MEC 520: Energy Technology Thermodynamics

Course description: Following a review of engineering thermodynamics principles, the thermodynamics of power generation, heat pumps, heat transfer, radiation, electro-chemical systems, motors, and power electronics 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

Infra-red imaging

Radiation

Convective Heat Transfer

Electro-chemical systems

Motors

Grades: Exams (2) 60

Final Exam 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 at (631) 632-6748 or http://studentaffairs.stonybrook.edu/dss/. They will determine with you what accommodations 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.sunysb.edu/ehs/fire/disabilities.shtml

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Academic dishonesty is an extremely serious offense and will not be tolerated in any form. Academic dishonesty in general is the presentation of intellectual work that is not originally yours. Examples include, *but are not limited to*, copying or plagiarizing class assignments including homework, reports, designs, and other submitted materials; copying or otherwise communicating answers on exams with other students; bringing unapproved aids, either in physical (written) or electronic form to an exam; obtaining copies of an exam prior to its administration, etc. Academic dishonesty violates both the ethical and moral standards of the Engineering profession and all infractions related to academic dishonesty will be prosecuted to the fullest via the CEAS CASA committee. For you, the honest student, academic dishonesty results in lower class curves, hence a depression in your GPA and class standing, while cheapening the degree you earn.