

Civil Engineering Program

Hydraulics and Water Resources EFA

Civil and Environmental Engineering Updated April 2020

Description

The *Hydraulics and Water Resources EFA* is designed for students who wish to gain more depth in water resources engineering topics. BS graduates with this EFA can find work in civil and environmental engineering positions involving more water resources engineering tasks (e.g., stormwater drainage design and floodplain mapping). The EFA is also good preparation for students who wish to pursue graduate study (MS or PhD) in hydraulics, hydrology, or water resources engineering.

CEE Design Electives (6 sh)

The Civil Program requires two CEE Design Electives. For the *Hydraulics and Water Resources EFA*, the following CEE Design Elective is required:

- ✓ CEE:4374 Water Resources Design

You must choose a second CEE Design Elective from the following list:

- CEE:4157 Environmental Engineering Design
- CEE:4506 Design of Concrete Structures
- CEE:4535 Design of Steel Structure
- CEE:4762 Design of Transportation Systems

Any course not chosen as a CEE Design Elective may be taken as an EFA Elective.

EFA Electives (21 sh)

For the *Hydraulics and Water Resources EFA*, the following EFA Electives are required:

- ✓ CEE:4119 Hydrology
- ✓ CEE:4371 Water Resources Engineering

You must choose at least 3 (and a maximum of 5) of the following courses:

- CEE:3783 Surveying & Remote Sensing
- CEE:4102 Groundwater
- CEE:3430 Water Treatment
- CEE:4107 Sustainable Systems
- CEE:4157 Environmental Engineering Design
- CEE:4370 Open Channel Flow
- CEE:4180 Fundamentals of Atmospheric Science
- CEE:5372 Exp. Methods in Fluid Mech. & Heat Transfer

Any remaining EFA Electives (a maximum of 2) may be chosen from the following:

- Any of the five design courses not taken as a CEE Design Elective
- Any 3000 level or above course(s) in CEE
- CEE:3328 Fluvial Geomorphology
- EES:3360 Soil Genesis and Geomorphology
- EES:3390 Integrated Watershed Analysis
- GEOG:3520 GIS for Environment Studies
- GEOG:4870 Applied Geostatistics
- Any other course(s) approved for EFA Elective credit. Other courses require written justification for relevance to the EFA. (Note that many 2000 level or below courses will not be approved for EFA Elective Credit).

EFA Submission

Fill out the attached PDF form electronically, and submit for approval by the CEE Curriculum Committee to:

<https://workflow.uiowa.edu/form/cee-and-environmental-efa-submission>

Keep a copy to bring to Academic Advising with your CEE Advisor.

Civil Engineering Program EFA Form

Updated May 2018

Student Name/Date: _____

Student ID #: _____

Expected Graduation Date: _____

Do you plan to take FE exam? _____

Indicate your chosen Elective Focus Area:

Civil and Environmental Practice

Pre-Architecture

Environmental

Urban and Regional Planning

Hydraulics & Water Resources

Management

Structures, Mechanics and Materials

Student Tailored

Transportation

Session	Year	Course #	CEE Design Electives	S.H.	Pre-Requisites
Enter your Choice of Two Required CEE Design Electives					

Session	Year	Course #	EFA Electives	S.H.	Pre-Requisites
Enter your Choice of Courses for the Seven Required EFA Electives					

For the **Pre-Architecture, Urban and Regional Planning, Management, and Student Tailored EFAs**, list courses that are required but do not count as EFA Electives. These courses may be used to satisfy the General Education Component (GEC) requirements.

Session	Year	Course #	Additional Required Courses	S.H.	Pre-Requisites
Enter any additional required courses for this EFA					

For the **Student Tailored EFA**, include a career statement to justify the elective focus area. Provide information on the requirements of the minor field or certificate program when the EFA form is submitted.

Career Objective(s) Statement: