# Project proposal

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| --- | --- | --- | --- | --- |
| **Name of Candidates** | **A** | **B** | **C** | **D** |
| **PS Numbers** |  |  |  |  |
| **Name of Mentor – Delivery** | **Adler** | | **PS No 20035779** | |
| **Name of Mentor- GEA** | **YYYY** | | **PS No** | |
| **Project Period** | **From: November 2020 To: December 2020** | | | |
| **Date of Completion** |  | | | |

### **Project Title**

* Design of Handheld Multimeter

### **Project DETAILS:**

1. **aim**:

* Design hand-held multimeter with 4.5-digit accuracy and 1000 V input range.

1. **Problem statement:**

* Project team shall propose required features and do detailed RS.
* Device shall be capable of various measurements such as AC Voltage, DC Voltage, Currents, Resistance, Continuity, Frequency.
* System shall display AVG, Peak, Min, Max, and True RMS values
* System shall be handheld

1. **Objectives & Learning outcomes of the project**

* RS understanding and Critical Thinking for applicable features
* AFE and associated technical challenges for data acquisition.
* Low Voltage Low Power - Power supply design
* Safety and design for EMI-EMC
* ADC acquisition, data processing, digital filtering
* Mathematical calculation for various parameters, display
* Mechanical enclosure design. Selection switch design.

1. **Key Deliverables:**

* Requirements specifications
* Detailed design calculations, block diagram and component selection
* Firmware design document, calculations, state diagrams, flow diagrams and pseudo code (or code in Python)
* Concept sketches and 3D Enclosure STEP files.

1. **Hardware & Software Recommendations**

* HW - 2
* FW – 1
* ME - 1

1. **Weekly Progress (gantt chart)**



### **REVIEW**

* Weekly reviews to be conducted over the entire tenure of Project
* Each review comprises of a progress presentation from the candidates
* Mentor may demand daily / Weekly deliverables
* behavioral Traits would be evaluated along with project deliverables

### **Final Review and Recommendation:**

* Rating and Score against each parameter

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr.No** | **Parameter** | **Rating** | | **Score/5** |
| **1** | **Approach towards the problem** |  | |  |
| **2** | **Analytical Ability and Results discussion** |  | |  |
| **3** | **Independent Work +Team Work** |  | |  |
| **4** | **Presentation Skills** |  | |  |
| **5** | **Project Deliverables** |  | |  |
| **6** | **Quality of Project Thesis** |  | |  |
| **7** | **Communication Skills** |  | |  |
| **8** | **Attitude** |  | |  |
| **9** | **Confidence** |  | |  |
| **10** | **Innovation** |  | |  |
|  | **Total** |  | | **/50** |
|  |  |  |  | |

A= Exceeds Expectations B= Meets Expectations C=Does not meet expectations

**Recommendation:**

**Progression: Yes No**