Generic robot and simulation setup

SolidWorks, ROSDS, Gazebo

Generic robot control simulation

ROSDS, Gazebo, MoveIt, C++, Matlab

Workspace definition

Matlab, Modern Robotics Toolbox

Path planning of operations Bravo

Matlab, Modern Robotics Toolbox

Literature review

Identified; requirements, manipulators, operations

Reach Bravo planning & control

ROSDS, Gazebo, MoveIt, C++, Matlab

Path planning, Joint trajectory control, Motion planning

Screw theory, Kinematics

Screw theory, Kinematics, Path planning, Motion planning, Geometries

Path planning, Joint trajectory control, Motion planning, Path following

Prerequisites: CAD modelling, test of simulation setup, controls and path planning

End product: Simulation of cleaning, feeding and gripping operation.