



# Abu Dhabi Polytechnic

## Students' Graduation Project Abstract

<b>Department:</b>	EMET	<b>Semester:</b>	Spring-2022
<b>Project Title:</b>	Robotic Arm Design		
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### Abstract:

In this paper, the design and fabrication of X arm painting robot is explained. Painting any surfaces or walls is a difficult task that needs a significant amount of human work. Not only that the paint itself is hazardous for human health. The paint droplets may enter the human lungs causing serious health implications. Moreover, some of the paint jobs are carried out at heights which pose extreme falling risks. The problems can be solved using an autonomous painting robot. The design of a robotic arm for painting job is proposed for Graduation Project.

The proposed robotic arm will consist of an arm that has 6 Degrees of Freedom having a paint nozzle at the end and hence able to apply paint on the walls or surfaces vertically, horizontally and at different angles. The robot is powered using stepper motors controlled by an Arduino based controller. There are several parameters that must be considered while developing a robotic arm. This report also explains these parameters.

This report outlines all of the work that is done, from the design of the robot through its production.