Title Page

# Executive Summary

The executive summary distills your entire report onto a single page. The executive summary contains a succinct synopsis of the product, how it fits within the theme and the design specifications.

# Team Roles

**Team Roles**

For the team roles, use a table similar to following to indicate the main roles of each team member for the session. Remember that you should be involved in at least four roles during the session and should change roles at least once every 3 weeks. It is also ok to have more than one person doing a particular role in each half of the session (e.g. you might have 2 or more team members involved with the design). You may also have more than one role at any particular time period (as teams vary between 3 members and 8 members). Reflection reports are a different activity. Significant contributions to overall team project by individuals should be mentioned here (briefly – let reflections do this in more detail).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Team Role** | **Weeks 1-4** | **Weeks 5 to 8** | **Weeks 9 to 10 (includes session break)** | **Weeks 11 to 13** |
| Director | Team member 1 | Team member 2 | Team member  3 | Team member  4 |
| Secretary | Team member 2 | Team member 1 | Team member  4 | Team member  3 |
| Finance/Budget |  |  | Team member  3 |  |
| Project planning |  |  | Team member 1 |  |
| Design |  |  | Team member  4 |  |
| Quality/Sustainability |  |  | Team member 2 |  |
| Sales/Marketing |  |  | Team member 1 |  |

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# Design Description

This section describes your chosen product and how it meets the requirements of the theme. It describes both what it is and how it works. The areas below are potential areas that could be addressed in your report.

## Summary of the Product

In a few paragraphs, summarize your product. Describe what it does and how it works. You may want to describe a scenario for its use. Consider providing a 3D model or picture of the envisaged final product.

## Detailed Description

This section contains the detailed description of the product you have designed. Start by describing your solution and how it works at a high level, but then do a functional decomposition of your solution in detail. Can put schematics in the appendix.

### Functional Block Diagram

This is a figure which represents the different functions of your finalized design and how they work together.

### Functional Description

After you have created the Block Diagram above, describe each of these functions in their own section here. Try to describe how each of these functions works instead of just saying what they are. Can put schematics and figures into the appendix considering 10 page limit.

# Design Description Supporting Documents

These sections below are suggestions of what could be included in your report.

## Manufacturing Plan

This manufacturing plan details how someone can either make another or start producing the product you have designed. This is a step-by-step procedure required to manufacture the design. This should include how each component of the system will be constructed and by who. E.g. it may refer to workshop services that will be used for detailed circuit construction or other hardware manufacturing.

## Part Drawings

Drawings of your product should appear in the manufacturing plan. This may include circuit diagrams or drawings of components requiring manufacturing or machining. These can be located in the appendix and referenced here.

## Bill of Materials

Provide a bill of materials needed to construct your product. This would be everything the technical staff would have to order, aside from tools, to make it. It should also include the costs of each component and the total materials cost for the product. You can locate a table in the appendix and describe it briefly here considering the 10 page limit.

# Evaluation

In this section, you verify the design you have provided for your product. The emphasis here is on the components chosen for your product and the testing methods you adopted with descriptions of working functionality.

## Design Requirements

In this section, you should identify three or more design requirements for each or all of the components. E.g. provide answers to questions such as: What were the required voltage levels to interface your sensor to another component in the final system? What are the range of values that the sensor needed to be able to detect and how close did you achieve these?

## Evaluation Plan

This section describes how you verified, both theoretically (electronic analysis or digital analysis which can be added to appendix and referenced here) and experimentally (actual measured results from the designed system in appropriate units of voltage or current or whatever units), that the chosen component met the design requirement(s). For theoretical evaluations, you could refer to technical literature (e.g. data sheets), mathematical design calculations (e.g. circuit analyses) or computer simulations (e.g. Electronic workbench). For the experimental testing, describe the aims and methods that were used to test that each component met it’s design requirement(s). Also describe the equipment that was used to complete the tests e.g. multimeters, CROs, computer simulations etc. Indicate how the experimental testing was used to validate the theoretical validation.

## Regulatory, Sustainability and Safety Considerations

Describe any regulations which apply to the use or production of your product (e.g. environmental or otherwise). List safety concerns which you have for the use or production of your product. Provide recommendations for each of the concerns you have listed. Provide sustainability issues here and how these would be overcome if funding were provided.

# Project planning and overall progress

This should described the overall project plan showing all important milestones and indicating any delays that have occurred and how they were handled. It should clearly describe the sub-division of tasks i.e. who did what? Consider including the following sections.

## Work Breakdown Structure

Describe the major tasks and milestones and deliverables and who is responsible for them (this may be provided In appendix and referred to here).

## Gantt Chart

Create a Gantt chart based on your work breakdown structure and indicating how long each task/milestone will take. The Gantt Chart may be provided in the appendix and referred to here.

## Detailed description of each milestone and deliverable

Provide a detailed description of each milestone and deliverable. This should be more than just a list of headings.

## Progress

This should summarise the overall progress of the team in relation to the project plan before the final deliverable (Innovation Fair). It should indicate any delays that have occurred or are forecast and any contingency plans you have had during the entire project and may have implemented.

# Budget

This section should provide the final budget of manpower and physical purchases (including estimated cost of part provided on a free from store basis). The final cash flow analysis for the project with all records of expenditure to-date of the final report submission should be provided in a clear graphical form. It should also include the Team’s records of man hour expenditure (this can be added to appendix and referred to here). Refer to the costing details provided in the subject handbook. It should include both real dollars (for product components) as well as costs for labour and other services estimated using ECTE250 dollars.

# Commercialisation and marketing

This should include details on how the team will make money from the product and their marketing strategy, if appropriate or how this device is beneficial to the allocated customer if a one-off engineering activity. It is suggested that this will be a relatively short section for the final report in ECTE250.

# References

This section contains a list of the references cited in the report. You should format your references according to the IEEE format, which is the standard format for referencing in the School.

# Appendices

Appendix A should be a copy of all meeting minutes. You can also use appendices to include details that could not fit into the main body of the report. E.g. detailed circuit diagrams, Gantt Chart, etc.. which are then referred to in the 10 page report.