Instructor - Rick J. Couvillion, PhD, PE, ME208, X 54155, rjc@uark.edu, website

Text - No text. Use instructor notes that are accessed via Blackboard.

Software - Excel and Visual Basic will be used on most assignments. Install Excel’s ‘Solver’ add-in. Excel spreadsheets with built-in Visual Basic functions will also be used and are available in the 'Downloads' folder on Blackboard. Matlab may be used later in the course and is available on U of A’s VLab. Instructions for accessing Matlab via VLab are available in the 'Downloads' folder on Blackboard. A student version can be purchased.

References

Prerequisite - Fluid Mechanics, Heat Transfer, Excel, Matlab, some programming.

Objectives
- Development of awareness and understanding of the relationships among the thermal sciences in the design process.
- Knowledge of thermal system component characteristics and their effect on overall system performance.
- Modeling of thermal systems and components.
- Thermal systems optimization.

Lectures - Recorded lectures are accessed via a ‘XXXXXX Lecture Recordings’ link on Blackboard. The recorded lectures are numbered 01-25. There are lecture notes that accompany the recorded lectures that can be downloaded via the 'Lecture Notes and Schedule' link on Blackboard. The lecture notes are also numbered 01-25, and the content roughly corresponds to that in the recorded lectures. On average, 3 recorded lectures corresponding to 3 sets of lecture notes per week will be covered as shown on the course content and schedule shown below.

Drills - There will usually be an online drill each week using Blackboard Collaborate. Instructions for signing on to a Collaborate drill session are available in the 'Downloads' folder on Blackboard. Drills will focus on questions about the lectures and the homework. There are some recorded drill sessions that can also be accessed via the 'XXXXXX Lecture Recordings' link on Blackboard. The drill recordings are labeled as such.

Communications - UA emails for all class members will be provided to encourage collaboration. If the class finds discussion groups useful, they will be set up on blackboard.

Grading - Three Exams - 80%. Homework - 20%. Exams require a proctor approved by the instructor and the MSE program. Approval form can be downloaded here. Graduate and honors students will have extra project work assigned.

Homework - Homework assignments 01 - 04 must be submitted before Exam 01 will be given. Assignments 05 - 07 must be submitted before Exam 02. Homework 08 - 09 and the project must be submitted before Exam 03.

Academic Honesty - Academic honesty is expected, and dishonesty as described in the UA academic integrity policy will be penalized. Penalties will range from getting zero on a homework, quiz, project, or exam to failure of the course and/or report to the College of Engineering Academic Integrity Monitor. However, these penalties will pale in comparison to the instructor knowing that you are a person who cannot be trusted. If a potential employer asks, the instructor will be obligated to express his concerns about your integrity.
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Note: Lecture recordings are numbered 01-25. There are also recorded drill/review sessions.