Schedule for Marine Biology and Oceanography Pre-College Summer Program
Principal Instructor: Dr. Claudia Koerting
Co-Instructor: Dr. John Hamilton

**Monday: Introduction to oceanography and instrumentation**
Storrs Campus: Meet in Beach Hall, room 128, teaching lab.

**Morning**
- Hands-on introduction to basic concepts in oceanography and coastal systems
- Begin construction of settling plates to hang off the Avery Point dock.

Break for lunch

**Afternoon**
- Learn about some basic instruments we use to make measurements in the ocean.
- Use smaller versions of these instruments at Mirror Lake on the Storrs campus.

**Evening**
- Homework – general question to consider reflecting on Monday’s program

**Tuesday: The Long Island Sound Marine habitat**
Leave at 8 a.m. for the Avery Point Campus, approx. a one hour trip. Meet in the marine sciences building teaching laboratory.

**Morning:**
- Students will be split into 2 groups. We will take a boat out around Eastern Point Bay to Pine Island, (just across the marina about 1000 feet off of Avery Point to make measurements for oxygen, current, temperature and salinity in several key locations.
  Students will record the data as well as make observations about the animal and plant life encountered. While one group is on the water the other group will examine the tide pools around the Avery Point campus.
- Water samples, plankton tow and seaweed samples will be collected for study in the afternoon.

Break for lunch

**Afternoon:**
- We will set up experiments in the water table laboratory (Rankin laboratory) to test hypotheses on the effect of temperature and salinity on the marine plants and animals we have collected.
- Oxygen consumption and production will be the main parameters measured.
- Nitrate and ammonia analysis of water and effect on algal growth
- Research taking place in the Rankin lab mesocosms on the effect of ocean acidification and warming on fish will be demonstrated and discussed by Marine Sciences faculty.

Return to Storrs at 4:30 p.m.

**Evening:**
- Plot data from the days experiments
- Suggest hypotheses to explain the data trends and relationships
**Wednesday: Marine ecology and conservation biology:**
Leave at 8 a.m. for the Avery Point Campus, meet in the marine sciences building teaching laboratory.

**Morning:**
- Exam settling plates from different stages of succession after hanging off the docks for an extended period of time as well as freshly settled plates.
- Discussion on marine ecology
- Bivalve filtration rate experiments using mussels collected from the Avery Point docks

Break for lunch

**Afternoon:**
- Leave for the Mystic Marinelife Aquarium for behind the scenes tour and to meet with researchers.

Return to Storrs at 4:30 p.m.

**Evening:** complete short assignment: discussion of the day’s observations.

**Thursday: Marine biology**
Leave at 8 a.m. for the Avery Point Campus, meet in the marine sciences building teaching laboratory.

**Morning:**
- Tour of the Mystic aquarium research labs
- Dissection of scallop
- Dissection of Squid

Break for lunch

**Afternoon:**
- Dissection of Dogfish
- Tour of the Marine Sciences oceanographic facilities and research labs.

Return to Storrs at 4:30 p.m.

**Friday morning: Wrap it up – How is Long Island Sound representative of coastal marine habitats? How is it different from the open ocean?**
Meet in Beach Hall, room 140

Activity: Prepare a report of the health of Eastern Long Island Sound based on the data we have collected.