

2017-2018 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.

### 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

#### Student Learning Outcome: Use CAD to produce 2D technical drawings

##### ▼ **Measure:** Engineering Graphics [NCAD-150] - Technical Drawing Practical *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
Implementation Plan (timeline):	Collection: annually at end of fall semester beginning AY 2013/2014. Spreadsheet for data collection.
Key/Responsible Personnel:	Data collected by Assessment Coordinator

**Student Learning Outcome: 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
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

**Student Learning Outcome: Generate reports on information contained in a BIM model**

▼ **Measure:** Construction CAD II [NCAD-220] - Course Embedded Assignments  
*Course level; Direct - Student Artifact*

Details/Description:	Course embedded assignments. 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 2014/2015. Spreadsheet for data collection.
Key/Responsible Personnel:	Data collected by Assessment Coordinator

**Student Learning Outcome: Create a BIM project based on preliminary information**

▼ **Measure:** Advanced Construction CAD [NCAD-240] - Course Embedded Project  
*Course level; Direct - Student Artifact*

Details/Description:	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. Spreadsheet for data collection.
Key/Responsible Personnel:	Data collected by Assessment Coordinator

**Student Learning Outcome: Use a BIM project as a basis to produce detailed sections and other details**

▼ **Measure:** Advanced Construction CAD [NCAD-240] - 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
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

Develop the skills to acquire, record and analyze information derived from field measurements, existing drawings & other technical documents

**Student Learning Outcome: Create and interpret dimensions for technical drawings**

▼ **Measure:** Data Collection and Analysis [NCAD-108] - Final Dimensioning Practical  
*Course level; Direct - Student Artifact*

Details/Description:	Practical grade
Acceptable Benchmark:	80% of students will score 75% or better on final dimensioning practical grade
Implementation Plan (timeline):	Collection: annually at end of spring semester beginning AY 2013/2014. Spreadsheet for data collection.
Key/Responsible Personnel:	Data collected by Assessment Coordinator

**Student Learning Outcome: Define appropriate technical vocabulary as used by the construction industry**

▼ **Measure:** Data Collection and Analysis [NCAD-108] - Final Vocabulary Exam  
*Course level; Direct - Exam*

Details/Description:	Exam grade
Acceptable Benchmark:	80% of students will score 75% or better on final vocabulary exam grade
Implementation Plan (timeline):	Collection: annually at end of spring semester beginning AY 2013/2014. Spreadsheet for data collection.
Key/Responsible Personnel:	Data collected by Assessment Coordinator

**Student Learning Outcome: Field measure and input existing space conditions into CAD**

▼ **Measure:** Data Collection and Analysis [NCAD-108] - Course project  
*Course level; Direct - Student Artifact*

Details/Description:	Project grade
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 Spreadsheet for data collection
Key/Responsible Personnel:	Data collected by Assessment Coordinator

**Student Learning Outcome: 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 Spreadsheet for data collection
Key/Responsible Personnel:	Data collected by Assessment Coordinator

Understand the basic characteristics of construction materials and procedures

**Student Learning Outcome: 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 Spreadsheet for data collection
Key/Responsible Personnel:	Data collected by Assessment Coordinator

**Student Learning Outcome: 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. Spreadsheet for data collection.
Key/Responsible Personnel:	Data collected by Assessment Coordinator

Develop the skills to create and present visualization materials

**Student Learning Outcome: 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:

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.  
Spreadsheet for data collection.

Key/Responsible Personnel: Data collected by Assessment Coordinator

**Student Learning Outcome: 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.  
Spreadsheet for data collection.

Key/Responsible Personnel: Data collected by Assessment Coordinator

**Student Learning Outcome: 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

### Student Learning Outcome: 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

### Student Learning Outcome: Explain the purpose and role of building codes in 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

**Student Learning Outcome: 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

**Student Learning Outcome: Engage productively in a collaborative team project**

▼ **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

**Student Learning Outcome: 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
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	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

### Student Learning Outcome: 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)

### Student Learning Outcome: 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
Implementation Plan (timeline):	Collection: annually during spring beginning AY 2016/2017. Survey of graduates.
Key/Responsible Personnel:	Data collected by NTID Center on Employment (NCE)

## Student Learning Outcome: 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