2015-2016 Assessment Cycle

Assessment Plan

Mission Statement

Mission Statement - Engineering Studies

Primary Vision
The Department of Engineering Studies will be a leader in providing technical education, academic support, and encouragement to prepare deaf and hard-of-hearing students for careers in engineering, engineering technology and engineering-related fields.

Mission Statement
The Department of Engineering Studies' mission is to provide the best academic experience for our students' growth and achievement during their learning experiences at RIT/NTID in preparation for a successful career.
The Department of Engineering Studies will offer intensive real-world practices in technical classes taught by experienced faculty who communicate well with deaf and hard-of-hearing students. They provide opportunities for students to develop skill sets that are in demand by industry. Students gain fundamental skills for entry-level positions within engineering and engineering technology fields as well as advanced learning opportunities offered through the other colleges of RIT.

Outcomes and Measures

Computer Aided Drafting Technology AAS/AOS Program Outcome Set

Develop the ability to produce accurate 2-D drawings and Building Information Modeling (BIM) projects

Use CAD to produce 2D technical drawings

Course level; Direct - Student Artifact

Details/Description: Technical drawing practical. Practical grade.
Acceptable Benchmark: 80% of students will score 75% or better on final practical grade
Spreadsheet for data collection.
Key/Responsible Personnel: Data collected by Assessment Coordinator

Extract and modify orthographic technical drawings from a BIM model

Measure: Construction CAD II [NCAD-220] - Final Portfolio Review of Construction Documents
Course level; Direct - Portfolio

Details/Description: Portfolio grade
Acceptable Benchmark: 80% of students will score 75% or better on final portfolio review grade
Spreadsheet for data collection.
Key/Responsible Personnel: Data collected by Assessment Coordinator
<table>
<thead>
<tr>
<th>Task</th>
<th>Measure:</th>
<th>Details/Description:</th>
<th>Acceptable Benchmark:</th>
<th>Implementation Plan (timeline):</th>
<th>Key/Responsible Personnel:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generate reports on information contained in a BIM model</td>
<td>Construction CAD II [NCAD-220] - Course Embedded Assignments</td>
<td>Course embedded assignments. Rubric scale 1-5.</td>
<td>80% of students will score 3 or more on the rubric scale 1-5.</td>
<td>Collection: annually at end of fall semester beginning AY 2014/2015. Spreadsheet for data collection.</td>
<td>Data collected by Assessment Coordinator</td>
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<tr>
<td>Create a BIM project based on preliminary information</td>
<td>Advanced Construction CAD [NCAD-240] - Course Embedded Project</td>
<td>Project grade</td>
<td>80% of students will score 75% or better on final project grade.</td>
<td>Collection: annually at end of fall semester beginning AY 2015/2016. Spreadsheet for data collection.</td>
<td>Data collected by Assessment Coordinator</td>
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<tr>
<td>Use a BIM project as a basis to produce detailed sections and other details</td>
<td>Advanced Construction CAD [NCAD-240] - Final portfolio review of construction documents</td>
<td>Portfolio grade</td>
<td>80% of students will score 75% or better on final portfolio review grade</td>
<td>Collection: annually at end of fall semester beginning AY 2015/2016. Spreadsheet for data collection.</td>
<td>Data collected by Assessment Coordinator</td>
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<tr>
<td>Develop the skills to acquire, record and analyze information derived from field measurements, existing drawings &amp; other technical documents</td>
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<tr>
<td>Create and interpret dimensions for technical drawings</td>
<td>Data Collection and Analysis [NCAD-108] - Final Dimensioning Practical</td>
<td>Practical grade</td>
<td>80% of students will score 75% or better on final dimensioning practical grade</td>
<td>Collection: annually at end of spring semester beginning AY 2013/2014. Spreadsheet for data collection.</td>
<td>Data collected by Assessment Coordinator</td>
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<tr>
<td>Define appropriate technical vocabulary as used by the construction industry</td>
<td>Data Collection and Analysis [NCAD-108] - Final Vocabulary Exam</td>
<td>Exam grade</td>
<td>80% of students will score 75% or better on final vocabulary exam grade</td>
<td>Collection: annually at end of spring semester beginning AY 2013/2014. Spreadsheet for data collection.</td>
<td>Data collected by Assessment Coordinator</td>
</tr>
<tr>
<td>Field measure and input existing space conditions into CAD</td>
<td>Data Collection and Analysis [NCAD-108] - Course project</td>
<td>Project grade</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Acceptable Benchmark:** 80% of students will score 75% or better on course project grade.

**Implementation Plan (timeline):** Collection: annually at end of spring semester beginning AY 2013/2014

**Key/Responsible Personnel:** Data collected by Assessment Coordinator

**Research technical information and incorporate into drawings and documentation**

**Measure:** Advanced Construction CAD [NCAD-240] - Design project

**Course level:** Direct - Student Artifact

**Details/Description:**

**Acceptable Benchmark:** 80% of students will score 3 or above on incorporating technical information into design project. Rubric scale: 1-5.

**Implementation Plan (timeline):** Collection: annually at end of fall semester beginning AY 2015/2016

**Key/Responsible Personnel:** Data collected by Assessment Coordinator

**Understand the basic characteristics of construction materials and procedures**

**Identify various construction materials using correct terminology**

**Measure:** Construction Materials and Methods II [NCAD-265] - Terminology Exam

**Course level:** Direct - Exam

**Details/Description:** Exam grade

**Acceptable Benchmark:** 80% of students will score 75% or better on terminology exam

**Implementation Plan (timeline):** Collection: annually at end of spring semester beginning AY 2014/2015

**Key/Responsible Personnel:** Data collected by Assessment Coordinator

**Identify characteristics of common construction materials**

**Measure:** Construction Materials and Methods II [NCAD-265] - Final Exam

**Program level:** Direct - Exam

**Details/Description:** Exam grade

**Acceptable Benchmark:** 80% of students will score 75% or better on course final exam

**Implementation Plan (timeline):** Collection: annually at end of spring semester beginning AY 2014/2015.

**Key/Responsible Personnel:** Data collected by Assessment Coordinator

**Develop the skills to create and present visualization materials**

**Develop and maintain a portfolio of student projects in both hard copy and electronic form**

**Measure:** Construction CAD III [NCAD-230] - Student Portfolio

**Course level:** Direct - Portfolio

**Details/Description:** Portfolio review grade

**Acceptable Benchmark:** Portfolio review grade 80% of students will score 75% or better on portfolio review

**Implementation Plan (timeline):** Collection: annually at end of spring semester beginning AY 2014/2015.

**Key/Responsible Personnel:** Data collected by Assessment Coordinator

**Generate renderings and animations from CAD and BIM projects**

**Measure:** Presentation Graphics [NCAD-250] - Final Project

**Course level:** Direct - Student Artifact

**Details/Description:** Final project grade

**Acceptable Benchmark:** 80% of students will score 75% or better on final project grade

**Implementation Plan (timeline):** Collection: annually at end of fall semester beginning AY 2015/2016.

**Key/Responsible Personnel:** Data collected by Assessment Coordinator
**Effectively prepare and present projects utilizing presentation graphics**

- **Measure:** Presentation Graphics [NCAD-250] - Final project presentation  
  Course level; Direct - Student Artifact
- **Details/Description:** Final project presentation grade  
  **Acceptable Benchmark:** 80% of students will score 75% or better on final project presentation grade  
  **Implementation Plan (timeline):** Collection: annually at end of fall semester beginning AY 2015/2016. Spreadsheet for data collection.
- **Key/Responsible Personnel:** Data collected by Assessment Coordinator

**Demonstrate creative skills on a design project**

- **Measure:** Advanced Construction CAD [NCAD-240] - Design Project  
  Course level; Direct - Student Artifact
- **Details/Description:** Design project grade  
  **Acceptable Benchmark:** 80% of students will score 75% or better on design project grade  
  **Implementation Plan (timeline):** Collection: annually at end of fall semester beginning AY 2015/2016. Spreadsheet for data collection.
- **Key/Responsible Personnel:** Data collected by Assessment Coordinator

**Understand current issues affecting the construction industry**

- **Measure:** Principles of Structural Systems [NCAD-275] and Presentation Graphics [NCAD-250] - Building Codes Exam  
  Course level; Direct - Exam
- **Details/Description:** Exam grade  
  **Acceptable Benchmark:** 80% of students will score 75% or better on building codes exam  
  **Implementation Plan (timeline):** Collection: annually at end of fall semester beginning AY 2014/2015. Spreadsheet for data collection.
- **Key/Responsible Personnel:** Data collected by Assessment Coordinator

**Identify issues related to sustainability in the construction industry**

- **Measure:** MEP Systems [NCAD-285] - Sustainability Exam  
  Course level; Direct - Exam
- **Details/Description:** Exam grade  
  **Acceptable Benchmark:** 80% of students will score 75% or better on sustainability exam  
  **Implementation Plan (timeline):** Collection: annually at end of spring semester beginning AY 2014/2015. Spreadsheet for data collection.
- **Key/Responsible Personnel:** Data collected by Assessment Coordinator

**Develop positive skills required to be effective on the job**

- **Measure:** Advanced Construction CAD [NCAD-240] - Team project  
  Course level; Indirect - Other
- **Details/Description:** Self evaluation, peer review and teacher evaluation using rubric scale: 1-5  
  **Acceptable Benchmark:** 80% of students will score 3 or more on the rubric scale 1-5  
  **Implementation Plan (timeline):** Collection: annually at end of fall semester beginning AY 2015/2016. Spreadsheet for data collection.
- **Key/Responsible Personnel:** Data collected by Assessment Coordinator
Accurately and clearly present technical information to an audience of peers

**Measure:** Presentation Graphics [NCAD-250] - Final Project Presentation  
Course level; Direct - Other

**Details/Description:** Self evaluation, peer review and teacher evaluation using rubric scale: 1-5  
**Acceptable Benchmark:** 80% of students will score 3 or more on the rubric scale 1-5  
**Implementation Plan (timeline):** Collection: annually at end of fall semester beginning AY 2015/2016. Spreadsheet for data collection.  
**Key/Responsible Personnel:** Data collected by Assessment Coordinator

Apply technical knowledge and skills on a co-op work experience

**Measure:** Co-op Work Experience [NCAD-299] - RIT Supervisor Online Co-op Evaluation System  
Course level; Direct - Other

**Details/Description:** Performance on the job  
**Acceptable Benchmark:** 80% of students will meet or exceed overall satisfactory score on co-op job  
**Implementation Plan (timeline):** Collection: annually at end of summer beginning AY 2014/2015. RIT Supervisor Online Co-op Evaluation System.  
**Key/Responsible Personnel:** Data collected by NTID Center on Employment (NCE)

Gain entry level employment in the construction industry

**Measure:** NCE - Job Placement  
Program level; Indirect - Other

**Details/Description:** Job placement after graduation  
**Acceptable Benchmark:** 90% of graduates who are seeking employment in the construction industry will be employed  
**Key/Responsible Personnel:** Data collected by NTID Center on Employment (NCE)

Indicate satisfaction with program and courses

**Measure:** Student Satisfaction Survey - Upon Completion of Final Semester  
Program level; Indirect - Survey

**Details/Description:** Upon completion of final semester - Survey results  
**Acceptable Benchmark:** 80% of students will rate all aspects of the program and courses as satisfactory or above  
**Implementation Plan (timeline):** Collection: annually near the end of fall semester beginning AY 2015/2016. Survey results summary  
**Key/Responsible Personnel:** Data collected by Assessment Coordinator

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