Robotics
EC705B
Contacts: 3L
Credits: 3

Robot Anatomy Arm Geometry-Direct & Inverse Kinematics Problem.Arm Dynamics,D Alembert Equations of Motion, Synthesis of elements with movalulity constraints,manipulations-trajectory planning,joint interpolated trajectories. [15L]

Control of Robot Manipulation-computed torque technique sequencing & adaptive control, resolved motion control Moluie Robots. [6L]

Robot sensing-Range & Proximity & Higher-Level vision, illumination techniques,Imaging Geometry, Segmentation Recognition & Interpretation. [8L]

Robot Programming Language Characteristics of Robot Level & Task Level languages.Robot intelligence-State Space search, Robotlearning,Robot Task Planning,Knowledge Engineering. [10L]

References:
1. K.S Fu R.C . CSG Lee-Robotics Control,Sensing, Vision & Intelligence,McGraw-Hill.
2. M.P. Groover,M.Weins,R.N. Nagel,N.C. Odrey –Industrial Robotics,McGraw Hill
3. Andrew C.Straugard-Robotics & AI,PHI
4. S. Sitharama Iyengar,Alberto Elefes-Autonomous Mobile Robots Control,Planning & Achitecture,IEEE Computer Society Press