

## **Design of Robotic Arm**

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### **Abstract**

Modern engineering courses provide students with exposure to the theory and derivations of problems. In order for future engineers to effectively prepare to apply their engineering education to problems in industry, it is vital that engineering students take courses in which they can learn how to integrate different engineering topics and apply theoretical knowledge to industry problems. The objective of this project is to develop an educational platform that both integrates and applies the knowledge that a mechanical engineering student learns during their undergraduate career i.e design and fabrication aspects of a 3D printed robotic arm. Also require knowledge and integration of mechanical engineering, mechatronics, programming and manufacturing principles and will require students to explore and integrate knowledge from various engineering disciplines, including dynamics (forward and inverse kinematics), stress and strain analysis, FEA and topology optimization, mechatronics

### **Keywords**

3D Printing, Arduino uno unit, Lifting Mechanisms, Design, Validation, Four Degree of Freedom, Stepper Motors, Robot Control.

### **Biographies**

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