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Sep

- 4 1. Introduction to course and industry. Read AICPA\* - "Industry Background".
- 6 2. Financial statements. Read RIC1\*\* through Fig. F1. Assign statement problem.
- 9 3. Generally accepted accounting principles (GAAP). Read RIC1 GAAP through "Materiality."
- 11 4. Construction revenue and expense. Read RIC1 through "Accounting Equation for Cost, Billings, and Income." Turn in statement problem. Assign income problem.
- 13 5. Project financial status. Read RIC1 through Table F1.
- 16 6. Measures of progress. Read RIC1 through "Change Orders and Claims".
- 18 7. Income tax accounting. Read RIC1 through "Disposal of a Plant Asset" and AICPA Chapter 5.
- 20 8. Construction accounts. Read RIC1 through "Chart of Accounts". Turn in income problem. Assign worksheet problem.
- 23 9. Cost and billings accounts. Read RIC1 through "End of Period Transactions."
- 25 10. Worksheet. Read RIC1 to end of accounting.
- 27 11. Break-even analysis. Read RIC2 "Cost, Markup, Volume, Income Relationships." Turn in worksheet problem. Assign break-even problem.
- 30 12. Cost estimating principles. Read in RIC2.

Oct

- 2 13. Cost capacity and factor estimating. Read sections in RIC2 and Ellis, "Cost Technology." Turn in break-even problem. Assign preliminary estimating problem.
- 4 14. Parameter estimates. Read section in RIC2.
- 7 15. Detailed estimates by computer spreadsheets. Read spreadsheet handout. Turn in preliminary estimating problem. Assign masonry detailed estimating spreadsheet problem.
- 9 16. Detailed estimates - elements and process. Read RIC2, "Detailed Estimates" to "Output Costing" (page 11 of DETAIL.DFT).
- 11 17. Detailed estimates - Output costing, cost factors and functions. Read RIC2, "Detailed Estimates" to end (page 25).

- 16 18. Cost indexes. Read section in RIC2. Turn in masonry detailed estimating spreadsheet problem. Assign cost index problem.
- 18 19. Labor estimates: Learning curve. Read Behrens, "The Learning Curve."
- 21 20. Labor estimates: Calculation of learning curve. Read handout.
- 23 21. Labor estimates: Scheduled overtime. Read BRT report. Turn in cost index problem. Assign labor cost problem.
- 25 22. Time value of money. Read ECON1 and ECON2.
- 28 23. Time value of money: continuous cash flow. Turn in labor cost problem. Assign equipment problem.
- 30 24. Equipment estimates: Economic life, retirement, replacement. Read Collier and Ledbetter, "Replacement Analysis."
- Nov 1 25. Equipment costs using average costs.
- 4 26. Equipment economic life using spreadsheet. Read handout.
- 6 27. Answer questions for Midterm Exam. Equipment hourly costs using spreadsheet. Read handout.
- 8 28. Midterm Exam (exam covers through labor costs).
- 11 29. Unit price proposals. Read RIC2. Turn in equipment problem. Assign unit price problem.
- 13 30. Work breakdown structures. Read Neil, "Project Control Through Integrated Cost Engineering."
- 15 31. Work breakdown structures (continued). Read Koupal, "Record Management Applications of the IEEE Industry Identification System," and RIC2. Turn in unit price problem.
- 18 32. Earned value and variances. Introduction to variances. Read RIC2. Read handout. Assign earned value problem.
- 20 33. Earned value continued and performance indexes.
- xx xx. Integration of cost and time control. Read Sears, "CPM/COST: An Integrated Approach", and Murthy, "Cost and Schedule Integration in Construction."
- 21 34. Theory of variance. Read handout. (Scheduled for 3:30P, Thursday, Nov 21, in place of class Wednesday, Nov 27 before Thanksgiving.)
- 22 35. Dimension units and dimension conversion.
- 25 36. Combinations of variances, general equations for combinations.
- Dec

- 2 37. Common variance combinations, variance criteria. Turn in earned value problem. Assign cost control problem.
- 4 38. Basic equations of variations.
- 6 39. Activity cost, time, and schedule variances and integration. Read handout.
- 9 40. Element cost variances. Turn in cost control problem.
- 11 41. Last class. Answer questions for Final Exam. Cleanup and close out course.
- 18 FINAL EXAM: 4:00-6:00 PM in regular classroom (GGB 2305). Required of all students, to be taken at this date and time. Do not make earlier travel plans. Tell Prof. Carr immediately if this date and time conflicts with the Final Exam of another course you are taking.

Final grade will be based on:

Homework problems	40%
Midterm exam	20%
Final exam	40%

A student must pass the exam portion to pass the course.

**CEE 531 HONOR CODE POLICY: ALL WORK IS TO BE INDEPENDENT,**

except that homework methods and answers may be freely discussed and compared. Homework assignments are not team assignments unless they are specifically identified as such. Students may work beside others on homework assignments, and they may discuss homework methods and answers as they perform the homework, but each will do his/her own work. Students and past students are welcome to help others understand course notes and methods. However, students shall not copy or otherwise share other students' homework or copy or otherwise use past students' homework. Students shall not share electronic files related to homework, except they may copy templates provided to all students by instructors. All keystrokes to solve a problem on a computer will be the student's own keystrokes.

All work during exams is completely independent. Each student's work shall be his/her own. There shall be no communication between students about the exam during the exam. Students may ask questions of the professor or teaching assistant who is monitoring the exam. Students may review exams from past semesters. Students may study together for an exam, and they may review each others exam results after exams have been graded and handed back.

\*AICPA is the American Institute of Certified Accountants, *Construction Contractors*, which is in the Construction Lab.

\*\*RIC1 and RIC2 are class notes on financial accounting and estimating prepared by R. I. Carr for this course. These and the other readings will be available as course packs produced by Dollar Bill Copying and distributed by Ulrich's Bookstore, 549 East University Avenue (at the corner of East University and South University), 662-3201 when needed.