What: Discuss requirements for each rubric category and provide guidance on selecting the appropriate letter grade

Who: Led by John & Ken, all participate

How: Identify key content & characteristics of reports corresponding to the range of letter grades

Note: The presented “key content & characteristics” are not all-inclusive. If there are other items you would like to have included, please let us know
1. Background

1.1 Introduction

“General description of the project: What is to be accomplished, relevance / significance to the sponsor, and benefits upon completion. Evidence that the student has added insight.”

- A/A+: Description is complete and comprehensive. Added insight shows clear evidence of communication with sponsor and other relevant individuals. Claims are supported by references. A+ is faculty level / journal quality
- B: Description is sufficient. Added insight provided but some evidence of insufficient sponsor communication & some unsupported claims
- C: Description appears to simply be a rephrasing of original project statement. Added insight appears to be largely unsupported student opinion
- D: Description appears to simply be a rephrasing of original project statement. Little added insight
- F: Description provided but appears to be inferior to a simple rephrasing of original project statement. Little or no added insight
- F-: Completely omitted or no useful content

Note: Grade for section 1 = average of grades for 1.1, 1.2, & 1.3 (if req’d)
1. Background

1.2 Project Description

“Project description, verbatim, from sponsor.”

- A/A+: Brief introductory paragraph followed by project description as provided by sponsor. A+ is faculty level / journal quality
- C: Simple copy-paste of project description as provided by sponsor
- F: Appears to have omitted parts of project description as provided by sponsor
- F-: Completely omitted or no useful content

Note: Grade for section 1 = average of grades for 1.1, 1.2, & 1.3 (if req’d)
1. Background

1.3 Original System*

“Clear, concise description of system as it existed at the start.”

• A/A+: A complete and comprehensive discussion of the original systems structure, operation, performance, and deficiencies. Claims made show clear evidence, as most effective, of communication with sponsor, other relevant individuals, actual testing of system, and/or citing of reliable sources. A+ is faculty level / journal quality

• B: A complete discussion of the original systems structure, operation, performance, and deficiencies. Claims made show some evidence of communication with sponsor, etc., but could have done more to support claims.

• C: A sufficient discussion of the original systems structure, operation, performance, and deficiencies. Claims made appear to simply be unsupported student opinion.

• D: At least one of the structure, operation, performance, or deficiencies discussions is missing or insufficient. Claims are unsupported.

• F: Multiple discussions of structure, operation, performance, or deficiencies discussions are missing

• F-: Completely omitted or no useful content

* Not present in some reports

Note: Grade for section 1 = average of grades for 1.1, 1.2, & 1.3 (if req’d)
2. Requirements

2.1 CRs & 2.5 HoQ

“2.1: List of CRs that are clear, comprehensive, necessary, potentially verifiable, and attainable, showing a good understanding of the problem. Weights adding to 250, with justifications. 2.5: HoQ in template with CRs, weights, all approvals.”

• Graded by course instructor
3. Existing Designs

3.1 Design Research

“A clear description of how existing designs were researched. Evidence that a reasonable collection of relevant sources (academic and professional journals, the web, catalogs, interviews with sponsor, advisor, etc.) were used effectively.”

• A/A+: The web, textbooks, journals, interviews, and other sources were used. All relevant sources were thoroughly used. A+ is faculty level / journal quality

• B: Besides the web and other easily accessible sources, textbooks, journals, and other sources were used to some extent, however not as extensively as would have been most useful

• C: Only easily accessible sources (e.g., on the web) were used, but this appears to be minimally sufficient.

• D: Only easily accessible sources were used, and this appears to be insufficient

• F: A number of obvious and easily accessible sources were not used, insufficient

• F-: Completely omitted or no useful content
3. Existing Designs

3.2 System Level

“At least three system-level existing designs, described in sufficient detail to assess relevance and applicability to the project.”

- **A/A⁺**: A very broad, insightful, and innovative look into systems & technologies both obvious and not necessarily intended for the application area of the project but actually very relevant to a creative and effective design. A+ is faculty level / journal quality

- **B**: Some obvious and relevant and not-so-obviously-related existing designs. However, better designs could likely have been found with a bit more effort.

- **C**: Fairly obvious examples of existing designs, search was terminated when the minimum required number of existing designs was found

- **D**: Fairly obvious examples of existing designs, search was terminated before the minimum required number of existing designs was found

- **F**: Designs listed were not relevant to the project

- **F⁻**: Completely omitted or no useful content
3. Existing Designs

3.3 Subsystem Level

"At least three subsystem-level existing designs for each of at least three subsystems of the system to be designed, described in sufficient detail to assess relevance and applicability to this project."

- **A/A+:** Thoughtful and complete functional decomposition. Subsystems consist of both obvious and not necessarily intended for the application area of the project but actually very relevant. A+ is faculty level / journal quality

- **B:** Decomposition is effective, but not optimal. Some obvious and some not-so-obvious existing designs. Better designs could be found with a bit more effort.

- **C:** Functional decomposition consists of the required three subsystems, but is not as useful as it could be. Fairly obvious examples of subsystem designs, search was terminated when the minimum required number was found

- **D:** Functional decomposition is lacking the required three subsystems and/or insufficient number of subsystems. Content that is present is minimally acceptable

- **F:** Functional decomposition is lacking the required three subsystems and/or insufficient number of subsystems. Content that is present is largely unacceptable.

- **F-:** Completely omitted or no useful content
Clarity and Conciseness

“Clear, concise, and focused; main ideas stand out; supporting details and references are effective and relevant. Writing is free of padding with no unnecessary repetition.”

- A/A+: Polished, controlled writing. Sentence meaning clear on first reading. Details and references enhance arguments, and modifiers increase sentence precision. Wordy constructions (e.g., “It is/there are...” sentence starts) are infrequent. Sentence length correlates with message complexity (long sentences reserved for complex ideas). A+ is faculty level / journal quality.

- B: Point of sentence apparent, but some rearranging would help. Arguments are effective, but could be made more so with additional detail & references. Sentence length is appropriate for content, and words are used effectively.

- C: Reads like a rough draft. Sentences are relevant, but may require effort to understand. Arguments are more-or-less effective, but may be weak, with some misplaced details. Some awkward sentence construction.

- D: Some sentences irrelevant, others difficult to understand. Incomplete, ineffective arguments. Appears text was added simply to increase word count.

- F: Large sections of text are incomprehensible

- F-: Large sections of text are missing

Focus here is on sentence-level issues; Issues of organizational clarity are covered in following section.
Organization

“Effective sequencing and paragraph breaks. Writing is easy to follow. Writing includes smooth, effective transitions among sentences, paragraphs, and ideas. Details fit where placed.”

• A/A+: Sections begin with introductory text. Paragraphs begin with topic sentence, middle sentences expand topic, and ending sentences summarize & transition. Bulleted/numbered lists incorporated appropriately & correctly. Transitional language guides idea flow. Tables & figures are constructed and captioned properly and introduced/addressed in text. A+ is faculty level / journal quality.

• B: Section introductions, paragraph and list structure, and table & figure use are handled properly, but frequently could be improved.

• C: Most sections begin w/ introductory sentence / paragraph. Paragraph structure exits, but topic sentences may be weak and transitions sometimes absent. Lists, tables, and figures used, but referencing and captioning only minimally sufficient.

• D: Weak or frequently absent introductory sentences or paragraphs. Paragraph structure is evident, but elements such as topic sentences or summary / transition sentences are absent consistently. Tables & Figures not referenced / captioned.

• F: Sections lack introductory sentences or paragraphs. No effective paragraph structure. Lists, tables, and figures are not used or used inappropriately.

• F-: Large sections of text are missing
Conventions

“Writing shows control of standard writing conventions (punctuation, spelling, capitalization, grammar, and usage) and uses them effectively to enhance communication. Errors are few and minor.”

• Based on number of errors, text appears to have been proofread.
• Sentences are complete and grammatically correct.
• Punctuation is used correctly (is in the right place and enhances clarity).
• Acronyms are spelled out at first mention.
• When a sentence begins with a number, the number is spelled out.
• Proper nouns are capitalized and all other nouns are lowercased.
• Sentence subjects and verbs agree.
• Verb tense choices are appropriate.

• A/A+: Always yes to all. A+ is faculty level / journal quality
• B: Almost always yes
• C: Usually yes
• D: Occasionally yes
• F: Rarely / never yes
• F-: Large sections of text are missing
Citing Sources

“Significant claims cited in text and listed in References using format given in course syllabus. Tables and figures cited correctly in text. Few omissions or errors.”

• Aside from common-knowledge, information from external sources is cited.
• Supporting external evidence is provided for all claims / conclusions requiring it.
• Cited sources enhance report and author credibility.
• Except in section 1.2, borrowed information is paraphrased, not directly quoted.
• In-text citations and Reference List entries conform to a technical format.
• The Reference List includes all sources cited in text, and no additional sources.
• Tables, figures, and images taken from other sources are properly cited.
• Appendices, if included, are used and referenced correctly.

- A/A+: Always yes to all. A+ is faculty level / journal quality
- B: Almost always yes
- C: Usually yes
- D: Occasionally yes
- F: Rarely / never yes
- F-: Large sections of text are missing