

2 -	Search for information and engage in life-long self-learning discipline through self-learning assignments.
3 -	Collaborate effectively within multidisciplinary team.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction	4	4	0
Rigid motion	6	4	2
Forwards kinematics	10	4	6
Inverse kinematics	10	4	6
Jacobian matrix and singularity	16	8	8
Project discussion	8	4	4
Project presentation	6	2	4

Teaching And Learning Methodologies :

Interactive Lecturing
Problem solving
Discussion
Project
Research

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignment Assessments	5.00		
Final Exam	40.00		
Mid- Exam II	15.00		
Mid- Exam I	15.00		
Participation	5.00		
Project	10.00		
Quizzes	10.00		

Recommended books :

- 1. Bruno Siciliano, Robotics, Modeling, Planning and Control. Springer 2009.
- 2. Craig, John J, R. Introduction to Robotics: Mechanics and Control, Pearson Education International, 2005, 3rd Edition.
- 3. Saeed B. Niku, Introduction to Robotics, Prentice Hall, 2001.
- 4. K.S. Fu, R.C. Gonzalez, and C.S.G. Lee, Robotics: Control, Sensing, Vision and Intelligence, McGraw-Hill, 1987
- 5. H. Asada and J. Slotine, Robot Analysis and Control, John Wiley & Sons New York, 1986, 3rd Edition.
- 6. Fu, K.S., Gonzalez, R.C., and Lee, C.S.G. Robotics: Control, Sensing, Vision, and Intelligence, McGraw Hill, 1986.
- 7. Megahed, S.M., Robotics: Principles of Robot Modelling and Simulation, John Wiley, 1993.

