Outcome Assessment Report

**Outcome:**  3.k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

**Target:** 75% of students assessed as 2 (satisfactory) or better for the specified outcome

**Program:** Construction Engineering

**Course:** CE 477 – Project Controls

**Term:** Fall 2009

**Instructor:** Susan Bogus Halter

**Course Description:** Time and cost budgeting is used for project control through management.

**Number of Students:** 24

* 3 (Bachelor in ConE) – evaluated for ABET assessment
* 11 (Bachelor in CM) – evaluated for ACCE assessment
* 10 (Graduate students)

**Performance Criteria used for Assessment:**

1. Knowledge of the capabilities of contemporary engineering tools.
2. Comprehension of the process of selecting engineering tools for specific goals.
3. Applies engineering tools for solving problems.

**Program Outcome Assessment:**

**Student Work Assessed:** Homework assignments 4 and 5 were assessed because they required students to perform complex project controls assessments. Copies of the homework assignments are attached.

**Rubric Used for Assessment:**

| **Exemplary (3)** | **Satisfactory (2)** | **Unsatisfactory (1)** |
| --- | --- | --- |
| Uses appropriate engineering tools to solve problem. Sophisticated tools (i.e., complex models) used to optimize results when simpler tools could have been used. Methods and assumptions are documented, where necessary.  Indicated by an average homework score of 9 or above. | Uses appropriate engineering tools to solve much of the problem, but sophisticated tools are not used. Methods are identified but assumptions may not be documented.  Indicated by an average homework score of 7 or 8 | Uses few tools, applies tools inappropriately, does not understand the assumptions pertinent to correct use, or draws incorrect conclusions from the tools.  Indicated by an average homework score of less than 7 |

**Results of Assessment:** All three Construction Engineering students scored between 9 and 9.5 out of 10 points on each of the two homework assignments assessed.

| **Student** | **Assessment** |
| --- | --- |
| 1 | 3 |
| 2 | 3 |
| 3 | 3 |

**Overall Program Outcome Assessment:** For this outcome, 100% of students achieved a rating of 2 (satisfactory) or better, thus the program’s target was met (see figure below for data on this and past assessments).

