ENGI. 5733: ROBOTICS

Instructor:  Dr. A. Tayebi, AT5005, E-mail: atayebi@lakeheadu.ca

Textbooks:

Topics discussed:
1. Introduction
2. Motion description of rigid bodies
3. Forward and inverse kinematics
4. Velocity kinematics
5. Dynamics (Euler-Lagrange and Newton-Euler methods)
6. Control design for robot manipulators

Evaluation:
(i) Final exam: 70%
(ii) Research paper: 30%,

Students will be assigned a research paper related to the course. Students will read the paper as well as other references as needed to understand the topic and perform simulations. At the end of the term, students will provide a written report and give a formal point presentation (20mn).