EMBRY-RIDDLE AERONAUTICAL UNIVERSITY
Engineering Science

Course: ES 403 Heat Transfer **Term:** Fall 2009

Instructor: Dr. Tom Gally **Office:** AC1-320
http://pr.erau.edu/gallyt

Hours: See website **Phone**: 777-3931

Text: *Heat Transfer*, J.P. Holman, Mc-Graw-Hill, 10th Edition.

Goals: To provide a basic understanding of the basic mechanisms of Heat Transfer Mechanisms – conduction, convection and radiation – and how to apply those concepts in designing thermal systems.

Evaluation:

Homework	10%
Exams (2 @ 30% each)	60%
Final (December 5th, 8-10am)	30%

Class Attendance:

There will be no role taken, so attendance is up to the discretion of the student, with the following caveats: (1) attendance at exams is mandatory – make up exams will be allowed only in extreme circumstances; (2) the student is solely responsible for assignments, announcements, and lectures provided during class.

Homework:

I have assigned homework solely as a learning aide for the students. Homework will not be graded, but will receive either a 2, 1, or 0 based upon the level of completeness. Homework will be due at the beginning of class on the due date. Late homework will not be accepted for credit.

Course Topics

Fundamental Concepts
1-D Conduction in Solids/Nonmoving Fluids
Multi-Dimension Conduction
Unsteady Conduction
Convection Fundamentals – Flat Plate Flow
Empirical Convection Correlations
Natural (Free) Convection
Radiation
Heat Exchanger Design

Emergency Continuity Planning:

In case of natural disaster or medical emergency which required the evacuation of the campus for an extended period, an attempt will be made to continue offering the course online via Blackboard.

All students are expected to be familiar with the regulations, dates and deadlines outlined in the Student Handbook.