ROBOTICS

Introduction: Robot anatomy, classification of robots, work envelope

Systems Review: Drives, control, sensors and end effectors, gripper actuators and gripper design
Co-ordinate Systems: Robot coordinate system representations, transformations
Manipulator Kinematics: Parameters of links and joints, kinematic chains, dynamic of kinematic chains, trajectory planning and control, advance techniques, parallel actuated and closed loop manipulators
Robot Motions & Motion Control: Differential equations, transform method, control system, position sensing, velocity sensing
Robot Programming and Application
Robot economics, safety and integration

References:

1. Rototics by K.S. Fu, R.C. Gonzalez, C.S.G. Lee - McGraw Hill
2. Rototics for Engineers by Y. Koren - McGraw Hill
3. Industrial Robotics by M.P. Groover - McGraw Hill
4. Robot Engineering: An Integrated Approach by Klafter et. Al. - P.H.I.
5. Robotics, J J Craig, Addison