



Division of Engineering Programs

EGE408 Merged Senior Design Project I – Fall 2018

Project Charter

End of Arm Tooling

Group Members	Department	ID Number
	ME	
George Daxis	CE	
	ME	
	ME	
	ME	

Advisor: Dr. Ping-Chuan Wang

September 17th, 2018

Project Description

Our group is going to design a universal attachment for a robotic arm which transports wax objects without causing any imperfections or blemishes to the objects.

The group will communicate with Mueller Phipps International (MPI), a Poughkeepsie based company, with plans to improve their wax-room manufacturing operation. The group plans to improve the process by making it more cost-efficient and versatile. From this project, the group will gain insight and knowledge on a design process, including research, prototyping, manufacturing, and optimization.

By replacing the current specialized tooling with a more universal design, MPI should no longer need to manufacture specialized End of Arm Tooling (EOAT) for their robot. Doing so would save the company a significant amount of time and money.

Preliminary Plan

The group's preliminary plan includes multiple phases, all of which are listed below.

- Research: Meet up with representative at MPI to get an insight into the project.
- Design: Create a model of our product using CAD software.
- Prototype: Have a functional and manufacturable product
- Refinement: Use feedback from MPI and from testing of the prototype in order to optimize our product.
- Final Product: A working device ready to be integrated in MPI's production line.

By the end of the Fall 2018 semester, the group aims to have a (near) working prototype. By the end of the Spring 2019 semester, the group hopes to demo (on site), and refine the apparatus.

Roles and Responsibilities

	Group Liaison / Sensors
George Dagis	Programming / GUI / Sensors
	Design / CAD / Documentation
	Materials / Design
	Kinematics / Analysis

Communications Plan

Team Meetings: Mondays 11:00 - 2:00, Tuesdays 3:15 - 6:30, Thursdays 11:00 - 2:00.

Advisor Meetings: TBD ^{Thursdays @ 11:30} (~~Mondays at 11:00?~~)

Stakeholder Meetings: TBD

Dr. Wang's office hours are MRF from 10-11:30.