Cost Estimation Models

Examination of methodologies for estimating and forecasting product and service costs. Topics include labor and material cost analysis; accounting analysis including financial statements, depreciation, budgeting, and overhead allocation; forecasting techniques; general cost estimating methods; operations estimating and analysis; product cost estimating, including pricing approaches; measuring after tax cash flows and utilizing breakeven models (same as INEG 5433). Prerequisite: OMGT 4323 and OMGT 4333, or consent.


Course Goals/Objectives:

The course objective is to provide fundamental concepts and principles that will increase the managerial/operational effectiveness of the student and to facilitate student learning in the following areas:

- Labor and material cost analysis;
- Accounting analysis including financial statements, depreciation, budgeting, and overhead allocation;
- Forecasting techniques;
- General cost estimating methods;
- Operations estimating and analysis;
- Product cost estimating including pricing approaches;
- Measuring after tax cash flows and utilizing breakeven models; and
- Economic decision making including rate of return, payback period, and time value of money methods.

Videos:

A video lecture--delivered by Dr Pohl or Leonard Nethercutt--accompanies each chapter.
Assignment Submissions:

When you "create" new assignments, use headers and footers to indicate your name, course, and assignment number. Name the file using this format:

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DoeJOMGT5503-1
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The 1 stands for the assignment number. Save the file in either Microsoft Word or Excel. If you have questions, please contact your instructor.

Course Requirements and Grade.

<table>
<thead>
<tr>
<th>Course Requirements</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Assignments</td>
<td>100</td>
</tr>
<tr>
<td>2. Exam 1 (Midterm Exam)</td>
<td>100</td>
</tr>
<tr>
<td>3. Exam 2 (Final Exam)</td>
<td>100</td>
</tr>
<tr>
<td>4. Discussions</td>
<td>60</td>
</tr>
</tbody>
</table>

Total Course Points Possible 360

Course Grade.

The assignment of the final course grade is based on performance for the course requirements from the scale below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90% and above</td>
</tr>
<tr>
<td>B</td>
<td>80% to 89%</td>
</tr>
<tr>
<td>C</td>
<td>70% to 79%</td>
</tr>
<tr>
<td>D</td>
<td>60% to 69%</td>
</tr>
<tr>
<td>F</td>
<td>Below 60%</td>
</tr>
</tbody>
</table>

EXAMS: 200 points. Two exams are scheduled. Each exam has 100 points possible.

ASSIGNMENTS: 100 points.

The assignments consist of questions and problems provided in class. **I will use the highest five—out of six-- assignment scores to calculate the percentage earned for the assignments.**

The purpose of the assignments is to help learn and understand chapter materials/concepts/applications. The assignments provide an opportunity to apply the concepts and reinforce the material covered in lecture. A positive correlation typically exists between assignment performance and course grade. Discussion of the homework problems with each other and in the discussion area is encouraged. Assignments are typically graded within 48 hours of the due date and a solution set is attached to your submission within Blackboard.

TOPIC PRESENTATIONS UNDER DISCUSSIONS: 2 @ 30 points each.
Select a topic of interest and find article(s) related to cost estimation/analysis that expands, enhances a topic covered in the text. Possible sources for topic information include business, industry, and practitioner journals or publications. See the information found under “Start Here” within “Content” on the Blackboard site to find out about remotely using UARK library resources. Post a summary of the article(s) in the discussion area. Include the key points and importance of the article(s) in the posted summary.

DISCUSSION CONTRIBUTION: 60 points allocated as follows:

| Week 1: Student Introduction | 0 points (for your classmates) |
| Week 1, 5: Initial Post      | 20 points (10 points each)     |
| Week 2, 3, 6, and 7: Discussion Requirement | 40 points (10 points each) |

Discussion Participation is required to enhance learning and understanding through the sharing of personal experience, knowledge, and insights. Discussion participation requirements include the two substantive topic presentations outlined above and the four discussion contributions.

Students receiving the best grade will need two substantive initial posts (topic presentations) AND posts to those of four other students. That makes a total of six posts over the term.

A substantive post is relevant and adds in a substantial way to the discussion. Versions of agreeing with what others have written is not substantive. Using library resources to pull material into the discussion (especially for students with limited "real world" experience) or drawing on experiences at work is substantive.

Students receiving the best grade need to be actively involved in the discussion on an ongoing basis. Rushing in at the end of the posting period to tack on your comments to everything that has preceded is not timely. Checking in with the discussion every couple of days and joining in with the discussion in a substantive way is appropriate.

Please see the “Course Roadmap” under “Content” on Blackboard for the discussion contribution due dates

Inclement Weather Policy:

The nice thing about an Internet class is we don’t have to drive in the weather. However, with weather, the Internet sometimes goes down. Should this happen to you, and it affects your ability to meet course deadlines, please contact the instructor using the Message feature of Blackboard once service is restored. Also, if Blackboard service is lost part way through an exam, contact your instructor immediately to help resolve the problem.

Change Policy:

The syllabus and class schedule is subject to modification. Any modifications will be posted in the Blackboard Announcements section.
Academic Honesty Policy:

- The University of Arkansas strives to be a center of academic excellence. As part of our Statement of Ethics, the University strives to preserve academic honor and integrity by repudiating all forms of academic and intellectual dishonesty, including cheating, plagiarism and all other forms of academic dishonesty. Academic dishonesty is unacceptable and is subject to a disciplinary response.
- Students who are caught cheating or committing plagiarism may be given a failing grade in the course by the professor and may be subject to dismissal or further discipline.
- Plagiarism is often misunderstood. It can be defined as submitting someone else’s work as your own. It is not permissible to “cut and paste” and then just cite another’s work. In writing for homework or projects, you should read and learn, process through your mind, relate ideas, and then express what you learned in your own words. Cite the references where you found your information. If you do use someone else’s words, you must use quotation marks and cite. You should not overuse quotes – save them for a rare occurrence.

A complete statement of the U of A’s Academic Honesty Policy is available in the UA Student Handbook and the UA Graduate Catalog.
CLASS SCHEDULE

Please find the six assignments in the assignments area in Blackboard. I will include some of the problems listed below in the assignments. I will provide you with the solution to the remaining problems once assignment grading is completed.

A video lecture—delivered by either Dr Pohl or Leonard Nethercutt—is available for each chapter.

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**Week 1**

Text and Videos:
Chapter 1: Importance
  - Essay Questions 4, 8
  - Problems 7A, 7D, 9

Chapter 2: Labor Analysis
  - Essay Questions 2, 5
  - Problems 6, 9

**Week 2**

Text and Videos:
Chapter 3: Material Analysis
  - Essay Questions 6, 8
  - Problems 1

Chapter 4:
  - Essay Questions 5, 11
  - Problems 4, 13

**Week 3**

Chapter 5: Forecasting
  - Essay Questions 5, 8, 12
  - Problems 4, 17
Week 4
Midterm Exam

Week 5
Text and Videos:
Chapter 6: Estimating Methods
   Essay Question 4, 7
   Problems 10

Week 6
Text and Videos:
Chapter 8: Product Estimating
   Essay Question 4, 8
   Problems 2, 3

   Chapter 9: Cost Estimating
   Essay Question 4, 9
   Problems 7, 11

Week 7
Text and Videos:
Chapter 10: Engineering Economy
   Essay Question 6, 10, 12
   Problems 8

Week 8
Final Exam