MEC 517: Energy Technologies Laboratory II

CATALOG DESCRIPTION
Experiments in the areas of thermoelectric power, fuel cells, hydrogen generation, wind turbines, photovoltaics, and power electronics. The focus is on system efficiencies, system integration, and design for residential markets.

REFERENCE BOOKS
- *Fuel Cell Systems Explained, Larminie and Dicks*
- *Fundamentals of Eng. Thermodynamics, Morran and Shapiro*
- *Heat Transfer, Holman*
- *Heat Transfer: a practical approach, Yunus A. Cengel*
- *Principles of Solar Engineering, Goswani, Kreith, and Kreider*

ACTIVITIES
1. Thermoelectric Labs 1, 2, 3, & 4
2. Fuel Cell Labs 1 & 2
3. Electrolysis Lab
4. Inverter Lab
5. Generator Lab 1
6. Wind Turbine Lab 1
7. Photovoltaics Labs 1 & 2
8. Power Electronics Lab 1
GRADES

- Each of the labs will be graded out of 10 points. Being a graduate level class, 1 of the 10 points is reserved for producing a graduate level report. This point will be given at the graders discretion. Combined, the labs are worth 60% of the semester grade.

- A group project report will be assigned and due mid-semester and will be worth 20% of the semester grade. Further details will be given in class and on Blackboard.

- An end of semester exam will be given worth 20% of the semester grade. This will include questions from each experiment performed during the semester.

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, room128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: http://www.stonybrook.edu/ehs/fire/disabilities

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.