

ENSC 405W Grading Rubric for Design Specification

Criteria	Details	Point
Introduction/Background	<p>Introduces basic purpose of the project.</p> <ul style="list-style-type: none"> What's currently the problem being solved? How would you solve it? Highlight expected challenges to tackle for developing this project Be concise. Compared to the requirement specifications document, the intro/background will likely be half as long. Update information from comments and feedback received. Block diagrams are required. 	10
Content	<p>Document explains the design specifications with appropriate justification for the design approach chosen. Each design specification should try to reference one or more requirement (or standard) listed in the requirements specification document. Include descriptions of the physics (or chemistry, biology, geology, meteorology, etc.) underlying the choices.</p>	20
Technical Correctness	<p>Technical points are clear, properly formatted, and represent design specifications.</p> <ul style="list-style-type: none"> Ideas are expected to be used for construction. 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 or engineering underlying the design. 	20
Process Details	<p>Specification distinguishes between design details for the alpha phase of development (i.e., proof-of-concept and appearance prototypes), and if details can be known at this point, later versions of the product (e.g. engineering prototype, production prototype, and mass-produced).</p> <ul style="list-style-type: none"> While you should end up with a complete plan for your proof-of-concept and appearance prototypes, depending upon the nature of your project there might be uncertainty at this point about the later stages of the project in which case you can discuss those uncertainties and how the earlier prototypes can resolve them. Numbering of design specs matches up with numbering for requirements specs (if sensible to do so). 	15
Conclusion/References	<p>Summarize design choices.</p> <ul style="list-style-type: none"> Include references for information sources using IEEE format conventions. Be specific to PoC in your conclusion. You may have received comments from the requirement specification document. Discuss implementing these ideas here. 	5
Supporting Test Plans Appendix	<p>Provide supporting test plans to address testing subsystems and components.</p> <ul style="list-style-type: none"> This follows the short acceptance test plan provided in your requirement specification document (e.g. https://en.m.wikipedia.org/wiki/Test_plan) 	5
Supporting Design Options Appendix	<p>Provide design options and your choice with proper justifications.</p> <ul style="list-style-type: none"> Justification should be based on requirements mentioned in the requirement specification document. For example, if a requirement is to work stand-alone, state: "The device must be stand-alone based on requirement number xxx, there are four options: x1, x2, x3 and x4. Among these options, we chose a solar panel <u>because of</u> y and z reasons." 	15
Format/Correctness/Style	<p>Includes letter of transmittal, title page, abstract, table of contents, list(s) of figures and tables, glossary, version history, approvals and references. Document looks like a professional specification. Ideas follow logically.</p> <ul style="list-style-type: none"> 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