



Twin Cities Campus

Stream Restoration Science and Engineering Postbaccalaureate Certificate

CSENG Civil, Envrn & Geo-Eng (CEGE)

College of Science and Engineering

Link to a [list of faculty](#) for this program.

Contact Information:

Stream Restoration Graduate Certificate Program, National Center for Earth-surface Dynamics, Saint Anthony Falls Laboratory, 2 Third Avenue SE, Minneapolis, MN 55414 (612-624-4606; fax: 612-624-0066)

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Website: <http://www.nced.umn.edu/srcp>

- Program Type: Post-baccalaureate credit certificate/licensure/endorsement
- Requirements for this program are current for Spring 2018
- Length of program in credits: 16
- This program does not require summer semesters for timely completion.
- Degree: Stream Rest. Science & Engineering Pbacc Cert

Along with the program-specific requirements listed below, please read the [General Information](#) section of the catalog website for requirements that apply to all major fields.

The postbaccalaureate certificate in stream restoration science and engineering is a three-semester program producing graduates who understand how to blend engineering, physical, biological, and social sciences in prioritizing, designing, implementing, and evaluating stream restoration projects. Two courses, including an introduction to stream restoration and a restoration design experience are required. The remaining courses are chosen from a specified list of relevant courses taught across a number of University departments.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

The preferred undergraduate GPA for admittance to the program is 3.00.

A bachelor's degree in a field related to ecology, civil engineering, or environmental and earth sciences from an accredited US institution or its foreign equivalent.

Other requirements to be completed before admission:

In addition to the University's online application form, students must submit a program application and one letter of reference. The SRSE program application form and directions for submission can be found at <http://nced.umn.edu/apply-certificate-program-stream-restoration>.

Applications are accepted throughout the year.

International applicants must submit score(s) from one of the following tests:

- TOEFL
 - Internet Based - Total Score: 79
 - Internet Based - Writing Score: 21
 - Internet Based - Reading Score: 19
 - Paper Based - Total Score: 550
- IELTS
 - Total Score: 6.5
- MELAB
 - Final score: 80

Key to [test abbreviations](#)(TOEFL, IELTS, MELAB).

For an online application or for more information about graduate education admissions, see the [General Information](#) section of the catalog website.



Program Requirements

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

A minimum GPA of 3.00 is required for students to remain in good standing.

Required Coursework

Foundation Course

The foundation course is also offered as EEB/ESCI 8601. Students pursuing a degree in earth sciences, civil engineering, or ecology, evolution and behavior should register for the foundation course under a designator other than that of their major.

[CEGE 8601](#) - Introduction to Stream Restoration (3.0 cr)

Elective Coursework

Take 11 or more credit(s) from the following:

River and Floodplain Science and Engineering

Take 1 or more course(s) from the following:

- [BBE 5513](#) - Watershed Engineering (3.0 cr)
- [BBE 8513](#) - Hydrologic Modeling of Small Watersheds (3.0 cr)
- [CEGE 4511](#) - Hydraulic Structures (3.0 cr)
- [CEGE 4512](#) - Open Channel Hydraulics (3.0 cr)
- [CEGE 4501](#) - Hydrologic Design (4.0 cr)
- [CEGE 8511](#) - Mechanics of Sediment Transport (3.0 cr)
- [FNRM 5114](#) - Hydrology and Watershed Management (3.0 cr)
- [FNRM 5153](#) - Forest Hydrology & Watershed Biogeochemistry (3.0 cr)
- [ESCI 4701](#) - Geomorphology (4.0 cr)

River and Floodplain Ecology

- [CEGE 8508](#) - Ecological Fluid Mechanics (4.0 cr)
- [EEB 5601](#) - Limnology (3.0 cr)
- [FW 8465](#) - Fish Habitats and Restoration (3.0 cr)
- [FW 8459](#) - Stream and River Ecology (3.0 cr)
- [HORT 5071](#) - Ecological Restoration (4.0 cr)

Water Quality

- [CEGE 5541](#) - Environmental Water Chemistry (3.0 cr)
- [CEGE 8541](#) (*Inactive*) (3.0 cr)
- [CEGE 8561](#) - Analysis and Modeling of Aquatic Environments I (3.0 cr)
- [CEGE 8562](#) - Analysis and Modeling of Aquatic Environments II (3.0 cr)
- [ESCI 4702](#) - General Hydrogeology (4.0 cr)
- [ESPM 5111](#) - Hydrology and Water Quality Field Methods (3.0 cr)

Water Policy and Management

Take at most 4 credit(s) from the following:

- [ESPM 4295W](#) - GIS in Environmental Science and Management [WI] (4.0 cr)
- [ESPM 5061](#) - Water Quality and Natural Resources (3.0 cr)
- [ESPM 5202](#) - Environmental Conflict Management, Leadership, and Planning (3.0 cr)
- [ESPM 5703](#) (*Inactive*) (3.0 cr)
- [WRS 5101](#) - Water Policy (3.0 cr)

Capstone Course

The capstone course is also offered as EEB/ESCI 8602. Students pursuing a degree in earth sciences, civil engineering, or ecology, evolution and behavior should register for the capstone course under a designator other than that of their major.

[CEGE 8602](#) - Stream Restoration Practice (2.0 cr)