Final Report Rubric — COE 485: Senior Design Project

Term: _____ Project: _____ Evaluator: _____

Students: _____ ☐ Advisor ☐ Examiner ☐ Coordinator

Criteria	Score 100%	Novice 0 – 20%	Apprentice 20 – 50%	Competent 50 – 80%	Proficient 80 – 100%
Problem Definition Weight: 5%		No problem definition.	Vaguely-defined problem.	Adequately-defined problem.	Well-defined problem.
Requirements and Specification Weight: 5%		Insufficient user requirements and technical specification: meeting the stated requirements and specifications does not solve the stated problem.	User requirements and technical specification cover only some aspects of the system, and miss some significant aspects, or characterize them inaccurately.	Accurate user requirements and technical specification that cover most aspects of the system.	Accurate, comprehensive, and sufficiently specific user requirements and technical specification.
System Architecture Weight: 25%		1. No discussion of the general solution concept and algorithms. 2. Non-representative, or missing, list of abstract system components. 3. Unclear assignment of system functions to specific system components. 4. No alternative architectures are considered.	1. Incomplete description of the solution concept, algorithms, and alternative approaches. 2. Only some system components are identified. Some major components are missing. 3. Some main system functions are not mapped to any system components. 4. Unclear designation of hardware vs. software components. 5. Superficial discussion of alternative architectures. Unconvincing justification of architectural choices.	1. Reasonable description of the solution concept, algorithms, and alternative approaches. 2. Most major system components are identified, with mixed levels of abstraction. 3. Most system functions are assigned to specific system components. 4. Hardware vs. software components are identified. 5. Adequate discussion of alternative architectures, and adequate justification of architectural choices.	1. Thourough description of the solution concept, algorithms, and alternative approaches. 2. All major system components are identified with appropriate abstraction. 3. Clear assignment of system functions to system components, covering all system functions. 4. Hardware vs. software components are identified. 5. Insightful discussion of alternative architectures and the involved tradeoffs, and convincing justification of architectural choices.
Component Design Weight: 20%		1. No justification for off-the-shelf vs. custom components. 2. Off-the-shelf components: no alternatives are considered. 3. Custom components: no description of component design.	1. Unconvincing or unsound justification for off-the-shelf vs. custom components. 2. Off-the-shelf components: basic comparison of alternatives; poor/missing selection criteria. 3. Custom components: incomplete description of component design; no design alternatives are considered.	1. Reasonable justification for off-the-shelf vs. custom components. 2. Off-the-shelf components: reasonable comparison of alternatives; biased selection criteria. 3. Custom components: reasonable description of component design; some design alternatives are considered, but some obvious ones are not.	1. Sound justification for off-the-shelf vs. custom components. 2. Off-the-shelf components: thorough comparison of alternatives; sound selection criteria. 3. Custom components: clear description of component design; all obvious design alternatives are considered.

Criteria	Score 100%	Novice 0 – 20%	Apprentice 20 – 50%	Competent 50 – 80%	Proficient 80 – 100%
System Integration Weight: 15%		1. Inter-component interfaces are not defined. 2. No discussion of interaction between system components.	1. Inter-component interfaces are defined, but no justification for custom vs. standard interfaces. 2. Custom interfaces are not specified. 3. Interactions between some components are partially described.	1. Inter-component interfaces are defined, with adequate justification for custom vs. standard interfaces. 2. Custom interfaces are adequately specified. 3. Interactions between most components are adequately described.	1. Inter-component interfaces are defined, with sound justification for custom vs. standard interfaces. 2. Custom interfaces are clearly specified. 3. Interactions between all interacting components are clearly described.
Testing, Analysis, and Evaluation Weight: 10%		1. No testing. 2. No analysis of any system attributes.	1. Arbitrary testing methodology that ensures meeting some system requirements. 2. Incorrect analysis of some system attribute(s).	1. Systematic testing methodology that ensures meeting some requirements. 2. Plausible analysis of some system attribute(s) without experimental evidence.	1. Comprehensive and systematic testing methodology that ensures meeting all requirements. 2. Rigorous analysis of some system attribute(s), supported by experimental results.
Handling Issues Weight: 5%		No issues reported.	1. Too few reported issues. 2. Arbitrary handling of issues, e.g. simpler explanations are not eliminated first.	1. Sensible resolutions are found for most issues, starting from simpler explanations to more complex ones. 2. Workarounds, rather than proper resolutions, are excessively considered.	1. Systematic and sound handling of issues, starting from simpler explanations to more complex ones. 2. Practical, non-ideal resolutions/workarounds are considered when necessary.
Tools and Standards Weight: 5%		No engineering tools or standards used, or none reported.	1. Some tools or standards are used, but custom solutions are sometimes used instead. 2. No justification of tool and/or standard selection.	1. Appropriate tools and standards are preferred over custom solutions. 2. No justification of tool and/or standard selection.	1. Appropriate tools and standards are preferred over custom solutions. 2. Tool and/or standard selection is reasonably justified.
Teamwork Weight: 5%		No teamwork: fewer than three members	The work load and variety on each member does not seem to be fair or at least one member is assigned trivial non-technical tasks (e.g. writing the report).	1. The work load and variety on each member seems fair. 2. Leadership role being assumed by each member for different tasks is NOT apparent.	1. The work load and variety on each member seems fair. 2. Leadership role being assumed by each member for different tasks is evident.
Technical Writing Weight: 5%		1. Illogical document structure. 2. Frequent grammer, spelling, or punctuation mistakes. 3. Confusing presentation of ideas. 4. Required background missing.	1. Awkward document structure. 2. Noticeable grammer, spelling, or punctuation mistakes. 3. Vague presentation of ideas. 4. Inadequate background.	1. Well-structured document. 2. Few grammer, spelling, or punctuation mistakes. 3. Understandable presentation of ideas. 4. Reasonable background.	1. Well-structured document. 2. No grammer, spelling, or punctuation mistakes. 3. Clear presentation of ideas. 4. Excellent and complete background.