

- Due Dates for Reports, Presentations, and Notebooks
- Report Format
- Other Notes (Including Design Notebooks)
- Course Evaluation

- **Final Reports, Presentations, and Design Notebooks are Due by 5:00 PM on Tuesday April 30**
- Put Reports and Presentations on the m: drive in Project Folders
- Label Reports as “ECE <N> Final Report”
- Label Presentations as “ECE <N> Final Presentation”
- “N” is the number of your project
- If you Have Separate Files for Drawings, Code Listings, Results etc. Clearly Label Them so They are Not Overlooked

The Final Report is a Comprehensive Description of Your Project From the Initial Customer Requirements Through the Final Test and Delivery

- Title Page Containing
 - Project Name
 - Team Members
 - Sponsor or Customer
 - Faculty Advisor
- Table of Contents
- List of Figures
- Professional Appearance
 - No Spelling or Syntax Errors
 - All Figures and Tables Labeled and Referenced in Text and not Breaking Across Pages
 - All Appendices Clearly Identified (Best approach is to use a header page)
 - Page Numbers
- Clearly Labeled and Referenced Appendices
- Notes on Appendices
 - All Appendices Must be Identified in Table of Contents
 - Drawings, Computer Listings, Schedules, etc. that were generated using specialized applications are logical candidates for inclusion in appendices
 - Main Text Can Reference Appendices to Make the Text Flow Better
- **Appendices May be Submitted as Separate Files with Final Report**

Final Report Outline 1/2



UMass

Dartmouth

COLLEGE OF ENGINEERING

1. Project Overview
2. Customer Requirements
3. Engineering Requirements, Constraints, and Applicable Standards
3.1. Requirements
3.2. Constraints
<u>3.3. Standards</u>
3.4. Ethical Issues
4. Functional Overview
5. Alternatives Evaluated
5.1. Alternative 1
5.2. Alternative 2
6. Technical Design Description of Selected System
6.1. Detailed System Diagram of Overall System
6.2. Subsystem 1 Description
6.3. Subsystem 2 Description
6.4. Subsystem N Description

Final Report Outline 2/2



UMass

Dartmouth

COLLEGE OF ENGINEERING

7. Test Plan and Results
7.1. VCRM
7.2. Test Cases and Test Results
7.3. Test Summary
8. Risk Discussion
9. Plan, Schedule, and Costs
9.1. Plan and Schedule- Final Update
9.2. Actual Hours vs. Planned Hours
9.3. Cost Summary
10. Summary
11. Lessons Learned / impacts due to Covid-19 how you continued/innovated to complete (or partially)
12. Documentation (May be Put in Appendices)
12.1. Electrical
12.2. Software
12.3. Mechanical
12.4. Other (If Applicable)
Appendix A
Appendix B
Appendix C
- - - -
Appendix N

Final Report Section Directions -1/3



UMass

Dartmouth

COLLEGE OF ENGINEERING

Section	Contents	Comments
1	Overview of Project	Describe the need does it addresses, what is the objective, and what is the impact if successful
2	Customer Requirements,	Latest customer requirements and constraints
3	Engineering Requirements and Constraints, Applicable Standards and Ethical Issues encountered	Use latest set of engineering requirements, constraints, and standards from CDR (or later if they have changed as a result of testing)
4	Functional Overview	Reuse your top-level system diagram(s). These can be hardware, software, or system level (or combinations) depending on your project
5	Alternatives evaluated	Use material from ECE 457 Concept Design Review Present the two alternatives that were evaluated, the results of the evaluation, and rationale for final selection

Final Report Section Directions -2/3



UMass

Dartmouth

COLLEGE OF ENGINEERING

Section n	Contents	Comments
6	Technical Design Description	<p>Subsystem description. This section should contain performance calculations, analyses, simulations, and prototyping as applicable for the subsystems and overall system.</p> <p>Note that this section complements section 12 and can reference material in the appendices associated with that section</p>
7	Test Plans and Results	<p>This section MUST contain the following (much of which can be taken from your Test Review document)</p> <ul style="list-style-type: none">--VCRM-- All the Test Cases and Test Results for each of the Requirements--Summary Table Showing Results of Tests- What passed, what didn't, notes and comments as applicable, especially for tests the were failed
8	Risk Discussion	<p>Brief discussion of risks and how they were addressed. Much of this material can be taken from CDR and updated to reflect work since then</p>

Final Report Section Directions -3/3



UMass

Dartmouth

COLLEGE OF ENGINEERING

Section	Contents	Comments
9	Plan, Schedule, and Costs	Update your schedule. Clearly show the hours Planned for each task and the Actual Hours spent. Show which tasks were completed and which were not Provide a cost summary for the project (hardware and software, not labor) Indicate how final cost compared with estimated cost.
10	Summary	Summarize status of project (what worked well, what didn't) and indicate suggestions for future work. Discuss potential impact and benefits of project if implemented by customer
11	Lessons Learned /impact	Lessons learned about engineering design, teamwork, project planning, testing, etc. Impacts from Covid-19 how you completed or partially, what ways did you innovate to go on. What could have been done in hindsight to have completed under these conditions
12	COMPLETE Documentation of Project	This section must include documentation at a level of detail that would permit someone to build and use your project. It must include ALL parts of project: <ul style="list-style-type: none">• Hardware• Software• Mechanical• Photos and Illustrations (useful for GUIs) NOTE- This documentation MUST include parts lists, software listings, dimensioned drawings, circuit board layouts, circuit diagrams, and user documentation This section will typically reference Appendices which can be attached as separate files when Final Report is submitted.

Grading Rubric – Final Reports



UMass

Dartmouth

COLLEGE OF ENGINEERING

ECE458 Capstone Design Final Report Grading Sheet							
Team Name _____			Grader _____				
Did the project accurately translate customer requirements into engineering requirements							
Excellent 4	Very Good 3	Good 2	Fair 1	Poor 0			
Comments on Strengths or Shortcomings							
Was the technical design sound? Did it successfully address the requirements and constraints?							
Excellent 6	Very Good 5	Good 4	Fair 2	Poor 1			
Comments on Strengths or Shortcomings							
Did the test cases address all the requirements and adequately verify that they were met?							
Excellent 8	Very Good 6	Good 4	Fair 2	Poor 0			
Comments on Strengths or Shortcomings							
Was the project thoroughly documented? Could someone build the project using the documentation?							
Excellent 8	Very Good 6	Good 4	Fair 2	Poor 0			
Comments on Strengths or Shortcomings							
Was the report professional with respect to clarity, writing style, spelling and syntax, and organization							
Excellent 4	Very Good 3	Good 2	Fair 1	Poor 0			
Comments on Strengths or Shortcomings							
What is your recommended grade for the overall project							
A+	A	A-	B+	B	B-	C+	C
Comments on Team Organization, Teamwork, and Individual Effort.							
Do you recommend any adjustment to above grade for individual team members based on their participation on the team or the quality of their work							
Team Member _____				Grade Adjustment _____			
Team Member _____				Grade Adjustment _____			
Team Member _____				Grade Adjustment _____			
Team Member _____				Grade Adjustment _____			

Engineering Notebooks

NOT BEING EVALUATED



UMass

Dartmouth

COLLEGE OF ENGINEERING

- **General Characteristics of Professional Notebooks**
 - CONTENT
 - CONTINUITY
 - COMPLETENESS
 - FORMAT
- **Content**
 - Not simply a log for meeting minutes!
 - Design Calculations
 - Graphs, Data, Diagrams (Hand or computer-generated)
 - Research on and Analysis of Design Options and Ideas
 - Test Results
 - Software Information and Listings
- **Continuity**
 - Should Show Evidence of Consistent Effort Toward Project Completion (e.g. Daily, Weekly, Bi-weekly)
- **Completeness**
 - Should Contain Enough Information and Detail For Another Knowledgeable Engineer to Understand the Project, the Design Decisions Made, Their Performance, and Their Contribution to the Overall Design
- **Format**
 - Cover should have: Name and Contact Information; Project Name; Dates Covered
 - Pages Should be Numbered, Blank Pages Acknowledged, and Dates Shown on Each Page
 - In Industry, (but not here) there is typically a requirement that entries be witnessed by another engineer.

Reminder re Notebooks

Info below is abstracted from the syllabus



UMass

Dartmouth
COLLEGE OF ENGINEERING

- Project notebooks must be maintained in ink by each student.
- Notebooks must be bound (no spiral or ring-type binders) with the front of each page numbered in ink. All entries (or pages) should be dated.
- Your name and project title must be on the cover.
- The notebook is a tool for documenting ALL your engineering work (see important note below)
 - Work performed and/or documented on-line. does not have to be included in your notebook but should be referenced in it.
- Notebooks must be signed and dated at least every two weeks by your advisor. Exceptions may apply depending on project and advisor judgment

Notebook Grading Rubric



UMass

Dartmouth

COLLEGE OF ENGINEERING

ECE458 Capstone Design Notebook Grading Sheet

Student Name _____ Grader Paul Fortier

Are entries in Notebooks in Ink

Yes
1

Mostly
1

No
0

Are Notebooks Bound

Yes
1

No
0

Are Student Name and Project Title on the Cover

Yes
1

No
0

Does the content of the Notebook provide a sequential and reasonably complete documentation of the student's design and analysis work and progress

Yes
4

Mostly
2

No
1

Comments on Strengths or Shortcomings

Has the notebook been reviewed and initialed by the project advisor (or customer) at regular intervals

Yes
3

Mostly
2

No
1

Comments on Strengths or Shortcomings

Senior Design ECE 458 Spring 2020

- Comments Sections are Most Useful
- All Inputs Welcomed
- Looking for Ideas/ Feedback on Following Specifics
 - Team Selection
 - Project Selection
 - Advising
 - How could I have prepared you all for what occurred
 - Any feedback on how to improve the course