



UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE of ENGINEERING

Senior Design Project Description for SPRING 2016

Project Title: Rapid Prototype Wash Tank Redesign (UNCC_BATH)

Supporter: UNC Charlotte Mechanical Engineering

Supporter Technical Representative: Assigned

Faculty Mentor: ASSIGNED TBD (check one)

Single Team Dual Team (check one)

Personnel (EN/ET): 1 E, Cp, Cv, 2 M, SE

(Complete if the number of students required is known)

Expected person-hours: (250 per student)

Description of Project:

The rapid prototyping machines lay down two kinds of plastics. One is the plastic of the desired part, the other is "support material" which provides a platform in areas of the part that have internal spaces. When the part is done, it is necessary to dissolve the support material to reveal the desired part. This project is for the design and construction of a bath for that purpose.

Initial Project Requirements (e.g. weight, size, etc.):

The circulating solvent used has to be maintained at a controlled elevated temperature and would ideally have controlled, or at least monitored PH. There will be a good user interface and an internet connection for alerts and monitoring.

Expected Deliverables/Results:

The deliverable will be a completely functional and tested wash tank.

List here any specific skills or knowledge needed or suggested (If none please state none):

None