

**ELEN 4207 – Senior Projects Design**  
**Assessment Rubric**  
**Drayer Department of Electrical Engineering**  
**Lamar University**

Project Name \_\_\_\_\_ Date \_\_\_\_\_

Team Members


**Assessment For Outcome (1)**

*Ability to identify, formulate, and solve engineering problems*

Category/ Dimensions	4 (Exceeds Standards)	3 (Meets Stan- dards)	2 (Partially Meets Standards)	1 (Does Not Meet Standards)	Points
<b><i>Problem Statement</i></b>	Problem state- ment shows full understanding of the problem and clearly includes final design deliv- erables	Problem state- ment shows some under- standing of the problem and in- cludes most of the final design deliverables	Problem statement shows little under- standing of the prob- lem and few design deliverables are in- cluded	No problem state- ment and no design deliver- ables.	
<b><i>Procedure</i></b>	Clear definition of solution, proced- ure and meth- ods. Different al- ternatives are considered and evaluated.	Solution proced- ure and meth- ods are not al- ways clearly de- fined. Few alter- native designs are evaluated.	Outlines a general procedure but does not clearly identify methods. No alterna- tive designs are given.	No procedure, tries things out unsystematically	
<b><i>Final Design</i></b>	Final design demonstrates ef- fective use of de- sign process, en- gineering stan- dards, economics to satisfy design objectives and real-word con- straints	Final design demonstrates some use of de- sign process, en- gineering stan- dards, economics to satisfy some design objectives and real-word constraints	Final design demon- strates little use of design process, en- gineering standards, economics to satisfy few design objectives and real-word con- straints	Final design does not demonstrate the use of any design process, engineering stan- dards, economics to satisfy any de- sign objectives and real-word constraints	

## Assessment For Outcome (2)

*Design components, devices, and systems to meet specific needs in electrical engineering.*

Category/ Dimen- sions	4 (Exceeds Stan- dards)	3 (Meets Stan- dards)	2 (Partially Meets Standards)	1 (Does Not Meet Standards)	Points
<b>Design Process</b>	Clear evidence of ability to understand the design requirements, limitations, analyze different alternatives, and provide a feasible design	Some evidence of ability to understand the design requirements, limitations, analyze different alternatives, and provide a feasible design	Little evidence of ability to understand the design requirements, limitations, analyze different alternatives, and provide a feasible design	No evidence of ability to understand the design requirements, limitations, analyze different alternatives, and provide a feasible design	
<b>Use of Engineering Principles</b>	Clear evidence of ability to use engineering principles to design components, devices or systems	Some evidence of ability to use engineering principles to design components, devices or systems	Some evidence of ability to use engineering principles to design components, devices or systems	No evidence of ability to use engineering principles to design components, devices or systems	

## Assessment For Outcome (3)

*Demonstrate an ability to use techniques, skills and modern engineering tools necessary for engineering practice.*

Category/ Dimensions	4 (Exceeds Stan- dards)	3 (Meets Stan- dards)	2 (Partially Meets Standards)	1 (Does Not Meet Standards)	Points
<b>Selection of appropriate tools, skills and techniques in solving the problem</b>	Clear evidence of ability to <b>select appropriate tools</b> , techniques and skills to effectively solve problems or design a system	Some evidence of ability to select appropriate tools, techniques and skills to solve problems or design a system	Little evidence of ability to select appropriate tools, techniques and skills to solve problems or design a system	No evidence of ability to select appropriate tools, techniques and skills to solve problems or design a system	
<b>Application of tools, techniques and skills to develop a solution</b>	Clear evidence of ability to <b>correctly apply tools</b> , techniques and skills to effectively solve problems or design a system	Some evidence of ability to correctly apply tools, techniques and skills to effectively solve problems or design a system	Little evidence of ability to correctly apply tools, techniques and skills to effectively solve problems or design a system	No evidence of ability to correctly apply tools, techniques and skills to effectively solve problems or design a system	
<b>Analyzing the results gained from the tools</b>	Clear evidence of correct conclusion of results gained from the tool	Some evidence of correct conclusion of results gained from the tool	Little evidence of correct conclusion of results gained from the tool	No evidence of correct conclusion of results gained from the tool	

Totals Outcome 1 \_\_\_\_\_

Outcome 2 \_\_\_\_\_

Outcome 3 \_\_\_\_\_

Final \_\_\_\_\_