# Project proposal

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| --- | --- | --- | --- | --- |
| **Name of Candidates** | **A** | **B** | **C** | **D** |
| **PS Numbers** |  |  |  |  |
| **Name of Mentor – Delivery** | **Anand** | | **PS No 953133** | |
| **Name of Mentor- GEA** | **YYYY** | | **PS No** | |
| **Project Period** | **From: November 2020 To: December 2020** | | | |
| **Date of Completion** |  | | | |

### **Project Title**

* Design of Robotic Arm

### **Project DETAILS:**

1. **aim**:

* To design a robotic arm with 3 axes capable of moving mass of 1 kg with speeds up to 1 m/s.

1. **Problem statement:**

* Detailed requirement specification in consultation with customer.
* Design for handling payload
* Design of the mechanics and estimation of power / torque required
* Design of firmware for smooth movement and accept commands from PC.
* Design of Mechanical Arm

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

* Design of mechatronics system, motion controller
* Understanding of mechanical stability analysis
* Safety and design for EMI-EMC
* PID Control and Remote Control
* Design of mechanics, gears, etc.

1. **Key Deliverables:**

* Requirements specifications
* Detailed calculation for mechanics including stability analysis and load profiles
* Component selection for motion control and power supply.
* Firmware design, design of PID controller and remote control – Pseudocode or Python code.
* Concept sketches and 3D design files

1. **Hardware & Software Recommendations**

* HW - 1
* FW – 1
* ME - 2

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**