

BEng Rubric – Project Planning Report

Project Overview – 10%

Level	Criteria
0	Section missing, or unable to meet the next rubric level.
Unsatisfactory	Overview provides a very limited understanding of the project with little to no added value from the supervisor provided project description. Project diagram may be very high-level, unclear, or missing entirely.
Pass	Student provides an overview of the main project aim along with a diagram that shows consideration of the main system components (hardware and/or software) or processes and how these are interconnected.

Pass requirement must be met before any elements below can be included.

++	Project overview makes use of suitable references to support the engineering context of the project (e.g. use of academic papers for key concepts that will be applied).			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Project overview makes use of suitable references to support the commercial context of the project (e.g. using market data to show consumer demand).			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	The aim clearly and concisely sets out what the project must achieve and the importance of the work.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	The project diagram makes good use of stylistic features (colour, font styles, groupings, shapes, etc) to intuitively separate sub-systems and components within the overall project. Use of styles are consistent .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Project diagram demonstrates complete understanding of critical component level design requirements (for example a MCU block might include peripheral/memory/clock needs, software routines may include API, algorithm, limitations, data type, execution time requirements).			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	The project diagram clearly shows , and where necessary explains, dependency between parts.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

Specification – 10%

Level	Criteria
0	Section missing, or unable to meet the next rubric level.
Unsatisfactory	Provided specification is very limited and shows little to no expansion on the original project description. Specification points given may be poorly defined or unclear.
Pass	Student provides a list of relevant requirements for the final project deliverable that can be used to measure the success of the project.

Pass requirement must be met before any elements below can be included.

+	Student splits specification points into a range of priority levels or uses a priority ordered list. Specification requirements over the main aim are given as potential “ stretch goals ”.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

+	Specification points are grouped in a suitable way for the project (for example splitting hardware and software requirements).			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Specification points are all quantitatively justified with respect to the project aim(s) and wider literature (e.g. H&S, legal requirements, engineering standards, best practice, etc). With inclusion of suitable references .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	There is clear assessment of the expected challenge posed by each specification point.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Each requirement includes a succinctly clear explanation of how it will be tested including the criteria for success .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Specifications are shown to be both attainable (with the facilities available to the student) and realistic (in terms of the time frame of the project).			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Clear ambition to achieve specification beyond commercial-off-the-shelf or state-of-the-art research-grade system. There is evidence that such ambition is realisable .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

Methodology – 10%

Level	Criteria
0	Section missing, or unable to meet the next rubric level.
Unsatisfactory	Student attempts to provide a development process for the project, with a limited inclusion of key tools and components, without consideration of the limitations related to these.
Pass	Student provides a suitable development process for the project, highlighting some key tools and components that will be used within each step, and outlining the obvious limitations related to these.

Pass requirement must be met before any elements below can be included.

++	Development process details all relevant tools that will be used with suitable justification for their choice.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Discussion of the implications of inter-dependencies between different steps.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

+++	Each step of the methodology is assessed in terms of the challenge posed to the student based on their individual experience and skill set. Additional tasks related to these are explained (e.g. use of a piece of software may require additional tasks to become familiar).			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

+++	Limitations are explained and assessed with relation to the project development (e.g. using a licenced software may incur cost but be beneficial if the student already has experience).			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Student effectively combines/synthesizes/translates existing methodologies leading to a bespoke solution which meets the specifications and accounts for all limitations.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

Risk Management and Mitigation – 20%

Level	Criteria
0	Section missing, or unable to meet the next rubric level. Risks presented are not related to project management.
Unsatisfactory	Risks presented may be missing mitigation actions. Risks presented may not be relevant to the project or very generic with little explanation.
Pass	Student provides a list of some obvious expected risks that could impact completion of the project and includes possible mitigation actions, although superficially considered.

Pass requirement must be met before any elements below can be included.

++	Includes risks specific to the project methodology accompanied by suitable mitigation actions .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	The potential impact of risks on the project are realistically quantified in terms of time/cost/change in spec. Risks are sorted by impact.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Mitigation actions are realistic given the resources available to the project.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	The likelihood of risks occurring are quantified with a method applied to sort the importance of each risk.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	There is clear indication of when each risk is likely to occur in the project and this is considered as part of the mitigation actions.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	All critical risks to the project are fully mitigated and quantified (rated) pre and post mitigation.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

Time Plan – 20%

Level	Criteria
0	Section missing, or unable to meet the next rubric level.
Unsatisfactory	Time plan is very basic, may be missing Gantt chart and just given as a list of tasks. Tasks show little thought and either reproduce information from the supervisor project handout or are a repeat of the specification points.
Pass	Student provides a Gantt chart that outlines the expected progress of the project, broken down into major tasks. Gantt chart includes stages at which progress reviews will be carried out.

Pass requirement must be met before any elements below can be included.

+	Completion points of deliverables and milestones indicated on chart.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

+	Dependency between tasks is clearly indicated and explained .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

+	Clear link of Gantt chart tasks to project specification and methodology .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

+	Milestones align with project review points and explanation is given for where the project is expected to be at each review .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Gantt chart and explanation demonstrates consideration of risks and mitigations with use of parallelisation .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Gantt chart has a visible cycle of develop, test, document.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Realistic time planning and work loading (based on # hrs per week).			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Gantt chart demonstrates points of uncertainty (e.g. via error bars) and the impact on following tasks is explained .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

Interview – 30%

Level	Criteria
0	Student did not attend interview. (Defence)
Unsatisfactory	Explanation of project is limited and confused. No coherent plan and/or risks presented.
Pass	Student is able to explain their project aim and expected outcome. The time plan for the project and potential risks are explained to the moderator. Questions may be unanswered or unsatisfactorily answered.

Pass requirement must be met before any elements below can be included.

++	Project aim is clearly explained, and when questioned student shows a good understanding of how the aim will be met .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Student convincingly shows that the project can be completed with the resources available to them .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	When questioned about risks to the project, student is able to demonstrate/discuss beginning steps that have been taken to mitigate these.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Student reflects on the personal limitations of their planning process and their ability to complete the project. Questioning shows that limitations are convincingly managed .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Through questioning and presentation, the student can convincingly justify the project undertaking .			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)

++	Given presentation (both provided materials and students delivery) is effective in its explanation of the project and plan.			
Not present (0%)	Some (40%)	Most (60%)	Fully met (80%)	Exceeded (100%)