

# CEE 4333 - Estimating Planning and Control

*Fall 2005*

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## Homework 6

**Homework due: 11/17/05, in class**

November 7, 2005

### Problem 1

Develop a cash flow for the project information provided below. For this project 15 Points

Table 1: Cost for the Activities of a Sports Facility Project

| Activity                  | Duration | Predecessors   | Cost     |
|---------------------------|----------|--|----------|
| Mobilize                  | 2        | -  | \$5,000  |
| Stock Materials           | 4        | Mobilize   | \$22,000 |
| Clearing and Grubbing     | 6        | Mobilize   | \$8,000  |
| Grading of Road           | 7        | Mobilize   | \$2,500  |
| Finish Grade              | 5        | Stock Materials,<br>Clearing and Grubbing                | \$3,000  |
| Prefab Bleachers          | 16       | Stock Materials  | \$18,000 |
| Landscape                 | 12       | Stock Materials<br>Clearing and Grubbing                 | \$35,000 |
| Pave Road                 | 8        | Grading for Road   | \$30,000 |
| Place Tennis Court        | 10       | Finish grade   | \$20,000 |
| Erect/paint bleachers     | 7        | Prefab bleachers,<br>Clearing and Grubbing               | \$16,000 |
| Curbing                   | 5        | Landscape,<br>Pave roadway                               | \$6,000  |
| Final Inspection/Clean-up | 3        | Place tennis court,<br>erect/paint bleachers,<br>curbing | \$4,000  |

the total expenditures amount to \$150,000 and the receipts are \$170,000 for a total profit of \$20,000. The retainage is 10% and the owner makes payments on the 10th and the 25th of the month.

- Find the total duration of the project
- Perform a cash flow analysis and find the net worth of the profit for interest rates of 6% and 12%.