

SYLLABUS AND COURSE INFORMATION

Lecture Time: TR (5:15-6:45 PM)

Room: TBA

Catalog Description:

Introduction to basic concepts in robotics; homogeneous transformations; Denavit-Hartenberg parameters, forward and inverse kinematics; velocity kinematics, Jacobians; dynamics and modeling; robot control: independent joint control, multivariable control, Lyapunov stability, PD+, computed torque, inverse dynamics control with the use of Matlab/Simulink, kinematics and control related demonstrations on the PUMA 560 manipulator.

Prerequisites:

- There will be a course project that uses MATLAB/SIMULINK. Students are expected to present their project work and results in the form of a technical report. The students can use the computer facilities at SOECAL, and at DU 530