The Field Projects Course:
The Florida Institute of Technology (FIT) Department of Marine and Environmental Systems (DMES) offers an interdisciplinary Field Projects course each summer for students entering their senior year. The Field Projects provide students with hands-on experience with scientific data collection and hypothesis testing. The program emphasizes principles of quality assurance, teamwork, planning, leadership, peer review and oral and written communication skills.

Research Areas:
The Summer 2005 Field Projects featured the following project areas:

1) atmospheric and water quality monitoring,
2) submerged aquatic vegetation investigations,
3) sea breeze meteorology,
4) beach profiling for students in oceanography, environmental science, and meteorology.
5) Students in ocean engineering were tasked with the design, construction, and testing of ocean engineering projects.

The Summer 2006 Field Projects will include investigations of sea surface temperature profiles over the Florida-Hatteras Shelf region.

STOP 1: Developing Hypotheses:
The spring semester prior to the Field Projects course the students take a companion course which introduces them to project science area topics. Students develop hypotheses for each of the areas of study and these may mature into testable hypotheses used during the field data collection. Collaboration with lead scientists for the project areas on hypotheses begin during this course and continue into the summer program. The resultant hypotheses developed by the students range in degree of influence from the mentor. Hypotheses are also constrained by availability of instrumentation or data sets that can be collected and by the ability of mentors to adapt their respective project areas to novel hypotheses.

STOP 2: Field Data Collection, Analysis, and Cross-cutting themes
The schedule of the field data collection phase for the individual research areas reflects a balance between data collection requirements across research areas that had sampling intervals ranging from daily to weekly. Also, students rotate in/out of the “land based” projects to participate in the ocean cruise studies. The schedule is rigorous, and requires effective time management by the students.

STOP 3: The Cruise:
Students plan and participate in a 4-day research cruise investigating processes in the Indian River Lagoon and the Atlantic Ocean.

STOP 4: Communicating Results
The course culminates with the Field Projects Symposium. Students focus on one of their summer research projects. The Symposium is open to the public and includes participation by the president of the university and scientists in their field of study.

FIT student Jaclyn Shafer presenting her research entitled “Verification of the ARPS model forecast of sea breeze related cloud systems” at the Summer 2005 Field Projects Symposium.