

## Electronics (ENGN/PHYS 208) Project Timeline

1. List Team Members:
2. What is the final objective of your project? (Example: "Our system will measure the amount of liquid in a Camelbak over time, and transmit the information wirelessly to mobile device, e.g. Apple Watch")
3. What are the Design Objectives? (Example: "Our bridge monitoring system will minimize power consumption to prolong battery life. Data will be transmitted over a LoRa protocol with a range of at least 200 m")
4. What hardware is involved and how is it all connected? (Example: We use two IR cameras configured for binocular vision. This determines distance to a target. One servo motor rotates a plate to align the throwing arm axis with the target. Another servo is rotated to actuate a throwing arm with a rubber ball, releasing with velocity to hit the pre-determined target.")
5. What computation elements are involved? (Example: "The LIDAR 3D room scan is converted into tonal music. The first pitch is computed as the mean distance to the surrounding walls. The second pitch is computed as the variance in wall distance.")
6. What is the user interface; how does the user interact with the system? (Example: "The smartrock system is turned on by sliding a switch underneath a rubber seal. IMU data is streamed to the PC host serial port via the LoRa

module. This data can be visualized using the Serial Plotter tool. To save energy, the user should disable the serial data stream to host PC using a 'noPlot' command sent to serial port. After verifying proper operation of the IMU, the user can begin logging data to the SD card by sending a 'logSD' command through the serial port.")

7. **Testing/Validation: How will you establish proof of concept? (Example: We will connect our bridge sensor to a to-scale wood draw-bridge model. We will measure the actual angle and angular velocity of the bridge using a protractor and stopwatch. This 'ground truth' data will be compared to our sensor's output quantitative data (angle of bridge vs. time) as well as the qualitative assessment 'Bridge is going up currently; bridge has been up for 5 min')**
  
8. **Develop a timeline/Gantt chart displaying when you will work on/achieve function of the systems described above. Keep in mind that all technical work should be complete by the start of week 12 (you'll need time to develop your written and oral reports)**

Week:	8: Mar 04 –	9: Mar 11 –	10: Mar 18	11: Mar 25	12: Mar 04	Finals
Days/	10	17	– 24	– Apr 01	– 10	week
Design						
Element						