UNIVERSTY OF NORTH TEXAS
MEEN 4760 / 5740 SYLLABUS
Introduction to Robotics and Automation **3 hours**

Instructor: Dr. Mark Wasikowski. **Email Address**: mark.wasikowski@unt.edu
Class: MW 1-2.20 NTDP F175 **Office Hours**: NTDP F101L by appointment – in person or on-line

Course Description: Introduction to robotics, mechatronics, and manufacturing automation. Robotic mechanisms and modeling, forward and inverse kinematics, manipulator dynamics, systems modeling, sensors and actuator integration, trajectory planning, vision, sensors, and classical / modern feedback control. MATLAB is used for project-based learning.

Pre-requisites: MEEN 2240 (or equivalent) and MEEN 3230 (or equivalent)
Software: MATLAB, SIMULINK (https://math.unt.edu/mathlab).
Resources:
1. "Modern Robotics: Mechanics, Planning, and Control", Lynch, Cambridge
2. "Introduction to Robotics: Mechanics and Control", Craig, Pearson
3. "Robot Modeling and Control", Spong, Wiley
4. "Robotics, Vision and Control: Fundamental Algorithms in MATLAB", Corke, Springer
5. "Introduction to Robotics – Analysis, Control, Applications", Niku, Wiley

Grading Rubric. standard 90/80/70/60.
15%: Attendance & participation. Required and graded. Attendance taken via roll. Must be present for credit. No tardiness credit. Participate through paying attention, group problem solving, helping others, or answering questions. Attending class, but not participating, is a 0-attendance grade for each occurrence.
30% homework – typically weekly. Format includes paper submission in class, CANVAS submission, and CANVAS /MATLAB Grader on-line submission. No late homework. No make-up work without documented university excused absence. 0 tolerance for Academic dishonesty - 0 on assignment. MATLAB codes showing significant similarity receive 0 score.
20% Exam 1. In class individual assessment on paper.
20% Exam 2. In class individual assessment on paper.
15% term paper / project. Due at final exam time, on-line via CANVAS.

Students responsible for checking CANVAS. Re-grades must be requested within 1 week after grades are posted, or the grade is final.

4760 / 5740 students share the same lecture, but homework, exams, and term paper are different.

Review UNT website for applicable policies: Emergency Notification & Procedures, student code of conduct, academic integrity, ODA, SPOT evaluations, record retention, discrimination prohibition, Harassment, and Retaliation, Sexual Assault Prevention, VISA regulations, Academic Support & Student Services. Instructor reserves the right change syllabus.