



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**

▼ **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

**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

**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

**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

**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**

**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

**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

**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

**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**

**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

**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**

**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

**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

**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**

**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

**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**

**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

**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

**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)

**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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