Mission / Purpose

The Department of Civil, Construction, and Environmental Engineering is dedicated to advancing the profession through its innovative, student-centered education and research programs. The faculty and staff are committed to preparing graduates for entry into the profession, educating future leaders of the profession, and conducting and disseminating meaningful basic and applied research for the betterment of the state, nation, and global communities.

Student Learning Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Foundational
(Foundational) Apply foundational knowledge of mathematics, science, humanities, and social sciences in professional practice

Connected Documents
civil engineering bachelors Curriculum Maps
civil engineering bachelors Curriculum Maps 2

Related Measures

M 2: Foundational - Portfolio
Average evaluation of foundational topic materials in graduation portfolios
Source of Evidence: Portfolio, showing skill development or best work
Target:
Average of 3 or better on a 1-5 Likert scale

SLO 2: Technical
(Technical) Synthesize technical knowledge of engineering science and analysis to identify, formulate, and solve relevant engineering problems.

Connected Documents
civil engineering bachelors Curriculum Maps
civil engineering bachelors Curriculum Maps 2

Related Measures

M 5: Technical - Portfolio
Average evaluation of design materials in graduation portfolios.
Source of Evidence: Portfolio, showing skill development or best work
Target:
3 or better on a 1-5 Likert scale

SLO 3: Design
(Design) Synthesize technical knowledge of engineering design to identify, formulate, and solve relevant engineering problems.

Connected Documents
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civil engineering bachelors Curriculum Maps 2

Related Measures

M 8: Design - Portfolio
Average evaluation of design materials in graduation portfolios
Source of Evidence: Portfolio, showing skill development or best work
Target:
3 or better on a 1-5 Likert scale.

SLO 4: Professional
(Professional) Exhibit the professional practice skills needed to be successful in engineering or related careers.

Connected Documents
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Related Measures

M 12: Professional - Portfolio
Average evaluation of professional practice materials in graduation portfolios.
Source of Evidence: Portfolio, showing skill development or best work
Target:
3 or better on a 1-5 Likert scale

Other Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans
OthOtcm 8: Program Value
The program will be highly valued by its program graduates and other key constituencies it serves.

Connected Documents
- civil engineering bachelors Curriculum Maps
- civil engineering bachelors Curriculum Maps 2

Related Measures

M 14: FE - Pass Rate
Trend in student pass rate on FE

Source of Evidence: Certification or licensure exam, national or state

Target:
Improve student performance on the FE exam and eventually exceed the national average pass rate.

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Assess new exam format
The exam format changes effective January, 2014. The faculty will assess and re-evaluate this assessment.

Established in Cycle: 2012-2013
Implementation Status: Planned
Priority: High
Mission / Purpose

The Department of Civil, Construction, and Environmental Engineering is dedicated to advancing the profession through its innovative, student-centered education and research programs. The faculty and staff are committed to preparing graduates for entry into the profession, educating future leaders of the profession, and conducting and disseminating meaningful basic and applied research for the betterment of the state, nation, and global communities.

Student Learning Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Foundational
(Foundational) Apply foundational knowledge of mathematics, science, humanities, and social sciences in professional practice

Connected Documents
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Related Measures

M 2: Foundational - Portfolio
Average evaluation of foundational topic materials in graduation portfolios
Source of Evidence: Portfolio, showing skill development or best work
Target:
Average of 3 or better on a 1-5 Likert scale
Finding (2012-2013) - Target: Met
An average evaluation score of 3.5 on foundational outcomes for 2012-13 graduates exceeds the target of 3.0.

SLO 2: Technical
(Technical) Synthesize technical knowledge of engineering science and analysis to identify, formulate, and solve relevant engineering problems.

Connected Documents
civil engineering bachelors Curriculum Maps
civil engineering bachelors Curriculum Maps 2

Related Measures

M 5: Technical - Portfolio
Average evaluation of design materials in graduation portfolios.
Source of Evidence: Portfolio, showing skill development or best work
Target:
3 or better on a 1-5 Likert scale
Finding (2012-2013) - Target: Met
An average evaluation score of 3.6 on the technical outcomes for 2012-13 graduates exceeds the target of 3.0.

SLO 3: Design
(Design) Synthesize technical knowledge of engineering design to identify, formulate, and solve relevant engineering problems.

Connected Documents
civil engineering bachelors Curriculum Maps
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Related Measures

M 8: Design - Portfolio
Average evaluation of design materials in graduation portfolios
Source of Evidence: Portfolio, showing skill development or best work
Target:
3 or better on a 1-5 Likert scale.
Finding (2012-2013) - Target: Met
An average evaluation score of 3.7 on the design outcomes for 2012-13 graduates exceeds the target of 3.0.

SLO 4: Professional
(Professional) Exhibit the professional practice skills needed to be successful in engineering or related careers.

Connected Documents
civil engineering bachelors Curriculum Maps
civil engineering bachelors Curriculum Maps 2

Related Measures
M 12: Professional - Portfolio
Average evaluation of professional practice materials in graduation portfolios.
Source of Evidence: Portfolio, showing skill development or best work

Target:
3 or better on a 1-5 Likert scale
Finding (2012-2013) - Target: Met
An average evaluation score of 3.6 on the professional outcomes for 2012-13 graduates exceeds the target of 3.0.

Other Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans

OthOtcm 8: Program Value
The program will be highly valued by its program graduates and other key constituencies it serves.
Connected Documents
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Related Measures

M 14: FE - Pass Rate
Trend in student pass rate on FE
Source of Evidence: Certification or licensure exam, national or state

Target:
Improve student performance on the FE exam and eventually exceed the national average pass rate.
Finding (2012-2013) - Target: Partially Met
For 2012-2013, the pass rate for the program students was approximately 20% below the national pass rate. This is a slight improvement and continues a positive trend towards the target. NCEES is changing the format and content for the FE exam effective January 2014. The faculty are considering the change in format and content, and how to modify the program to continue the progress towards the target.

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Assess new exam format
The exam format changes effective January, 2014. The faculty will assess and re-evaluate this assessment.

Established in Cycle: 2012-2013
Implementation Status: Planned
Priority: High
Mission / Purpose

The Department of Civil, Construction, and Environmental Engineering is dedicated to advancing the profession through its innovative, student-centered education and research programs. Our faculty and staff are committed to preparing graduates for entry into the profession, educating future leaders of the profession, and conducting and disseminating relevant basic and applied research for the betterment of the state, nation, and global community.

Student Learning Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Foundational
(Foundational) Apply foundational knowledge of mathematics, science, humanities, and social sciences in the professional practice of civil or construction engineering

Connected Documents
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- civil engineering bachelors Curriculum Maps 2

Related Measures

M 1: Foundational - FE
Percent correct on the mathematics and science questions of the FE.
Source of Evidence: Certification or licensure exam, national or state
Target:
Exceed National average on Math and Science portion of FE
Finding (2011-2012) - Target: Not Met
Students scored 89% of the national average on the math and science section of the FE on both the October 2010 and the April 2011 examinations. More recent results are not year available. There has been very little change in this number over the last 2.5 years. This is below our target of exceeding the national average; however, the result includes repeat takers (as yet we have no way to eliminate these data) and the actual pass rate is slightly higher.

M 2: Foundational - Portfolio
Average evaluation of foundational topic materials in graduation portfolios
Source of Evidence: Portfolio, showing skill development or best work
Target:
Average of 3 or better on a 1-5 Likert scale

M 3: Foundational - Survey
Student survey on foundational knowledge.
Source of Evidence: Academic indirect indicator of learning - other

SLO 2: Technical
(Technical) Synthesize technical knowledge of engineering science and analysis to identify, formulate, and solve civil or construction engineering problems.

Connected Documents
- civil engineering bachelors Curriculum Maps
- civil engineering bachelors Curriculum Maps 2

Related Measures

M 4: Technical - FE
Percent correct on the mathematics and science questions of the FE 2
Source of Evidence: Certification or licensure exam, national or state
Target:
Exceed National Average

M 5: Technical - Portfolio
Average evaluation of design materials in graduation portfolios.
Source of Evidence: Portfolio, showing skill development or best work
Target:
3 or better on a 1-5 Likert scale

M 6: Technical - Survey
Student survey on ability to synthesize and apply technical knowledge.
Source of Evidence: Academic indirect indicator of learning - other

SLO 3: Design
(Design) Synthesize technical knowledge of engineering design to identify, formulate, and solve civil or construction engineering problems.
Related Measures

M 7: Design - FE
Percent correct on the mathematics and science questions of the FE 3
Source of Evidence: Certification or licensure exam, national or state
Target: Exceed National Average

M 8: Design - Portfolio
Average evaluation of design materials in graduation portfolios 3
Source of Evidence: Portfolio, showing skill development or best work
Target: 3 or better on a 1-5 Likert scale.

M 9: Design - Survey
Student survey on ability to design.
Source of Evidence: Academic indirect indicator of learning - other

SLO 4: Professional
(Professional) Demonstrate the professional practice skills needed to be successful in civil or construction engineering

Related Measures

M 11: Professional - FE
Percent correct on the mathematics and science questions of the FE 4
Source of Evidence: Certification or licensure exam, national or state
Target: Exceed national average

M 12: Professional - Portfolio
Average evaluation of professional practice materials in graduation portfolios.
Source of Evidence: Portfolio, showing skill development or best work
Target: 3 or better on a 1-5 Likert scale.

M 13: Professional - Survey
Student survey on professional practice skills.
Source of Evidence: Academic indirect indicator of learning - other

Other Outcomes, with Any Associations and Related Measures, Targets, Findings, and Action Plans

OthOtcm 5: The FE as an assessment tool.
(An Improvement Outcome Derived from the 2010-11 Assessment Findings) The FE as an assessment tool. The department is instituting an integrated FE experience that will include practice exams and mentoring. The practice exam results will allow students to become acquainted with the exam format and structure as well as target their studies to their weak areas. Likewise faculty will assess practice exam results to direct specific course content toward practice and improvement in weak areas

Related Measures

M 14: FE - Pass Rate
Trend in student pass rate on FE
Source of Evidence: Certification or licensure exam, national or state

M 15: FE Practice Exams
Performance on departmental FE practice exams
Source of Evidence: Certification or licensure exam, national or state

OthOtcm 6: Recognized quality
The program will improve and sustain a high level of recognized quality.

Related Measures

OthOtcm 7: Optimal level
The program will build and sustain an optimal level of annual program enrollments and degree completions.

Connected Documents
civil engineering bachelors Curriculum Maps
civil engineering bachelors Curriculum Maps 2
OthOtc 8: Program Value
The program will be highly valued by its program graduates and other key constituencies it serves.

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- civil engineering bachelors Curriculum Maps
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