

1.0 Communication (SLO) – The graduate employs an understanding of audience, purpose and context to communicate effectively in a range of situations using appropriate media while displaying a significant aptitude for presenting scientific and technical materials to diverse audiences.

General Communication Rubrics

Learning Indicator	Level 4	Level 3	Level 2	Level 1
	Master	Proficient	Apprentice	Novice
1.0 Ability to concisely describe a problem, issue or situation along with current perspectives and potential new approaches	Provides a concise description of the problem or issue; Addresses all relevant content areas; Use of engineering terms/jargon matches audience knowledge level.	Provides a reasonable problem or issue description; Most relevant content areas are addressed; Engineering terms and jargon matches the level of most of the audience	Describes the problem or issue in vague terms; Addresses some of the relevant content areas; Engineering terms and jargon minimally matches audience level	Does not adequately describe problem or issue; Fails to address majority of relevant issues; Uses engineering terms and/or jargon which does not match audience knowledge
2.0 Ability to use persuasive arguments, well-reasoned and supported by evidence, to support a thesis or position	Presents arguments clearly and logically; Material provided abundantly supports the thesis or position proposed	Presents arguments clearly and in reasonable form; Minor gaps in analysis do not significantly alter conclusion; Adequate material provided to support thesis or position taken	Arguments presented do not always appear reasonable; Gaps in analysis detract from conclusion; Minimal materials presented to support thesis or position proposed.	Arguments are confusing and many gaps exist in the analysis; Conclusion does not appear to follow from arguments; Material provided inadequate to support thesis/proposal
3.0 Ability to use appropriate equations, numerical expressions and illustrations	All equations are clear, accurate and labeled. All variables are defined and units specified. All equations being used have been justified in the text; All figures, charts, etc. are accurate, consistent with text and of good quality. All items are labeled in accordance with engineering standards.	Most equations are clear, accurate and labeled. Most variables are defined and units specified. Equations are mostly justified with minor exceptions; Most figures, charts, etc. are accurate, consistent with text and of reasonable quality. Labeling is in accordance with engineering standards.,	Most equations are accurate but variables may be undefined or units missing. Not all equations are justified in the text. Figures do not always display information clearly and may not be consistent with the text; Labeling is incomplete.	Some equations are inaccurate and there is little attempt to justify their use. Variables are not defined and units are often missing; Illustrations are poorly made and are not always consistent with the text; Labeling does not comply with engineering standards

<p>4.0 Acknowledges the work of others in a consistent manner according to standard norms</p>	<p>Prior work is always acknowledged by referring to sources of ideas, data, findings, etc.; References are given in a standard manner providing the reader with sufficient information to locate the source to confirm accuracy and authenticity.</p>	<p>Prior work is usually acknowledged with occasional oversight; With minor exceptions, references are provided in a standard manner allowing readers to confirm authenticity and accuracy.</p>	<p>On several occasions, references are not stated when appropriate; References are incomplete or inaccurate making it difficult/impossible to confirm authenticity and/or accuracy,</p>	<p>Little or no attempt is made to acknowledge work of others; Few references are included and those references are incomplete, inaccurate or both</p>
<p>5.0 Ability to effectively communicate with diverse audiences</p>	<p>Demonstrates an ability to adjust tone and style to a wide and highly diverse range of audiences</p>	<p>Demonstrates the ability to adjust tone and style to several different audiences. Occasionally displays style or tone inappropriate to the target audience</p>	<p>Demonstrates the ability to communicate with a restricted range of audiences only; Often uses style or tone inappropriate to the target audience</p>	<p>Does not demonstrate any ability to adjust style or tone to different audiences; Uses the identical style and tone under all circumstances</p>
<p>6.0 Ability to effectively communicate in a variety of ways</p>	<p>Demonstrates an ability to creatively and effectively use many diverse methods of communication, including a variety of visual and auditory styles</p>	<p>Demonstrates an ability to effectively use several, diverse communication methods although clearly favors specific approaches or methods.</p>	<p>Demonstrates an ability to use a limited variety of communication methods. Repeatedly uses the same or similar approach or method</p>	<p>Demonstrates an ability to use only 1 or 2 methods of communication; Repeatedly focuses on a single approach.</p>

**Oral Communication
Rubrics**

Learning Indicator	Level 4	Level 3	Level 2	Level 1
	Master	Proficient	Apprentice	Novice
O1. Ability to create a visually stimulating and informative presentation	Text is easily read by audience furthest from speaker in the time provided; Graphs, charts etc are well-designed and labeled and support the verbal presentation. Slides are of professional quality.	Text can be read by most of the audience; Occasionally too much text/slide to be read in time provided. Charts, graphs, etc., are well-designed and labeled and support verbal presentation; Slides appear reasonable.	Text is readable with effort although several slides have too much material to be read in time. Graphs, charts etc. adequate although some do not support verbal presentation; Some slides are poorly made	Text is not readable; Many slides have more material than can be read in time; Graphs, charts, etc. poorly designed and do not support verbal presentation; Slide format detracts from verbal presentation; Slides are poor.
O2. Ability to present clearly and maintain the interest of an audience in the material being presented	Presenter communicates clearly through verbal or other means; Attitudes demonstrates confidence and enthusiasm; Audience attention is constantly maintained.	Presenter communicates clearly through verbal or other means; Attitude demonstrates confidence but not enthusiasm; Audience attention is mostly maintained.	Presenter communicates clearly most of the time but has occasional lapses; Attitude indicates lack of confidence or disinterest; Audience attention occasional wanders.	Presenter has problems clearly communicating; Several lapses during which the presentation stalls; Attitude indicates lack of confidence, lack of preparation or disinterest. Audience attention is not maintained.
O3. Ability to handle audience questions in a professional manner	Demonstrates full knowledge of the material; Understands and answers questions as asked; Can explain and elaborate on the answers provided.	Demonstrates sufficient knowledge to answer most questions; Understands and answers questions being asked; Does not explain or elaborate beyond minimal answer.	Demonstrates difficulty answering questions beyond rudimentary level; Answers not always clearly related to questions being asked. Does not explain or elaborate	Is unable to answer most questions at any level. Often gives answers unrelated to question asked. Cannot explain or elaborate even with assistance.

**Written Communication
Rubrics**

Learning Indicator	Level 4	Level 3	Level 2	Level 1
	Master	Proficient	Apprentice	Novice
W1. Ability to create a well-organized document that is visually appealing	The document is visually appealing and easily navigated; A table of contents is provided and sections are delineated through the appropriate use of headers and white space. Ideas flow logically and follow the organizational structure.	The document is organized and a table of contents is provided; Some sections are delineated through headers and white space but the format could be improved. For the most part ideas flow logically but may not always follow the organizational structure	Small errors are present in the table of contents or elsewhere; Sections are inconsistently delineated and ideas presented do not always follow logically and often fail to match the organizational structure	The document is not visually appealing and few navigational tools are provided. The table of contents is misleading or absent; The flow of ideas is not logical and does not match the organizational structure of the document
W2. Ability to use appropriate words and grammatical structure	Sentences are complete and grammatical. They flow together smoothly; Words are chosen for precise meanings; Engineering terms and jargon are used appropriately; There are no spelling, labeling, or punctuation errors.	Sentences are mostly complete grammatical and flow smoothly; Minor errors exist but do not distract the reader; For the most part, engineering terms/jargon used correctly but not always defined. There are a few errors (1-5) in spelling, labeling and/or punctuation.	Some errors in sentence structure, grammar, or flow enough to distract reader from the main message; Inappropriate use of engineering terms or jargon leading to some confusion; Word choice could be improved and there are several instances (>5 and <10) of spelling and/or punctuation errors	Multiple errors in sentence structure/grammar/flow significantly distract reader from message; Engineering terms and jargon often used incorrectly or without definition. Multiple errors (>10) in spelling, labeling, and punctuation.
W3. Ability to use appendices appropriately	Information is placed appropriately in either main text or appendices; Appendices are documented and referenced appropriately in the text.	Appendices are used in an appropriate manner and documented and referenced correctly; Division of materials between main text and appendices is not optimal	While appendices are used, they are not properly documented and referenced in the text; Content of the appendices is incomplete; Division of material between main text and appendices is poor	Appendices are not used when appropriate; There is unnecessary inclusion of detail in the main body of the text.