



OFFICE OF ACADEMIC ASSESSMENT  
*The* UNIVERSITY of OKLAHOMA

# Program Assessment Report

2022 - 2023

COE - Civil Engineering (PhD)

### General Information

**Mission**

In the Doctor of Philosophy in Civil Engineering program the School of Civil Engineering and Environmental Science offers face-to-face program. The School of Civil Engineering and Environmental Science aims to attract quality students consistent with top-tier graduate programs in Civil Engineering and maintain a productive graduate research environment that promotes scholarly activity to produce degree recipients who are successful in their academic pursuits.

**College**

Engineering

**Department/School/Division**

Civil Engineering and Environmental Science

**Assessment Liaison**

Dr. KA Strevett

## Communication Skills

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### Student Learning Outcome (SLO)

Upon completion of the Doctor of Philosophy in Civil Engineering (PhD CE) degree program, students should be able to communicate technical information to an audience of their peers.

### Outcome Status

Active

#### Direct - Presentation

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##### Assessment Method Description

All PhD CE students are required to successfully complete CEES 5021 Technical Communications. PhD CE Water Resources Engineering students can also elect to take CEES 5843 Hydrology. All students must give a series of presentations in the class, which are recorded.

The student audience and instructor will be given a rubric to evaluate the speaker with the following performance scale: 5 = exceeds expectations, 3 = meets expectations, 1 = does not meet expectations. Ratings of "exceeds expectations" and "meets expectations" will constitute a "pass" while the rating of "does not meet expectation" will be equivalent to "fail."

##### Performance Target

90% of all PhD CE students should receive ratings at or above "meets expectations."

##### Assessment Results and Use of Results

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###### Reporting Period

2022 - 2023

###### Assessment Results Entry Date

08/08/2023

###### Assessment Results

100% (4/4) of the PhD CE students in CEES 5021 received an oral presentation rating of "meets expectations" or higher.

###### Results Status

Target Met

###### Number of Students Assessed

4

##### USE OF ASSESSMENT RESULTS

###### Curriculum

Request presentation data from CEES 5843 Hydrology next year.

###### Other

Graduate Studies Committee in the School of Civil Engineering and Environmental Science have developed a Graduate Student Seminar Series to encourage development of technical communications.

#### Direct - Project

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##### Assessment Method Description

All PhD CE students are required to successfully complete CEES 5021 Technical Communications and submit a Technical Writing Requirement. PhD CE students can also elect to take CEES 5373, CEES 5433, CEES 5693, CEES 5843, and/or CEES 5853. All students must write a comprehensive technical document which is graded by the instructor.

A score above 70% will be equivalent to "pass."

##### Performance Target

90% of all PhD CE students should receive a score of 70% or higher.

##### Assessment Results and Use of Results

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###### Reporting Period

2022 - 2023

**Assessment Results Entry Date**

08/08/2023

**Assessment Results**

100% (6/6) of the PhD CE students in CEES 5021 received a score of 70% or higher on the technical writing component.

**Results Status**

Target Met

**Number of Students Assessed**

6

**USE OF ASSESSMENT RESULTS****Other**

Graduate Studies Committee in the School of Civil Engineering and Environmental Science have developed a Graduate Student Seminar Series to encourage development of technical communications.

**Research Skills**

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**Student Learning Outcome (SLO)**

Upon completion of the Doctor of Philosophy in Civil Engineering (PhD CE) degree program, students should be able to demonstrate knowledge of and proficiency in research skills.

**Outcome Status**

Active

**Direct - Presentation**

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**Assessment Method Description**

All PhD CE students are encouraged to present their research at a conference with external participants or publish a conference paper prior to graduation.

This rubric is self-reported (and corroborated by faculty advisor) at the completion of degree and is simply a "yes" or "no" (and how many) answer. If the student reports that "yes" they did present or publish at a conference, then the title of the paper and/or presentation, as well as the conference, is recorded.

**Performance Target**

75% of all PhD CE students should be the presenter and author/co-author at a conference.

**Assessment Results and Use of Results**

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**Reporting Period**

2022 - 2023

**Assessment Results Entry Date**

08/08/2023

**Assessment Results**

100% (3/3) of the PhD CE students who responded to the exit survey were the presenter and author/co-author at a conference at least twice prior to graduation.

**Results Status**

Target Met

**Number of Students Assessed**

3

**USE OF ASSESSMENT RESULTS****Other**

Graduate Studies Committee in the School of Civil Engineering and Environmental Science have developed a Graduate Student Seminar Series to encourage scholarly engagement.

**Indirect - Student Survey**

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**Assessment Method Description**

Graduate Student Survey: All graduate students are asked to complete a short survey prior to graduation. One of the questions is "Please circle the most appropriate response to the following statement: Your experience in graduate school helped you acquire the ability to understand and communicate basic research methods?" Strongly Disagree - Disagree - Neutral - Agree - Strongly Agree.

#### **Performance Target**

90% of all PhD CE students will strongly agree that the experience helped them acquire the ability to understand and communicate basic research methods.

#### **Assessment Results and Use of Results**

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##### **Reporting Period**

2022 - 2023

##### **Assessment Results Entry Date**

08/08/2023

##### **Assessment Results**

67% (2/3) of the PhD CE students who responded to the survey answered "strongly agree" when asked how their experience helped them acquire the ability to understand and communicate basic research methods. The other student answered "agree".

##### **Results Status**

Target Not Met

##### **Number of Students Assessed**

3

#### **USE OF ASSESSMENT RESULTS**

##### **Other**

Graduate Studies Committee in the School of Civil Engineering and Environmental Science have developed and implemented a new annual survey of graduate students to verify self-reported data.

### **Analytical Skills**

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#### **Student Learning Outcome (SLO)**

Upon completion of the Doctor of Philosophy in Civil Engineering (PhD CE) degree program, students should be able to demonstrate the ability to identify, analyze, synthesize and present scholarship in their areas of expertise.

#### **Outcome Status**

Active

#### **Direct - Examination**

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##### **Assessment Method Description**

All PhD CE students are required to take and pass a general examination, administered and evaluated by a minimum of five committee members.

Using a generic rubric with the following performance scale: 5 = exceeds expectations, 3= meets expectations, 1= does not meet expectations. Ratings of "exceeds expectations" and "meets expectations" will constitute a "pass" while the rating of "does not meet expectation" will be equivalent to "fail."

##### **Performance Target**

80% of all PhD CE students should receive ratings at or above "meets expectations."

#### **Assessment Results and Use of Results**

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##### **Reporting Period**

2022 - 2023

##### **Assessment Results Entry Date**

08/08/2023

##### **Assessment Results**

100% (3/3) of the PhD CE students had received at least a score of "meets expectations" on their General Exam.

##### **Results Status**

Target Met

**Number of Students Assessed**

3

**USE OF ASSESSMENT RESULTS****No Changes Needed**

Graduate Studies Committee in the School of Civil Engineering and Environmental Science agree this assessment does not require modification.

**Direct - Publication**

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**Assessment Method Description**

All PhD CE students are encouraged to write and submit a manuscript to a peer-reviewed journal prior to graduation.

This rubric is self-reported (and corroborated by faculty advisor) at the completion of degree and is simply a “yes” or “no” (and how many) answer. If the student reports that “yes” they did write and submit a manuscript, then the title of the paper, as well as the journal, is recorded.

**Performance Target**

50% of all PhD CE students should have a peer-reviewed journal article in review prior to graduation as the lead author or co-author.

**Assessment Results and Use of Results**

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**Reporting Period**

2022 - 2023

**Assessment Results Entry Date**

08/08/2023

**Assessment Results**

100% (3/3) of the PhD CE students who responded to the student exit survey had multiple journal papers submitted, accepted, or published prior to graduation.

**Results Status**

Target Met

**Number of Students Assessed**

3

**USE OF ASSESSMENT RESULTS****No Changes Needed**

Graduate Studies Committee in the School of Civil Engineering and Environmental Science agree this assessment does not require modification.