

Assessment Rubric 2021-22

CPEG4912 Computer Engineering Final Year Thesis in ELEC

**Instructions:**

FYT faculty advisor evaluates each student individually in a FYT team.

FYT second reader evaluates each FYT team.

Program Outcome	Component	Percentage	Exemplary (A- to A+)	Competent (B- to B+)	Needs Work (C- to C+)	Unsatisfactory (D, F)
<b>Proposal Report</b>						
	Thesis objective formulation, methodology to be followed, background	60%	The objectives are well defined and prioritized. All relevant information and constraints are obtained and accurately analyzed. Decision and design recommendation are well supported by the information.	All major objectives are identified. Sufficient information is obtained. Appropriate analyses are selected. Decision and design recommendation are reasonable and mostly supported by the information.	Most major objectives are identified but one or two minor ones are missing or priorities are not established. Most constraints are identified; some are not adequately addressed or accurately analyzed. Decision and design recommendation is reasonable.	Many major objectives are not identified. Information is collected but without any analysis. Only one solution is considered or other solutions were ignored or incompletely analyzed. Many constraints and criteria were ignored.
	Clarity and presentation of the report (organization, use of English)	30%	Report is well organized and clearly written. The underlying logic is clearly articulated and easy to follow. Words are chosen that precisely express the intended meaning and support reader comprehension. Diagrams or analyses enhance and clarify presentation of ideas. Sentences are grammatical and free from spelling errors.	Report is organized and clearly written for the most part. In some areas the logic or flow of ideas is difficult to follow. Words are well chosen with some minor exceptions. Diagrams are consistent with the text. Sentences are mostly grammatical and only a few spelling errors are present but they do not hinder the reader.	Report is organized via topic/flow, but in some areas it is difficult to follow the flow of ideas. Words can be further improved. Some diagrams are not well explained. Grammar errors that impede the flow of communication.	Report lacks an overall organization. Reader has to make considerable effort to understand the underlying logic and flow of ideas. Diagrams are absent or inconsistent with the text. Grammatical and spelling errors make it difficult for the reader to interpret the text in places.
	Planning of future work	10%	Complete and well-analyzed task list. Detailed well-around plan of future work. Reasonable timing and labor allocation.	Well-defined task list. Good plan of future work. Practical timing and labor allocation.	A possibly incomplete task list without priority. Plan of future work but not well justified. Time and labor allocation is not well thought.	No clear task list. Future work is not well considered. No time and labor allocation.

Program Outcome	Component	Percentage	Exemplary (A- to A+)	Competent (B- to B+)	Needs Work (C- to C+)	Unsatisfactory (D, F)
<b>Progress Report</b>						
	Work completed	60%	Progress is beyond expectations with respect to plan. Highly detailed discussions on milestones completed.	Progress is highly satisfactory with respect to plan. Detailed discussions on milestones completed.	Progress is mostly satisfactory with respect to plan. Some discussions on milestones completed.	Progress is not satisfactory with respect to plan. No discussions on milestones completed.
	Clarity and presentation of the report (organization, use of English)	30%	Report is well organized and clearly written. The underlying logic is clearly articulated and easy to follow. Words are chosen that precisely express the intended meaning and support reader comprehension. Diagrams or analyses enhance and clarify presentation of ideas. Sentences are grammatical and free from spelling errors.	Report is organized and clearly written for the most part. In some areas the logic or flow of ideas is difficult to follow. Words are well chosen with some minor exceptions. Diagrams are consistent with the text. Sentences are mostly grammatical and only a few spelling errors are present but they do not hinder the reader.	Report is organized via topic/flow, but in some areas it is difficult to follow the flow of ideas. Words can be further improved. Some diagrams are not well explained. Grammar errors that impede the flow of communication.	Report lacks an overall organization. Reader has to make considerable effort to understand the underlying logic and flow of ideas. Diagrams are absent or inconsistent with the text. Grammatical and spelling errors make it difficult for the reader to interpret the text in places.
	Use of research approaches related to hardware/software engineering techniques (concepts of initial system development, requirement specification, system analysis specification & user interface	10%	Employ appropriate analytical tools and/or hardware/software engineering methodologies. Clearly demonstrates mastery of several areas of the curriculum.	Employ appropriate analytical tools and/or hardware/software engineering methodologies acquired in his course of study to the project at hand.	Employ some analytical tools and/or hardware/software engineering methodologies acquired.	Does not make use of analytical tools and/or hardware/software engineering methodologies relevant to the project

specification are included here)

Program Outcome	Component	Percentage	Exemplary (A- to A+)	Competent (B- to B+)	Needs Work (C- to C+)	Unsatisfactory (D, F)
<b>Final Report</b>						
	Results obtained	60%	Perform competently and in addition notice improvements that can be made to the design spec. Deliver <b>HW/SW system of exceptional quality and well-conceived architecture</b> . Plan and execute thorough list of test cases.	Develop code that follows the design spec. Develop <b>HW/SW system with sound architecture</b> . Plan and execute list of test cases with expected result specified.	Develop <b>HW/SW system</b> that follows the design spec, but can be further improved. Plan and execute some test cases, but not covering all possible scenarios.	Fail to develop <b>HW/SW system</b> following the design spec and/or <b>proper methodology</b> . Perform minimal testing of own code, concentrating exclusively on the simplest, most obvious cases.
	Clarity and presentation of the report (organization, use of English)	30%	Report is well organized and clearly written. The underlying logic is clearly articulated and easy to follow. Words are chosen that precisely express the intended meaning and support reader comprehension. Diagrams or analyses enhance and clarify presentation of ideas. Sentences are grammatical and free from spelling errors.	Report is organized and clearly written for the most part. In some areas the logic or flow of ideas is difficult to follow. Words are well chosen with some minor exceptions. Diagrams are consistent with the text. Sentences are mostly grammatical and only a few spelling errors are present but they do not hinder the reader.	Report is organized via topic/flow, but in some areas it is difficult to follow the flow of ideas. Words can be further improved. Some diagrams are not well explained. Grammar errors that impede the flow of communication.	Report lacks an overall organization. Reader has to make considerable effort to understand the underlying logic and flow of ideas. Diagrams are absent or inconsistent with the text. Grammatical and spelling errors make it difficult for the reader to interpret the text in places.
	Use of research approach related to <b>hardware/software</b> engineering techniques (concepts of system design specification and implementation are included here)	10%	Employ appropriate analytical tools and/or <b>engineering methodologies</b> . Clearly demonstrates mastery of several areas of the curriculum and is able to propose innovative solutions to the technical challenges posed by the project.	Employ appropriate analytical tools and/or <b>engineering methodologies</b> acquired in his course of study to the project at hand. Clearly demonstrate mastery of many areas of the curriculum and is able to successfully complete the proposed project.	Employ some analytical tools and/or <b>engineering methodologies</b> acquired. Make progress towards addressing the technical challenges of the project. Complete most of the major tasks in the proposed project.	Does not make use of analytical tools and/or <b>engineering methodologies</b> relevant to the project. Does not demonstrate requisite command of the material covered in the curriculum. Unable to finish the proposed project.

Program Outcome	Component	Percentage	Exemplary (A- to A+)	Competent (B- to B+)	Needs Work (C- to C+)	Unsatisfactory (D, F)
<b>Oral Presentation</b>						
	Project demonstration	40%	Present a fully-functioning working product with several original/inventive elements. Show strong effort was made in breaking new ground and building excitement about the application. The demonstration techniques are imaginative and effective in conveying ideas to the audience.	Present a working product with support to all desired functions. Offer some new information or approach about the application. The demonstration techniques are effective in conveying main ideas.	Present a working product but some desired functions are not supported or malfunctioned. Simply shows how the application works. The demonstration only conveys main ideas.	The product is incomplete or does not work. Show little effort in building the application. The demonstration failed to capture the interest of the audience and/or is confusing in what was communicated.
	Delivery: Oral delivery, contact with audience, slides, timing	40%	Slides cover complete, accurate description of important outcomes. Effective use of charts, graphs, figures etc. Use of fluent English and confident. Hold attention by direct eye contact and nature hand gestures. Excellent timing and smooth transition among different parts.	Slides cover accurate description of most of important outcomes. Use of charts, graphs, figures etc. Fair use of English. Hold attention by consistent use of direct eye contact. Presentation runs with desired pace and finishes within allocated time.	Slides cover some of the outcomes. Limited use of charts, graphs, figures etc. Use of English with noticeable errors. A few eye contacts only. Presentation pace is not well planned but finished within allocated time.	Information is arranged in confused and unstructured way. Student lacks of confidence. Poor use of English. Does not attempt to look at audience at all. Read notes or looks at computer screen only. Presentation is too short or too long for the allocated time.
	Quality of answers	20%	Student has presented full knowledge of both problem and solution. Answers to questions are strengthened by rationalization and explanation.	Student has competent knowledge and is at ease with information. Can answer questions.	Student is uncomfortable with information. Seems novice and can answer basic questions only.	Student has no or very less knowledge of both problem and solution. Cannot answer questions.