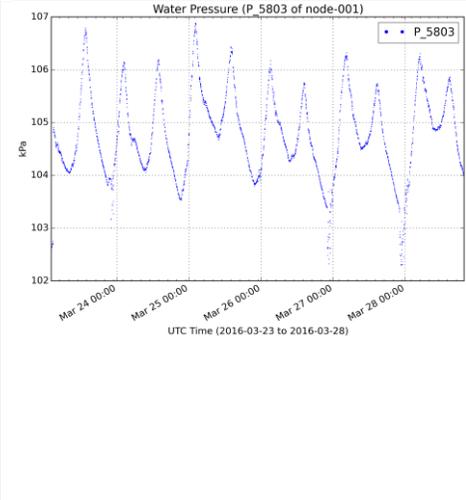


!!!NEW Fall 2016 NEW!!

OCN 418 Advanced Environmental Monitoring Systems & Measurements

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| Heeia Fishpond Monitoring Station | Raspberry Pi 3 (top) Pressure Sensor (bottom) | Plot of telemetered pressure data from Heeia |

Class: Mondays 1:30pm to 4:30pm (capped at 10 students)

Location: Marine Science Building Room 318

Prerequisites: OCN 363, MATH 242, CHEM 162/L, PHYS 272/L & junior status, or consent

Major restrictions: SOEST majors have priority, but other majors encouraged to inquire

For more information contact Michael Guidry at guidry@hawaii.edu

Course description:

In this course, students will learn to how to combine (1) environmental sensors, and (2) custom, low-cost, open-source microprocessors that can be programmed, configured, and deployed to collect in-situ environmental data and, in certain cases, stream time-series data for near-real-time monitoring and analysis.

There are two general objectives to this course: (1) review of environmental monitoring principles, instrumentation, data collection and visualization, system control and networking; and (2) assigned group environmental monitoring activities and projects where the students learn how to configure and deploy a custom sensor package to monitor temporal and/or spatial environmental variability.

Grading: Group Projects (50%); Final Presentations (25%); Course Attendance/Participation (25%)