, water and air pollution, solid waste disposal, hazardous and toxic waste management, pollution prevention, environmental impact evaluation, administration of environmental programs and regulatory compliance. Graduates are prepared to hold positions in government, industry, consulting or academia.

GRADUATE PROGRAM

Environmental Engineering—M.S. Degree

- Complete the following admission requirements:
 - Complete the equivalent of a UAF course in basic computer techniques.
 - Complete the TOEFL exam (only non-native English speakers, minimum score 575 for the paper test, or 213 for the computerized test).
 - Complete a B.S. in engineering from an ABET accredited institution (GPA of 3.0 or higher).
- Complete the general university requirements (page 43).
- Complete the master's degree requirements (page 46).
- Complete the thesis or non-thesis requirements for one of the Environmental Engineering and Environmental Quality Science concentration areas listed below:

Environmental Quality Science—M.S. Degree

- Complete the following admission requirements:
 - Complete the equivalent of 1 year of UAF courses in calculus and general chemistry, and 1 semester of computer techniques.
 - Complete the TOEFL exam (only non-native English speakers, minimum score 575 for the paper test, or 213 for the computerized test).
 - Complete a B.S. in science from an accredited institution (GPA of 3.0 or higher).
- Complete the general university requirements (page 43).

- Complete the master's degree requirements (page 46).
- Complete the thesis or non-thesis requirements for one of the Environmental Engineering and Environmental Quality Science concentration areas listed below:

Concentrations for Environmental Engineering and Environmental Quality Science

Water Supply and Waste Treatment

- Complete the following

ENVE 641—Aquatic Chemistry	3
ENVE 645—Unit Processes—Chemical and Physical	3
ENVE 646—Unit Processes—Biological	3
ENVE 647—Biotechnology	3
ENVE 650—Seminar* (1)	2
ENVE 653—Measurements Laboratory	1
ENVE 698—Project	3
or ENVE 669—Thesis	6
Approved electives**	6-9
- Complete one of the following

ENVE 643—Air Pollution Management	3
ENVE 648—Solid Waste Management	3
ENVE 649—Hazardous and Toxic Waste Management	3
- Minimum credits required

* Complete 2 semesters at 1 credit each.

** Electives as approved by the student's committee (6 credits for thesis option; 9 credits for project option).

Note: In addition to the courses listed in any of the concentration areas, electives include but are not limited to: BIOL 642, 680, 682, 685; and CE 603, 661, 683, 684; and CHEM 631, 655; and ENVE 658; and GE 620; and MATH 608, 615.

Environmental Contaminants

- Complete the following

CS 663—Groundwater Dynamics	3
ENVE 641—Aquatic Chemistry	3
ENVE 642—Contaminant Hydrology	3
ENVE 647—Biotechnology	3
ENVE 649—Hazardous and Toxic Waste Management	3
ENVE 650—Seminar* (1)	2
ENVE 653—Measurements Laboratory	1
ENVE 698—Project	3
or ENVE 669—Thesis	6
Approved electives**	6-9
- Minimum credits required

* Complete 2 semesters at 1 credit each.

** Electives as approved by the student's committee (6 credits for thesis option; 9 credits for project option).

Note: In addition to the courses listed in any of the concentration areas, electives include but are not limited to: BIOL 642, 680, 682, 685; and CE 603, 661, 683, 684; and CHEM 631, 655; and ENVE 658; and GE 620; and MATH 608, 615.



University of Alaska Fairbanks

Admissions • P.O. Box 757480 • Fairbanks, AK 99775-7480 • admissions@uaf.edu • www.uaf.edu

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Environmental Science and Management

- a. Complete 5 of the following courses
 - ENVE 641—Aquatic Chemistry 3
 - ENVE 644—Environmental Management and Law 3
 - ENVE 647—Biotechnology 3
 - ENVE 649—Hazardous and Toxic Waste Management 3
 - ENVE 651—Environmental Risk Management 3
 - ENVE 652—Toxicology for Engineers and Scientists 3
- b. Complete the following
 - ENVE 650—Seminar* (1) 2
 - ENVE 653—Measurements Laboratory 1
 - ENVE 698—Project 3
 - or ENVE 669—Thesis 6
 - Approved electives** 6-9
- c. Minimum credits required 30

* Complete 2 semesters at 1 credit each.

** Electives as approved by the student’s committee (6 credits for thesis option; 9 credits for project option). For Environmental Engineering candidates, 6 elective credits must be from the following: CE 663, ENVE 642, 643, 645, 646 and 648.

Note: In addition to the courses listed in any of the concentration areas, electives include but are not limited to: BIOL 642, 680, 682, 685; and CE 603, 661, 683, 684; and CHEM 631, 655; and ENVE 658; and GE 620; and MATH 608, 615.

- See Arctic Engineering.
- See Civil Engineering.
- See Engineering for Ph.D. program.
- See Engineering Management.
- See Science Management.

