MEC 520: Energy Technology Thermodynamics  Fall 2010

Course description: Following a review of engineering thermodynamics principles, the thermodynamics of power generation, heat pumps, heat transfer, radiation, electro-chemical systems, chemical reactions and combustion are explored in the context of sustainable energy development.

Prerequisites: none

Reference books:  *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:  Thermodynamics review  
Power cycles  
Heat pumps  
Heat Transfer  
Radiation  
Combustion  
Electro-chemical systems  
Student Project

Grades:  Exams (2)  30  
Project report  30  
Problems  40

Americans with Disabilities Act:  
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:
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/