THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF ENGINEERING AND APPLIED SCIENCE
DEPARTMENT OF COMPUTER SCIENCE

CSCI 196
SENIOR COMPUTER SCIENCE
DESIGN PROJECT II

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(ADAPTED FROM ARNOLD C. MELTZER)
INTRODUCTION

• PREREQUISITES
• PURPOSE
• IMPORTANCE
• ATTENDANCE
• ATTENTION IN CLASS
• SCHEDULE
• REVIEW
INTRODUCTION

• PRESENTATIONS
• LABORATORY NOTEBOOK
• DELIVERABLES
• GRADING
• PROGRESS REPORTS
• FINAL REVIEW
PREREQUISITES

• SENIOR STATUS
  – SUCCESSFUL COMPLETION OF CSCI 195
  – A SENIOR DESIGN PROJECT WHICH HAS BEEN DESIGNED AND IS IN THE PROCESS OF BEING CONSTRUCTED.
PURPOSE

• IMPLEMENT
• DOCUMENT
• DEMONSTRATE
• COMPLETE A PROJECT
• GRADUATE
IMPORTANCE

• WRITE A GOOD TECHNICAL REPORT
• MAKE A GOOD ORAL PRESENTATION
• PLAN A PROJECT
• COMPLETE A PROJECT
• DO AN ECONOMIC ANALYSIS
ATTENDANCE

- REQUIRED AT ALL SESSIONS
  - LECTURES BY PROFESSOR
  - PRESENTATIONS BY STUDENTS

- 3 UNEXCUSED ABSENCES - FAILURE
- 4 ABSENCES OR MIAs - FAILURE
  - MIA - 15 MIN. ABSENCE FROM A SESSION
ATTENTION IN CLASS

• FULL ATTENTION TO THE SPEAKER
• NO COMPUTER USE ALLOWED
LATE PRESENTATION

• MINUS 10% FOR EACH WEEK OR PART OF WEEK THE PRODUCT IS LATE

• NO WORK PRODUCT ACCEPTED AFTER NEXT WORK PRODUCT DUE
SECOND SEMESTER

• BUILD PROJECT
• 4 PROGRESS REVIEWS (PR)
• DEMONSTRATE PROGRESS AT EACH PR
• FINAL REVIEW
• GRADUATE
REVIEWS

• ORAL PRESENTATION
  – SLIDES
• FORMAL REPORT
• NOTEBOOK REVIEW
• DEMONSTRATION
• APPROPRIATE DRESS
APPROPRIATE DRESS

• PROPER BUSINESS ATTIRE FOR YOUR COUNTRY
  – WOMAN (USA)
    • DRESS, SUIT, OR SKIRT AND BLOUSE
  – MAN (USA)
    • SUIT AND TIE, OR JACKET, DRESS PANTS AND TIE
SLIDE TECHNIQUES

- DO NOT CROWD SLIDES
- KEEP IT SIMPLE
- KEEP BLOCK DIAGRAMS SIMPLE
- DO NOT USE COLOR
- USE A TOP-DOWN APPROACH
- MAX 7 BULLETS ON A SLIDE
LABORATORY NOTEBOOK

• FORMAL **BOUND** NOTEBOOK
• ALL ENTRIES IN **INK**
• **EVERY** PAGE INITIALED & DATED
• JOURNALING MODE
  – DATE, WHAT YOU DID, AMOUNT OF TIME SPENT, SIGNATURE
• GRADED ON COMPLETENESS NOT BEAUTY
DELIVERABLES

• FOUR PROGRESS REVIEWS
  – P.R. #1 - #4
• FINAL REVIEW
## GRADING - SPRING SEMESTER

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<th>Demo</th>
<th>Report</th>
<th>Notebook</th>
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PROGRESS REVIEW

• 4 PROGRESS REVIEWS (PR #1 - #4)
  – PRESENTATION
  – DEMONSTRATION - WORK TO DATE
  – FORMAL PROGRESS REPORT
  – NOTEBOOK REVIEW - AT TIME OF PRESENTATION
PROGRESS REPORT

• SHORT REPORT
• DOCUMENTS PROGRESS
• A SHORT DESCRIPTION OF THE PROJECT AND THE TREE OF MODULES
PROGRESS REPORT

• DIAGRAMS OF MODULES
• TIME SPENT ON EACH MODULE
• TIME NEEDED TO COMPLETE MODULE
• TIME SPENT ON PROJECT
• TIME TO COMPLETE PROJECT
PROGRESS MATRICES

• OUTLINED
• DESIGNED
• CONSTRUCTED
• TESTED
• INTEGRATED
• DOCUMENTED
• TOTALS
## EXAMPLE FOR OUTLINED MATRIX

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WRITING STYLE

• TELL A STORY
• DO NOT WRITE LIKE YOU SPEAK
• AVOID SLANG
• DO NOT USE CONTRACTIONS
• USE FULL SENTENCES
OUTLINE OF PROGRESS REPORT

• PREFACE
  – STANDARD TITLE SHEET - NO PAGE #
  – ABSTRACT - PAGE ii
  – TABLE OF CONTENTS - PAGE iii
  – LIST OF FIGURES - PAGE iv
  – LIST OF TABLES - PAGE v
OUTLINE OF PROGRESS REPORT

1. INTRODUCTION
   – STRESSING PROGRESS TO DATE
   – WORK TO COMPLETE

2. MODULE DESCRIPTION
   – DIAGRAM OF MODULES

3. TESTS PERFORMED ON EACH MODULE WITH RESULTS
   – USE A TABLE
OUTLINE OF PROGRESS REPORT

4. GANTT CHART
   - GANTT CHART
   - WEEKLY COSTS

5. GRAPH OF LABOR COSTS
   - ORIGINAL WEEKLY ESTIMATES
   - ACTUAL WEEKLY COSTS TO DATE
   - PROJECTED WEEKLY COSTS TO COMPLETE
OUTLINE OF PROGRESS REPORT

6. ECONOMIC ANALYSIS
   – ORIGINAL ESTIMATE
   – CURRENT ANALYSIS
OUTLINE OF PROGRESS REPORT

7. PROGRESS MATRICIES
   7.1 OUTLINED
   7.2 DESIGNED
   7.3 CONSTRUCTED
   7.4 TESTED
   7.5 INTEGRATED
   7.6 DOCUMENTED
   7.7 TOTALS
GANTT CHART

• SAME AS ALWAYS
CUMULATIVE LABOR COSTS

WEEKS

CUMULATIVE LABOR COSTS

COST (DOLLARS IN THOUSANDS)

ESTIMATED
ACTUAL
PROJECTED

WEEKS
ECONOMIC ANALYSIS

- COST OF PROTOTYPE
- UNIT COSTS
- SAME AS ALWAYS
DEMONSTRATION

• A DEMONSTRATION
  – PROJECT TO DATE
  – SOME WORKING MODULES
FINAL PROJECT REVIEW

- FINAL PROJECT REVIEW
  - PRESENTATION
  - DEMONSTRATION -
    • COMPLETED WORKING PROJECT
  - FINAL REPORT - FACULTY KEEPS
  - NOTEBOOK - FACULTY KEEPS
  - CD WITH SOURCE CODE AND INSTALL FILES
FINAL REPORT

- STANDARD TITLE SHEET
- ABSTRACT
- DEDICATION (OPTIONAL)
- ACKNOWLEDGEMENTS (OPTIONAL)
- TABLE OF CONTENTS
- LIST OF FIGURES
- LIST OF TABLES
FINAL REPORT (CONTINUED)

• INTRODUCTION TO THE PROJECT
  – TELL WHAT PROJECT IS ABOUT
• THEORY BEHIND THE PROJECT
  – MATHEMATICAL
• SPECIFICATIONS OF THE PROJECT
FINAL REPORT (CONTINUED)

• DETAILED DESCRIPTION OF THE PROJECT
  – DESCRIBE EACH MODULE IN DETAIL
  – SHOW SCHEMATIC DIAGRAMS, FLOWCHARTS & PDL
  – EXPLAIN I/O

• HISTORY OF THE PROJECT
  – HOW PROJECT CHANGED OVER YEAR
FINAL REPORT (CONTINUED)

• TEST PERFORMED WITH RESULTS ON EACH MODULE

• FINAL GRAPH OF LABOR COSTS
  – ORIGINAL ESTIMATE
  – FINAL ACTUAL COSTS

• FINAL ECONOMIC ANALYSIS
  – ORIGINAL ESTIMATE
  – FINAL COSTS
FINAL REPORT (CONTINUED)

• CONCLUSIONS & RECOMMENDATIONS
• REFERENCES
APPENDICES

- DOCUMENTED COMPUTER CODE
  - EXTERNAL DOCUMENTATION
  - INTERNAL DOCUMENTATION
APPENDICES

• USER’S MANUAL
  – INTRODUCTION TO PRODUCT
  – HOW TO INSTALL PRODUCT
  – HOW TO USE PRODUCT
  – HOW TO TROUBLE SHOOT PRODUCT
  – DESCRIPTION OF THE PRODUCT
    • MODULES
    • SCHEMATICS