

## MILESTONE ONE (TEAM): OBJECTIVES, MORPH CHART, & INITIAL DESIGN

### PROJECT TWO: MILESTONE 1 – COVER PAGE

Team ID: Mon-16

Please list full names and MacID's of all *present* Team Members

Full Name:	MacID:
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## MILESTONE 1 (STAGE 2) – LIST OF OBJECTIVES, CONSTRAINTS, AND FUNCTIONS

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1. As a team, create a final a list of objectives, constraints, and functions in the table below.

- Use your individual *Pre-Project Assignment* to build your team's final list
- The exact number you should have depends on what information you have gathered from the Project Module.

Objectives	Constraints	Functions
Container should be rigid and durable	<i>Container must fit within the assigned autoclave footprint</i>	Securely holds surgical tools
Resistant to high temperature	<i>Base must lay parallel to the assigned autoclave floor</i>	Facilitates sterilization
Unreactive with chemicals used to sterilize	<i>Must be able to be picked up by the robot arm's end effector – max width of 80-150 mm</i>	Secures tools during travel
Low thermal expansion	<i>All features must exceed 2 mm</i>	Be able to be picked up by robot arm
Identifiable by the robot arm	<i>Mass does not exceed 350g</i>	Store liquid
Impervious to liquids		

2. What is the primary function of the entire system?

Allows the sterilization of surgical tools.
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3. What are the secondary functions?

Securely holds surgical tools
Able to be picked up by robot arm
Store liquid

## MILESTONE 1 (STAGE 3) – MORPHOLOGICAL ANALYSIS

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1. Identify multiple means to perform the secondary functions that your team came up with during Stage 1 of this milestone. One sub-function (pick up) is already listed for you. The other two sub-functions are for your team to choose.

→ Make sure that every mean for the “pick up” sub-function assumes that the end effector of the robot arm is a gripper. The means for your other sub-functions do not need to follow this assumption.

Function	Means					
Pick up	Handle	Holes for gripper	Hook	Lip on the edge		
Tool Storage	Box	Basket	Tool cutout	Adhesive strips	Magnet	Pouch
Store liquid	Bowl	Container	Cup	Box		