

## 2016-2017 In4073 Lab Activities Timeline

=====

This is a general plan that should not be followed to the letter,  
but is intended to serve as a general guideline.  
It lists the most important lab milestones.

### # Preparation (BEFORE 1st lab):

-----

1. Familiarize with HW
  - setup your toolchain
  - compile and upload the provided code
2. Protocol design and implementation on the flight controller board

### # 1st lab:

-----

1. Familiarize with HW
  - connect joystick and execute js demo code (from resources page).
  - motor control
2. Test protocol
3. Implement manual mode

### # 2nd lab:

-----

1. Demonstrate protocol
2. Test manual mode
3. Implement data logging

### # 3rd lab:

-----

1. Demonstrate manual mode
2. Test data logging
3. Implement calibration
4. Implement yaw control (DMP)

### # 4th lab:

-----

1. Test and demonstrate yaw mode
2. Implement roll and pitch control (DMP)
3. Start on filters (Butterworth 1st order, Kalman)
4. Profile your code!

### # 5th lab:

-----

1. Test and demonstrate full control using DMP
2. Test Kalman filter
3. Implement height control
4. Implement wireless

## # 6th lab:

-----

1. Test full control using Kalman
2. Test height control
3. Test wireless

## # 7th lab:

-----

1. Preliminary demonstration + free advice
2. fine tuning
3. Profile your code!

## # 8th lab:

-----

1. Formal demonstration and grading