EXPANDING CITIZEN SCIENCE OPPORTUNITIES THROUGH UNDERGRADUATE INNOVATION SCHOLARS RESEARCH

NH Sea Grant Research Symposium, January 28th, 2021
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BACKGROUND

THE INNOVATION SCHOLARS PROGRAM

- Year-long experience for first-year CEPS students
- Hands-on, research-based opportunities

FOUR COHORTS: Advanced Manufacturing, Seacoast Field Science, Internet Engineering, & Ocean & Environmental Sensing

OCEAN & ENVIRONMENTAL SENSING STUDENTS
Building & Employing New Research Skills (e.g., programming microcontrollers, soldering & circuitry basics, critical scientific thinking, experiment planning & execution, etc.)

PREVIOUS RESEARCH

“SUNNY DAY” FLOODING, HAMPTON, NH
Significant Increase in Frequency, Severity of Flooding

- During high tide & king tide events (elev. > 10 ft).
- Impacts residents, businesses, & local decision-makers.

Localized Water Level Monitoring
2018-2020 Innovation Scholars built, programmed, & deployed ultrasonic sensors to measure freshwater elevation.

CURRENT PROJECTS

LENDING LIBRARY INSTRUMENTS
- Wave Rider Buoy
- Wave Period, Height, Direction
- Solar Panel & GPS
- Water Quality Sensor
- Soil Moisture
- Water PH, Salinity, & Level

2020-2021 OBJECTIVE
INSTRUMENT “LENDING LIBRARY”

Design, build, & test simple instruments to monitor environmental conditions.

Facilitates quick & easy data collection by local stakeholders.

Promotes opportunity for citizen science & inter-community/inter-organizational collaboration!

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Hampton, NH Residents & Business Owners

University of New Hampshire
College of Engineering & Physical Sciences
Innovation Scholars Program

Watch the Video Here: https://seagrant.unh.edu/innovation-scholars

Video & Background Image Courtesy of Tim Briggs
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