SUSTAINABILITY STUDIES PROGRAM

EHM: Environmental Humanities
EHM 118 E: Introduction to the Natural History of Long Island

FALL 2013

Instructor: Steven Englebright
Ph# (631) 988-1700
Office Hours: M-W by appointment / ESS 351

Mon/Wed classes
5:30 – 6:50pm
Rm ESS 183

Course Description:
This multidisciplinary course focuses on the natural history of Long Island and the ecological analysis of local forests, salt marshes, marine intertidal systems, and bogs. Students will become familiar with observation techniques and conceptual approaches used to investigate ecological patterns and processes in the local environment. (3 credits)

Meeting Schedule:

Mon. 8/26/13  Introduction: Pre glacial geology of Long Island; cross-sectional stratigraphy
Depositional origins of Cretaceous sediments

Wed. 8/28  Field Trip on campus

Mon. 9/2  Labor Day / no class

Wed. 9/4  Glacial Geomorphology of Long Island: outwash plains, moraines, till, flowtill and ice contact deposits, sandurs

Mon. 9/9  Glacial Processes and Climate: subglacial streams, ice shove deformation, hill hole pairs
Periglacial Processes and Phenomena: the Calverton Ponds, Dwarf Pine Plains, Grandifolia Sandhills, and Parabolic Dunes of Napeague

Wed. 9/11  Glacial Stratigraphy

Mon. 9/16  Field Trip to West Meadow Beach (1)  Note: Low Tide will be at 3:30 P.M.

Wed. 9/18  Field Trip to West Meadow Beach (2)  Note: Because Low Tide will be at 5:30 P.M., this field trip will include examination of the mid-bay bar “wildlife cafeteria” and the possible release of immature Salt Marsh Terrapins.

Mon. 9/23  Pollen, Climatic Evidences and Sequence, Sea Level Rise
Origin of the Long Island Sound

Wed. 9/25  Coastal Features: spits, offshore bars, mid-bay bars, eroding and winged headlands, tombolos

Mon. 9/30  Coastal Processes

Wed. 10/2  Salt Marshes > Wading River, Flax Pond, & West Meadow:
age and origin, trapping and binding organisms, humans and salt marshes

Mon. 10/7  Barrier Islands: shoestring sands and lagoons; age, origin, and migration of inlets
eg: Democrat Point

Wed. 10/9  Forest Types and Distributions; Introduction to the Long Island Pine Barrens
Mon. 10/14    Pine Barrens, continued.
            (Columbus Day)
Wed. 10/16   Mid-Term Exam
Mon. 10/21   Freshwater Wetlands, Vernal Ponds, Perched Ponds, Kettles, and Lakes
Wed. 10/23   Rivers of Long Island
Mon. 10/28   Groundwater and Long Island’s Aquifer System
Wed. 10/30   Land Use and the Long Island Environment
Mon. 11/4    Soils: Desert pavements and vertifacts
Wed. 11/6    Marine Habitats of Long Island
Mon. 11/11   Mashomack, Pine Swamp, and the Bass Creek Core
            (Veterans Day)
Wed. 11/13   Jamaica Bay; A Case Study in Environmental Stress
Mon. 11/18   Preservation; Preservationists, Naturalists, and Organizations
Wed. 11/20   Stewardship and the Future: Preserving Habitats and Biological Diversity
Mon. 11/25   Student Presentations
Wed. 11/27   No class ~ Happy Thanksgiving
Mon. 12/2    Student Presentations
Wed. 12/4    Student Presentations
Thurs. 12/12 Final Exam (Same room & time)

* Group student presentations will describe organisms that live (or once lived) on Long Island.
  These include, but are not limited to:
    o Birds of Long Island
    o Reptiles and Amphibians of Long Island
    o Marine Mammals of Long Island
    o Fishes of Long Island (fresh and salt water)
    o Aquatic Invertebrates of Long Island
    o Insects of Long Island
    o Mollusca of Long Island

Verbal presentations should not exceed 15 to 20 minutes and should be accompanied by written species list
handouts with, if appropriate, indexed habitat preferences and photographs or drawings.

**Required Text:**
Overview of Course Goals:

This course is designed to impart knowledge about the ecosystems, bio-geological phenomena, animals and plants, and past and present interactive human activities that collectively define the Natural History of Long Island.

Objectives:

I. Give students insight into the dynamic past and present of the land, shoreline, shallow intertidal and subtidal areas of Long Island including an introduction to many of the plants and animals that live here in ecological association with one another.

Outcomes:

Upon completion of this course, students should:

1. Better understand how Long Island’s Natural History is a valuable part of the heritage of every resident of coastal New York;
2. Have gained new insight into the natural world that they, by living here, are directly a part of;
3. Have learned from detailed information about the geological events and biological processes of Long Island to have an enhanced context for establishing a stronger personal sense of place and respect for ecological stewardship

II. Develop critical thinking skills including effective speaking and writing skills while fostering an enhanced respect for endemic ecosystems through an expanded knowledge of the geological and biological processes that have been or are, active in the coastal region of New York State.

Outcomes:

Upon completion of this course, students should:

1. Both better understand and empathize with efforts that may serve to protect and preserve the biodiversity and ecological function of Long Island’s terrestrial and marine habitats;
2. Identify individually with the Long Island region in ways that might lead to better personal or professional choices and/or environmentally useful decision making regarding either Long Island or any other analogous eco-region.

Assignments that demonstrate the accomplishment of the above-listed outcomes include:

1. Correct answers to multiple choice and/or matching questions and short and long answer questions on exams. Written answers require organized, logical, responses that apply to the questions posed.
2. Student presentations in class: each student must participate in group projects as approved by the instructor.
3. Various written papers of topically appropriate length must be prepared and presented by each student including, as appropriate, group assignments.
Course Requirements:

Both attendance and class participation are important components of this course. Any absence or unexcused lateness for a class assignment may result in a ½ letter grade deduction for said assignment.

Grades in this class will be: A= 95-100, A- = 90-94,
   B+ = 87-89, B = 83-86, B- = 80-82,
   C+ = 77-79, C = 73-76, C- = 70-72,
   D = 65-69, F = 0-64

The Mid-Term Exam will be 20% of the final grade; the Final Exam will be 40% of the final grade; and the written materials and class presentation will be as much as 40% of the final grade. Pop quizzes may occur and the alpha-numeric grade for any such quizzes will be counted as up to 15% of the final grade. Pop quizzes will be computed as part of the overall “class presentation” grade such that, together, they equal 40% of the final grade. The instructor reserves the right to adjust this courses’ syllabus in order to accommodate, for example, guest speakers, films or other audio-visual material, or any adjusted emphasis on specific course themes or topics.

DISABILITY SUPPORT SERVICES (DSS) STATEMENT:

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room 128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

ACADEMIC INTEGRITY STATEMENT:

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person’s work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/uaa/academicjudiciary/

CRITICAL INCIDENT MANAGEMENT:

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students’ ability to learn.
Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.