ENSC 405W Grading Rubric for Engineering Journals

Criteria	Details	Marks
Identification	Your journal has your full name, team name, and team number listed on the inside cover or first page of the journal. A contact phone number and your e-mail are also provided there. A sticker with your name is affixed to the outside cover. Do not include student number anywhere in the journal.	**/10%**
Media	Your journal is a standard, lined, black, blue, or pink lab-book with non-removable pre-numbered pages. Spiral-bound notebooks, loose-leaf pages, computer printouts, Hilroy scribblers, or tiny notebooks are unacceptable and will result in a 0 for the entire assignment!	**/15%**
Format/Corrections	All entries are in pen. Entries are dated (start on a new page for a new date). Corrections to past entries have a line drawn through them and are dated. Do not scribble out or erase corrections. Any added pages are securely glued or taped into the journal and are dated.. Spelling, grammar, and neatness don't count! But journal must be reasonably legible	**/25%**
Regular Entries	Journal is obviously written in on a regular basis. Note that more than 3 entries per week (starting in the second week of classes) is the minimum required to receive full marks (minimum 36 entries); less than 1 entry per week (12 entries) will result in a 0 for the entire assignment!	**/25%**
Work Breakdown Chart	Final two pages of the journal contain a Work Breakdown Chart (WBC) that details your contribution to each document (Proposal, Requirements/ Functional Specification, Design Specification., UI Design Appendix, Meeting Minutes, and Poster Presentation). Provide as much detail as possible about tasks such as document design, research, drafting, editing/revising, and formatting. The WBC may be produced on a word processor and taped into the journal.	**/25%**
Comments		

ENSC 405W Grading Rubric for Project Proposal

Criteria	Details	Marks
Introduction/Background	Introduces basic purpose of the project. Includes clear project background.	**/05%**
Scope/Risks/Benefits	Clearly outlines project scope. Details both potential risks involved in project and potential benefits flowing from it.	**/15%**
Market/Competition/ Research Rationale	Describes the market for a commercial project and details the current competition. For a research project, the need for the system or device is outlined and current solutions are detailed.	**/10%**
Company Details	Team has devised a creative company name, product name, and a logo. Outlines relevant skills/expertise of team members.	**/05%**
Project Planning	Details major processes and milestones of the project. Includes Gantt, Milestone, and/or PERT charts as necessary (MS Project).	**/10%**
Cost Considerations	Includes a realistic estimate of project costs. Includes potential funding sources. Allows for contingencies.	**/05%**
Conclusion/References	Summarizes project and motivates readers. Includes references for information from other sources.	**/10%**
Rhetorical Issues	Document is persuasive and could convince a potential investor to consider funding the project. Clearly considers audience expertise and interests.	**/10%**
Presentation/Organization	Document looks like a professional proposal. Ideas follow in a logical manner. Layout and design is attractive.	**/10%**
Format Issues	Includes letter of transmittal, title page, executive summary, table of contents, list of figures and tables, glossary, and references. Pages are numbered, figures and tables are introduced, headings are numbered, etc. References and citations are properly formatted.	**/10%**
Correctness/Style	Correct spelling, grammar, and punctuation. Style is clear, concise, coherent.	**/10%**
CEAB Outcomes: Below Standards, Marginal, Meets, Exceeds	11.2 – Cost Considerations: 11.3 – Project Assessment and Scope: 11.4 – Project Risk: 11.5 – Project Planning:	

ENSC 405W Grading Rubric for Design Progress Reviews

Criteria	Details	Marks
Introduction/Background (2 min)	Introduces basic purpose and scope of the project clearly and concisely. Introduce team and individual roles in project. Provides any necessary background.	**/15%**
Persuasion (1 min)	Explain why the project is important or otherwise impressive.	**/05%**
Financial (1 min)	Outlines your funding sources and expenditures to date	**/05%**
Outline Market (2 min)	Outline target market, its size, and their required expertise.	**/15%**
Design Elements (2 min)	Provide a high level overview of the system design. Outline possible design alternatives. Outline possible risks.	**/20%**
Remediation (1 min)	Outline how you will compensate for any current schedule slippage or issues with design or materials. Anticipates how to deal with unforeseen problems that may arise.	**/10%**
Conclusion (1 min)	Clearly and concisely summarizes the current state of the project.	**/05%**
Questions (5 min)	Questions are answered clearly and concisely without becoming defensive.	**/10%**
Team Participation	Everyone participates in presentation.	**/10%**
Timing	10 minutes for presentation. 5 minutes for questions.	**/05%**
Comments		

ENSC 405W Grading Rubric for Requirements Specification

Criteria	Details	Marks
Introduction/Background	Introduces basic purpose of the project.	**/05%**
Content	Document explains the requirements of the proposed product without excessive design content (i.e., outlines the "what" rather than the "how").	**/10%**
Technical Correctness	Ideas presented represent requirements specifications that must be considered for a marketed product. Specifications are presented using tables, graphs, and figures where possible (rather than over-reliance upon text).	**/15%**
Process Details	Complete analysis of problem. Justification for chosen requirements. Sources of ideas referenced. Specification distinguishes between requirements for current project version and later stages of project (i.e., proof-of-concept, prototype, and production versions). Comprehensively details constraints. **Includes a one page appendix detailing the functionalities that will be presented for the proof-of-concept during the 405W poster presentation.**	**/20%**
Engineering Standards	Outlines specific engineering standards that apply to the device or system and lists them in the references.	**/10%**
Sustainability/Safety	Issues related to sustainability issues and safety of the device are carefully analyzed. This analysis must cover the "cradle-to-cradle" cycle for the current version of the device and should outline major considerations for a device at the production stage.	**/10%**
Conclusion/References	Summarizes requirements. Includes references for other sources.	**/05%**
Presentation/Organization	Document looks like a professional specification. Ideas follow logically.	**/05%**
Format Issues	Includes letter of transmittal, title page, abstract, table of contents, list of figures and tables, glossary, and references. Pages are numbered, figures and tables are introduced, headings are numbered, etc. References and citations are properly formatted.	**/10%**
Correctness/Style	Correct spelling, grammar, and punctuation. Style is clear concise, and coherent. Uses passive voice judiciously.	**/10%**
CEAB Outcomes: Below Standards, Marginal, Meets, Exceeds	8.2 Responsibilities of an Engineer: 8.5 Integration of Standards: 9.2 Sustainability:	

ENSC 405W Grading Rubric for Design Specification

Criteria	Details	Marks
Introduction/Background	Introduces basic purpose of the project.	**/05%**
Content	Document explains the design specifications with appropriate justification for the design approach chosen. Includes descriptions of the physics (or chemistry, biology, geology, meteorology, etc.) underlying the choices.	**/20%**
Technical Correctness	Ideas presented represent design specifications that are expected to be met. Specifications are presented using tables, graphs, and figures where possible (rather than over-reliance upon text). Equations and graphs are used to back up/illustrate the science/engineering underlying the design.	**/25%**
Process Details	Specification distinguishes between design details for present project version and later stages of project (i.e., proof-of-concept, prototype, and production versions). Numbering of design specs matches up with numbering for requirements specs (as necessary and possible).	**/15%**
Test Plan Appendix	Provides a test plan outlining the requirements for the final project version. Project success for ENSC 405W will be measured against this test plan.	**/10%**
User Interface Appendix	Summarizes requirements for the User Interface (based upon the lectures and the concepts outlined in the Donald Norman textbook).	**Graded Separately**
440 Plan Appendix	Analyses progress in 405W and outlines development plans for 440. Includes an updated timeline, budget, market analysis, and changes in scope. Analyses ongoing problems and proposes solutions.	**Graded Separately**
Conclusion/References	Summarizes functionality. Includes references for information sources.	**/05%**
Presentation/Organization	Document looks like a professional specification. Ideas follow logically.	**/05%**
Format/Correctness/Style	Includes letter of transmittal, title page, abstract, table of contents, list of figures and tables, glossary, and references. Pages are numbered, figures and tables are introduced, headings are numbered, etc. References and citations are properly formatted. Correct spelling, grammar, and punctuation. Style is clear, concise, and coherent. Uses passive voice judiciously.	**/15%**
Comments		

ENSC 405W Grading Rubric for User Interface Design
(5-10 Page Appendix in Design Specifications)

Criteria	Details	Marks
Introduction/Background	Appendix introduces the purpose and scope of the User Interface Design.	**/05%**
User Analysis	Outlines the required user knowledge and restrictions with respect to the users' prior experience with similar systems or devices and with their physical abilities to use the proposed system or device.	**/10%**
Technical Analysis	Analysis in the appendix takes into account the "Seven Elements of UI Interaction" (discoverability, feedback, conceptual models, affordances, signifiers, mappings, constraints) outlined in the ENSC 405W lectures and Don Norman's text (*The Design of Everyday Things*). Analysis encompasses both hardware interfaces and software interfaces.	**/20%**
Engineering Standards	Appendix outlines specific engineering standards that apply to the proposed user interfaces for the device or system.	**/10%**
Analytical Usability Testing	Appendix details the analytical usability testing undertaken by the designers.	**/10%**
Empirical Usability Testing	Appendix details completed empirical usability testing with users and/or outlines the methods of testing required for future implementations. Addresses safe and reliable use of the device or system by eliminating or minimizing potential error (slips and mistakes) and enabling error recovery.	**/20%**
Graphical Presentation	Appendix illustrates concepts and proposed designs using graphics.	**/10%**
Correctness/Style	Correct spelling, grammar, and punctuation. Style is clear concise, and coherent. Uses passive voice judiciously.	**/05%**
Conclusion/References	Appendix conclusion succinctly summarizes the current state of the user interfaces and notes what work remains to be undertaken for the prototype. References are provided with respect to standards and other sources of information.	**/10%**
CEAB Outcomes: Below Standards, Marginal, Meets, Exceeds	1.3 Engineering Science Knowledge: 4.1 Requirement and Constraint Identification: 5.4 Documents and Graphic Generation: 8.2 Responsibilities of an Engineer:	

ENSC 405W Grading Rubric for ENSC 440 Planning Appendix

(5-10 Page Appendix in Design Specifications)

Criteria	Details	Marks
Introduction/Background	Introduces basic purpose of the project. Includes clear project background.	**/05%**
Scope/Risks/Benefits	Clearly outlines 440 project scope. Details both potential risks involved in project and potential benefits flowing from it.	**/10%**
Market/Competition/ Research Rationale	Describes the market for the proposed commercial project and details the current competition. For a research project, the need for the proposed system or device is outlined and current solutions are detailed.	**/10%**
Personnel Management	Details which team members will be assigned to the various tasks in ENSC 440. Also specifically details external resources who will be consulted.	**/15%**
Time Management	Details major processes and milestones of the project. Includes both Gantt and Milestone charts and/or PERT charts as necessary for ENSC 440 (MS Project). Includes contingency planning.	**/15%**
Budgetary Management	Includes a realistic estimate of project costs for ENSC 440. Includes potential funding sources. Allows for contingencies.	**/15%**
Conclusion/References	Summarizes project and motivates readers. Includes references for information from other sources.	**/10%**
Rhetorical Issues	Document is persuasive and demonstrates that the project will be on time and within budget. Clearly considers audience expertise and interests.	**/10%**
Format/Correctness/Style	Pages are numbered, figures and tables are introduced, headings are numbered, etc. References and citations are properly formatted. Correct spelling, grammar, and punctuation. Style is clear, concise, and coherent.	**/10%**
Comments:		

ENSC 405W Grading Rubric for Poster Presentation

Criteria	Details	Marks
Hands-on Demo Materials	Proof-of-concept/mock-up/computer demo are well-designed and convincing.	**/40%**
Presentation	All team members are prepared and knowledgeable about project details. Able to answer questions at appropriate level for audience.	**/15%**
Readability, Layout, and Organization	Poster is organized in a way that presents the material clearly and Intuitively. Font size and type are easily readable from 1 meter. Makes appropriate use of graphics. Level of detail is appropriate to audience.	**/15%**
Conventions	Provides title, name of company, team member names, date, and affiliation. Includes introduction and conclusion. Mainly uses bulleted lists rather than text. Includes contact information. Selectively lists references.	**/10%**
Aesthetics/Visual Appeal	Colors chosen are complementary and effective. White space is used effectively and balanced with text appropriately.	**/10%**
Correctness	Edited carefully for spelling, grammatical, and format errors.	**/10%**
Comments	**Please note that egregious errors in readability, conventions, aesthetics, or correctness may result in additional deductions beyond the listed marks (weighting).**	