Autonomous Robotics (MECS 564) – Spring 2025

Instructor: Dr. L. Nakamura

Course Overview

This course covers planning, control, and perception for mobile robots. Assignments mix programming, lab work, and presentations.

Major Deliverables

Assignment 1: Localization Lab

- Release: **January 22, 2025**
- Due: **February 5, 2025 at 6:00 PM**
- Deliverables: ROS bag files, lab report PDF, calibration spreadsheet.
- Points: 40

Assignment 2: SLAM Programming Assignment

- Release: **February 5, 2025**
- Due: **February 26, 2025 at 11:59 PM**
- Deliverables: GitHub repository link, README, video demonstration.
- Weight: 12% of course grade

Assignment 3: Midterm Design Review

- Review Meeting: **March 5, 2025 at 2:30 PM**
- Deliverables: Slide deck (PDF), prototype chassis photos, risk assessment table.
- Weight: 15%

Assignment 4: Field Test Report

- Test Window: **March 24–27, 2025**
- Report Due: **April 2, 2025 at 5:00 PM**
- Deliverables: Test logs (CSV), incident summary memo, footage highlights.
- Weight: 18%

Assignment 5: Capstone Demo and Write-up

- Demo Date: **April 21, 2025 at 11:00 AM**
- Final Submission: **April 28, 2025 at 11:59 PM**

- Deliverables: Demonstration video, technical paper (10 pages), poster PDF, code archive.
- Weight: 30%

Assignment 6: Team Retrospective

- Due: **April 30, 2025 at 6:00 PM**
- Deliverables: Team retrospective worksheet, individual reflection form.
- Weight: 5%

Policies

Late submissions accepted up to 48 hours with a 10% penalty per day. All times are stated in Pacific Time.