

Hydraulics and Water Resources EFA

Civil and Environmental Engineering Updated April 2017

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 (3 sh)

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

- CEE:3136 Design of Concrete Structures (3 sh)
- CEE:4157 Environmental Engineering Design (3 sh)
- CEE:4535 Design of Steel Structure (3 sh)
- CEE:4762 Design of Transportation System (3 sh)

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 (3 sh)
- ✓ CEE:4371 Water Resources Engineering (3 sh)

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

- CEE:3783 Surveying & Remote Sensing (3 sh)
- CEE:4102 Groundwater (3 sh)
- CEE:4103 Water Quality (3 sh)
- CEE:4107 Sustainable Systems (3 sh)
- CEE:4157 Environmental Engineering Design (3 sh)
- CEE:4370 Open Channel Flow (3 sh)
- CEE:4180 Fundamentals of Atmospheric Science (3 sh)
- CEE:5372 Exp. Methods in Fluid Mech. & Heat Transfer (3 sh)

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

- Any 3000 level or above course(s) in CEE
- CEE:3328 Fluvial Geomorphology (3 sh)
- EES:3360 Soil Genesis and Geomorphology (3 sh)
- EES:3390 Integrated Watershed Analysis (3 sh)
- GEOG:3520 GIS for Environment Studies (3 sh)
- GEOG:4870 Applied Geostatistics (3 sh)
- 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

To submit your EFA, fill out the attached PDF form and email it to Kim Lebeck (kimberly-lebeck@uiowa.edu) for approval by the CEE Curriculum Committee. Keep a copy to bring to Academic Advising with your CEE Advisor.

Civil & Environmental Engineering EFA Form

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Student Name/Date: _____ Student ID #: _____

Expected Graduation Date: _____ Do you plan to take FE exam? _____

Subtrack Designation: _____ Civil _____ Environmental

Indicate your chosen Elective Focus Area:

- | | |
|-------------------------------------|-----------------------------|
| Civil and Environmental Practice | Pre-Architecture |
| Environmental Engineering | Urban and Regional Planning |
| Hydraulics & Water Resources | Management |
| Structures, Mechanics and Materials | Student Tailored |
| Transportation | |

Session	Years	Course #	CEE Design Electives	S.H.	Pre-Requisites
<i>Enter your Choice of Two Required CEE Design Electives</i>					

Session	Years	Course #	EFA Electives	S.H.	Pre-Requisites
<i>Enter your Choice of Courses for the Seven Required EFA Electives</i>					

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	Years	Course #	Additional Required Courses	S.H.	Pre-Requisites
<i>Enter any additional required courses for this EFA</i>					

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 the certificate program when the EFA form is submitted.

Career Objective(s) Statement: