

# ECE491 Mechatronic Systems Design Laboratory

## Project Report Template

Due: Friday May 5<sup>th</sup>, 2017 in TA's mailbox or under my door by 5 pm CT

### 1. Team Name (5%)

You need a name for your group (team) that captures the “spirit” of your group, and the strategy that your team pursues to win. Acronyms are fine, just make sure they are pronounceable.

### 2. Overall Approach (20%)

Describe in general how you solved the problem. Describe the approach, and your solution to completing as competitive car as possible in the time allowed. Describe what worked, and what did not work.

### 3. Hardware Design

#### 3.1 MCU block diagram (5%)

Include a system block diagram that shows all the connections to the FRDM MCU board, including connections to your sensors, such as cameras, motor controllers etc.

#### 3.2 Detailed Drawings or Pictures of Vehicle (20%)

Include pictures of the vehicle, showing the attachments of all your sensors and other HW components. Label the photos or drawings so its clear what is what and where.

#### 3.3 Motor Drive Circuits (25%)

Show detailed schematic for your motor drive circuitry, including values and pin #s connected to the MCU.

### 4. Software Design (20%)

Describe in some detail the approach off your software. How did it help you be competitive, and what were some of the SW/HW issues that you had to overcome to make things work.

### 5. Conclusion (5%)

Summarize the main high-points of your design, and what were some off the lessons learned.