

## LAB PERFORMANCE EVALUATION RUBRIC (FOR SYSTEM DESIGN LAB)

performance indicators	Inadequate Needs improvement	Developing	Good	Excellent	Score
	0-4	5-6	7-8	9-10	
<b>PI 1 Participation &amp; Regularity</b>	Irregular	More or less Punctual & regular	Most of the time punctual & Regular.	Punctual & Regular	
<b>PI 2 Background preparation - lists ideas found in the textbook</b>	No background preparation	Refers the textbooks occasionally.	Good background preparation before the design work.	Well prepared with sufficient knowledge on the design aspect	
<b>PI 3 Design meets the requirements</b>	Design is incomplete, inaccurate and/or imprecise	Design is somewhat inaccurate and very imprecise.	Design is mostly accurate	Design is both accurate and precise and may show innovation	
<b>PI 3 Use of modern tools</b>	No use of tools	some amount of usage of softwares	Design is mostly carried out using modern tools	Extensive use of modern tools for the design & validation.	
<b>PI 4 Design Log Book</b>	No participation; sits on the sidelines with no log book;	Minimal participation; Shows little interest; doesn't pay attention irregular maintenance of log book;	Good participation; appears interested; enthusiastic maintains a design log book;	Shows outstanding Participation, does the assigned task, managing time properly; maintains a proper log book	
<b>TOTAL SCORE</b>					

## **LAB REPORT EVALUATION RUBRIC**

performance indicators	Inadequate Needs improvement	Developing	Good	Excellent	Score
	0-4	5-6	7-8	9-10	
<b>PI 1 Timely Submission</b>	Irregular	More or less meeting deadlines	Most of the time Meeting deadlines	Meeting Deadlines regularly	
<b>PI 2 Organization &amp; Preparation of report</b>	Lack of organization, incoherent development and/or unreadable	Inconsistent clarity, gaps in logical development, overall hard to follow	Mostly clear, logical progression, a few parts hard to follow	Overall organization clear & develops very logically; easy to read and understand	
<b>PI 3 Results &amp; Conclusions</b>	Methods and/or calculations missing or faulty Results unclear, erroneous or partially missing; objectives not met. Some parts impossible to read or understand. Conclusions not fully explained and/or lack sufficient rationale or support.	Methods, techniques, measurements and calculations identified but incomplete Some results presented; objectives partially met. Some parts hard to read or understand. Explains some conclusions and/or some rationale	Mostly explains methods, techniques, measurements and calculations made Results presented; objectives mostly complete Explains conclusions with mostly clear rationale	Fully explains all methods, techniques, measurements and calculations made Presented clearly and concisely; completes all objectives; Fully explains any conclusions with clear rationale.	
<b>TOTAL SCORE</b>					

## LAB VIVA EVALUATION RUBRIC

performance indicators		Inadequate Needs improvement	Developing	Good	Excellent	Score
		0-4	5-6	7-8	9-10	
<b>PI 1</b>	<b>Knowledge of subject</b>	Does not have grasp of information; answered only rudimentary questions	At ease with information; answered most questions	At ease; answered all questions <b>but</b> failed to elaborate	Demonstrated full knowledge; answered all questions with elaboration	
<b>PI 2</b>	<b>Conceptual Understanding</b>	Unable to explain the Mathematical/technical concept(s) involved.	Partially explains the Mathematical/technical concept(s) involved.	Adequately explains the Mathematical /technical concepts(s) involved.	Explains fully the mathematical/technical concepts involved.	
<b>PI 3</b>	<b>Communication and body language</b>	Unable to communicate ideas and unprofessional attitude	Communicates few ideas clearly and needs improvement in professional attitude	Communicates some ideas clearly and good professional attitude.	Communicates all ideas clearly and fluently and excellent professional attitude.	
<b>PI 4</b>	<b>Confidence level</b>	Appears uneasy and somewhat insecure. Rarely faces the audience or makes eye contact.	Appears generally at ease and confident. Sometimes faces the audience and maintains eye contact.	Appears fairly comfortable and confident. Generally faces the audience and maintains good eye contact.	Appears very comfortable and confident. Consistently faces the audience and maintains good eye contact.	
<b>TOTAL SCORE</b>						

# STUDENT GRAND VIVA EVALUATION RUBRIC

Evaluate the student's Grand viva employing the following range-scored criteria (best is on right)

performance indicators		Inadequate	Average	Admirable	Outstanding	Score
		1	2	3	4	4
PI 1	<b>Knowledge of subject</b>	Does not have grasp of information; answered only rudimentary questions	At ease with information; answered most questions	At ease; answered all questions <b>but</b> failed to elaborate	Demonstrated full knowledge; answered all questions with elaboration	
PI 2	<b>Conceptual Understanding</b>	Unable to explain the Mathematical/technical concept(s) involved.	Partially explains the Mathematical/technical concept(s) involved.	Adequately explains the Mathematical /technical concepts(s) involved.	Explains fully the mathematical/technical concepts involved.	
PI 3	<b>Use of technical Language &amp; real world examples</b>	Incorrect use of technical terms and does not have knowledge about real world applications & issues .	Little use of accurate technical terms and have partial knowledge about real world applications & issues	Uses most technical terms accurately and have adequate knowledge about real world applications & issues	Uses technical terms accurately and appropriately and have adequate knowledge about real world applications & issues	
PI 4	<b>Communication and body language</b>	Unable to communicate ideas and unprofessional attitude	Communicates few ideas clearly and needs improvement in professional attitude	Communicates some ideas clearly and good professional attitude.	Communicates all ideas clearly and fluently and excellent professional attitude.	
PI 5	<b>Confidence level</b>	Appears very comfortable and confident. Consistently faces the audience and maintains good eye contact.	Appears fairly comfortable and confident. Generally faces the audience and maintains good eye contact.	Appears generally at ease and confident. Sometimes faces the audience and maintains eye contact.	Appears uneasy and somewhat insecure. Rarely faces the audience or makes eye contact.	
<b>TOTAL SCORE</b>						

<b>CO1</b>	PI 1, PI 2, PI 3	Demonstrate systematic understanding of knowledge related to 4 years study of B. Tech. in EE
<b>CO2</b>	PI 1, PI 2	Utilise the knowledge and ideas to deal with real world problems and issues clearly.
<b>CO3</b>	PI 3, PI 4	Show verbal communication and presentation skills.
<b>CO4</b>	PI 5	Demonstrate confidence and versatility in answering the varieties of questions posed by a group of interviewer in a moderately short duration.

## LAB PERFORMANCE EVALUATION RUBRIC

performance indicators	Inadequate Needs improvement	Developing	Good	Excellent	Score
	0-4	5-6	7-8	9-10	
<b>PI 1 Participation &amp; Regularity</b>	Irregular	More or less Punctual & regular	Most of the time punctual & Regular.	Punctual & Regular	
<b>PI 2 Lab Techniques</b>	Measurements, skills or Techniques in lab are incomplete, inaccurate and/or imprecise	Measurements, skills or techniques in lab are somewhat inaccurate and very imprecise.	Measurements, skills or techniques in lab are mostly accurate	Measurements, skills or techniques in lab are both accurate and precise and may show innovation	
<b>PI 3 Safety Procedures &amp; Directions</b>	Safety procedures were ignored. Did Not follow directions.	Lab is carried out with some attention to relevant safety procedures & directions.	Lab is generally carried out with attention to relevant safety procedures & directions.	Lab is carried out with full attention to relevant safety procedures & directions.	
<b>PI 4 Ability to work in a group</b>	No participation; sits on the sidelines with no interaction; disinterested;	Minimal participation; Shows little interest; doesn't pay attention to other group members; may argue to get point across;helps group only when asked;	Good participation; appears interested; enthusiastic but talks over teammates or may "hog" tasks; tries to help group complete tasks;	Shows outstanding leadership qualities through shared participation and respect for others; keeps others on task, managing time; Assumes responsibility for effective functioning of the group.	
<b>TOTAL SCORE</b>					

## LAB REPORT EVALUATION RUBRIC

performance indicators	Inadequate Needs improvement	Developing	Good	Excellent	Score
	0-4	5-6	7-8	9-10	
<b>PI 1 Timely Submission</b>	Irregular	More or less meeting deadlines	Most of the time Meeting deadlines	Meeting Deadlines regularly	
<b>PI 2 Organization &amp; Preparation of report</b>	Lack of organization, incoherent development and/or unreadable	Inconsistent clarity, gaps in logical development, overall hard to follow	Mostly clear, logical progression, a few parts hard to follow	Overall organization clear & develops very logically; easy to read and understand	
<b>PI 3 Results &amp; Conclusions</b>	Methods and/or calculations missing or faulty Results unclear, erroneous or partially missing; objectives not met. Some parts impossible to read or understand. Conclusions not fully explained and/or lack sufficient rationale or support.	Methods, techniques, measurements and calculations identified but incomplete Some results presented; objectives partially met. Some parts hard to read or understand. Explains some conclusions and/or some rationale	Mostly explains methods, techniques, measurements and calculations made Results presented; objectives mostly complete Explains conclusions with mostly clear rationale	Fully explains all methods, techniques, measurements and calculations made Presented clearly and concisely; completes all objectives; Fully explains any conclusions with clear rationale.	
<b>TOTAL SCORE</b>					

# STUDENT PROJECT EVALUATION RUBRIC

Evaluate the student's Project employing the following range-scored criteria (best is on right)

Performance indicators		Inadequate	Average	Admirable	Outstanding	Score
		1	2	3	4	
PI 1	<b>Understanding of Project Objectives</b>	Unable to understand the Project objectives and did not apply engineering elements such as design, synthesis, mathematical modelling, or simulation as applicable in the project.	Unable to understand the Project objectives and applied engineering elements such as design, synthesis, mathematical modelling, or simulation as applicable in the project is limited.	Project objectives are well understood and applied suitable engineering elements in the project.	Project objectives are clearly understood and Applied appropriate engineering elements in the project.	
PI 2	<b>Content &amp; methodology</b>	The information presented is isolated and the methods are not described.	The information presented is relevant and the methods are partly described.	The information presented is relevant coverage with accurate support. Methods are described & explained	The information presented is relevant with higher degree of originality and methods are clearly described.	
PI 3	<b>Results &amp; explanations Analysis</b>	Results & explanations are not appropriate	Results are well explained	Results are well explained	Results are appropriately explained	
PI 4	<b>Planning and scheduling of Project Activities</b>	No project schedule provided	Project activities were poorly identified and not arranged practically in a project schedule with timeline	Project activities were identified but some were not arranged practically in a project schedule with timeline	Project activities were clearly identified and arranged practically in a project schedule with timeline	
PI 5	<b>Use of modern tools/devices</b>	Does not make use of analytical tools and/or devices relevant to the project	Employ some analytical tools and/or devices acquired.	Employ appropriate analytical tools and/or devices acquired in his course of study to the project at hand	Employ appropriate analytical tools and/or devices. Clearly demonstrates mastery of several areas of the curriculum	

Performance indicators		Inadequate	Average	Admirable	Outstanding	Score
		1	2	3	4	
PI 6	<b>Originality</b>	The work was entirely adapted for previous works	Most work was adapted from previous works, did not demonstrate creativity and critical thinking	Some work was adapted from previous work and/or demonstrated creativity and critical thinking in a satisfactory manner	The concept of the work is original/ novel and/or demonstrated creativity and critical thinking.	
PI 7	<b>Formatting and organisation of report</b>	There was no structure of report and the formatting was beyond the guidelines. No references provided	The report was poorly structured, and the formatting include very substantial and consistent error. References provided were not reliable (e.g internet content) and relevant	The report was structured and formatted in a satisfactory manner. Some references were not reliable (e.g internet content) and relevant	The report was structured in an orderly manner, and the formatting was done properly in accordance to the guidelines. All references were apparently reliable (e.g journals) and relevant	
PI 8	<b>Delivery – Presentation skills &amp; Communication (Q/A)</b>	Bare organization and preparation. Lack of confidence and familiarity in some parts of the presentation. Answer at least one question correctly. Need clarification.	Basic organization and preparation. Confident in only some parts of the presentation. Answer most questions correctly. Need clarification sometimes.	Good organization and preparation. Confident in most parts of the presentation. Answer most questions correctly and concisely.	Excellent organization and preparation. Confident and relaxed in the whole presentation. Handle difficult questions with ease and confidence. Illustrative explanation	
PI 9	<b>Self-Initiatives &amp; commitment</b>	The student did not understand the project and did not show any self-initiative at al	The student did not understand some parts of the project and did not show self-initiative in handling and planning of the tasks for the project	The student understood most parts of the project and showed some self-initiative in handling and planning of the tasks for the project	The student understood the project well and showed self-initiative in handling and planning of the tasks for the project	
<b>TOTAL SCORE</b>						

<b>CO1</b>	PI 1	Recognise <b>the relevancy and necessity / usefulness of the project in current scenario</b> a technical problem of current relevance to Electrical Engineering and allied field.
<b>CO2</b>	PI 2	Research the problem and identify the solution methodology



<b>C03</b>	PI 3, PI 5	Validate and analyze the results by Simulation/Experimentation and construction of systems using modern tools/devices
<b>C04</b>	PI 4, PI 6	Demonstrate time management and commitment towards professional ethics.
<b>C05</b>	PI 7, PI 8	Develop interpersonal skills, communication skills and technical report writing skills.
<b>C06</b>	PI 9	Able to evolve as a <b>committed</b> self-learner.

## STUDENT SEMINAR ON INDUSTRIAL TRAINING EVALUATION RUBRIC

**Evaluate the student's performance employing the following range-scored criteria (best is on right)**

performance indicators		Inadequate 1	Average 2	Admirable 3	Outstanding 4	Score
<b>PI 1</b>	<b>Industrial training experience &amp; orientation</b>	Shows absolutely no interest in industrial training. Have no knowledge about the company. Training completion certificate received with remarks.	Shows lack of interest in industrial training. Minimal knowledge about the company. Training completion certificate received	Show positive feelings about industrial training experience Moderate knowledge about the company. Training completion certificate received	Shows a very strong positive feeling about industrial training experience. Extensive knowledge about the company. Training completion certificate received with appreciation.	
<b>PI 2</b>	<b>Formatting and organisation of Training report</b>	Report submitted was not structured.	The report was poorly structured, and the formatting include very substantial and consistent error	The report was structured and formatted in a satisfactory manner	The report was structured in an orderly manner, and the formatting was done properly.	
<b>PI 3</b>	<b>Presentation skill</b>	Very Poor delivery of presentation. Mumbles and/or Incorrectly pronounces some terms .	Contents of presentations are not appropriate and not well delivered Presentation Short <b>OR</b> dragging in parts	Contents of presentations are appropriate Most of the seminar well paced	Contents of presentations are appropriate and well delivered Well-paced throughout.	
<b>PI 4</b>	<b>Overall learning experience</b>	The trainee's learning experience is unclear or very poor.	The trainee's learning experience is poor or insufficient.	The trainee's learning experience is good and exhibits self learning capability.	The trainee's learning experience is rich and exhibits self learning capability.	
<b>TOTAL SCORE</b>						

<b>CO1</b>	PI 1	Gain knowledge about recent trends, issues and developments in industry.
<b>CO2</b>	PI 1, PI 2	Apply the engineering knowledge to real industrial situations.
<b>CO3</b>	PI 2, PI 3	Develop technical reports and presentation with the help of ICT.
<b>CO4</b>	PI 3	Demonstrate communication skills and time management.
<b>CO5</b>	PI 4	Able to evolve as a self learner.

# STUDENT SEMINAR EVALUATION RUBRIC

Evaluate the student's seminar presentation employing the following range-scored criteria (best is on right)

performance indicators		Inadequate	Average	Admirable	Outstanding	Score
		1	2	3	4	
<b>PI 1</b>	<b>Content &amp; Knowledge relevancy</b>	Content not clearly related to topic. Does not have grasp of information.	Content sufficient for clear understanding At ease with information.	Content is sufficient for clear understanding. At ease with information.	Content sufficient for clear understanding Demonstrated full knowledge.	
<b>PI 2</b>	<b>Presentation Skill</b>	Very Poor delivery of presentation. Mumbles and/or Incorrectly pronounces some terms . presentation short/rushed	Contents of presentations are not appropriate and not well delivered Presentation Short <b>OR</b> dragging in parts	Contents of presentations are appropriate Most of the seminar well paced	Contents of presentations are appropriate and well delivered Well-paced throughout.	
<b>PI 3</b>	<b>Contribution of work</b>	Bibliography includes some web links. Significance not mentioned or just hinted	Bibliography is not organised. Significance mentioned.	Bibliography is more or less organised Significance explained	Well organised bibliography Significance exceptionally well explained	
<b>PI 4</b>	<b>Preparation of Report</b>	Report submitted was not structured.	The report was poorly structured, and the formatting (e.g: font, spacing, labelling of figures and tables, equations numbered and etc) include very substantial and consistent error	The report was structured and formatted (e.g: font, spacing, labelling of figures and tables, equations numbered and etc) in a satisfactory manner	The report was structured in an orderly manner, and the formatting (e.g: font, spacing, labelling of figures and tables, equations numbered and etc) was done properly.	
<b>TOTAL SCORE</b>						

<b>CO1</b>	PI 1	Gain knowledge about recent trends, issues and developments in technology.
<b>CO2</b>	PI 4	Develop technical reports.
<b>CO3</b>	PI 2, PI 4	Develop interpersonal skills, software skills as well as communication skills.
<b>CO4</b>	PI 2	Deliver presentation with the help of ICT
<b>CO5</b>	PI 1, PI 3	Evolve as a self-learner.