Leading University Sylhet

Department of Computer Science & Engineering

**RUBRIC FOR DESIGN PROJECT EVALUATION**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Evaluation Criteria** | **Beginning (4)** | **Developing (6)** | **Proficient (8)** | **Exemplary (10)** |
| **Identification of Problem or Definition of Project**  | Insufficient identification of problem; inadequately objectives. | Partial identification of problem; lack of specifics does impair solution of design. | Adequate identification of problem; any lack of specifics does impair solution of design. | Clear and complete identification of design goals and objectives. |
| **Complexity of Design** | Below typical technical complexity for course level. | Average typical complexity for course level. | Meets typical technical complexity for course level. | Exceeds typical technical complexity for course level. |
| **Research** | No evidence of use of outside information | One research source cited. | Two research sources are cited. | Three or more research sources are cited; evidence of variety |
| **Meeting Design Requirements** | Few design requirements are met.Design Areas:Physical FeaturesOperation & UseSafetyCost | Only basic requirements are met.Design Areas:Physical FeaturesOperation & UseSafetyCost | Design requirements are met.Design Areas:Physical FeaturesOperation & UseSafetyCost | All design requirements are met and exceeded.Design Areas:Physical FeaturesOperation & UseSafetyCost |
| **Engineering Analysis** | Most analysis is skipped or does not contribute to creating and effective design.Analyses are performed as a separate process after design choices are made.Analyses are likely incorrect and are difficult to understand due to poor setup. | Analyses performed are done after the fact to prove that choices made were valid.Analyses performed after discovering that trial and error is not working well.Analyses are haphazard and do not follow a logical flow. | Analyses performed are needed for design effectiveness and meeting design parameters.Analyses performed to prevent trial and error when prototype is built.Analyses are performed correctly and contain many elements of a quality engineering analysis. | Analyses performed are used to enhance design effectiveness and choose design parameters.Analyses performed to save significant effort by preventing trial and error when prototype is built.Analyses are performed correctly and follow steps for quality. |
| **Alternative Solutions** | No evidence of alternative designs. | One alternative presented as the project solution. | At least two alternatives presented. | Three or more alternatives presented. |
| **Optimizing, Testing & Evaluation** | No reason provided for the selected solution.Project does not include evaluation of results. | Reasoning for the solution based on opinion only.Results evaluated but without any focus. | Reasoning for the solution is supported by facts.Results evaluated; reflects the project’s need. | Solution selected by the use of comparative data.Evaluation data are collected to support needs. |
| **Design Documentation & Presentation** | Reports may have poor quality writing and mix jargon with engineering language.Reports miss many important topics and are not easy to read.Information in report is not organized. Data or design features explanations are very difficult to locate.Demonstration may not work and derails the purpose of the presentation.Project results are not shared with others. Evidence of plagiarism. | Reports attempts appropriate language/format for the engineering field.Reports are fairly informative and generally easy to read.Information in reports organized into sections with data or design features explanation present.Demonstration is present but breaks up flow of presentation.Project results shared with others.The team did not quote all the source of information that they used. | Reports used mostly appropriate language/format for the engineering field.Reports are mostly informative and easy to read.Information in reports is well organized. All data and design features can be found without difficulty.Demonstration enhances understanding during presentation.Project results shared; both positive and negative results presented.The team quoted nearly all the source of information that they used. | Reports used appropriate language/format for the engineering field.Reports are informative and easy to read.Information in reports is well organized so that data or design features explanations are easy to found.Demonstration is effectively incorporated into presentation.Project results shared; improvements presented.Avoid plagiarism, does not use information without giving credit to the appropriate source. |
| **Time Management** | No evidence of planning. Missed significant milestones or project not completed | Plan was made but not followed; some goals accomplished; inconsistent use of time. | Plans and procedures followed during the project.Goals accomplished; most milestones met; misses some deadlines. | Project plan, procedures followed and documented. Identify plan and timeline; consistently met deadlines. |
| **Teamwork Dynamics** | Student builds cohesion in group through verbal and non-verbal behavior. Takes an active role to encourage participation of all members. | Student behavior brings sometimes cohesion in group. Sporadic jokes and pranks encourage participation of team members. | Student jokes and pranks bring cohesion in the group but meeting become very time consuming. | Student apathy negatively affects group performance.Group cohesion is broken by non-verbal behavior. |