## MEEN 3996 Honors College Mentored Research Experience Fall 2016

Instructor: Xiaohua Li
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**Lecture Time:** No Lecture, student meets instructor once a week to discuss research

progress

**Instructor Office Hours:** Open Office Policy. MWF, 11:30 a.m.-1:30 p.m. or by appointment

**Required Textbook**: No required Textbook. Student need to read research publications

## **Course Description:**

3 hours. Student will conduct research on solar thermoelectric battery design, test, evaluation and simulation. Research papers will be assigned for reading. A prototype model will be built, field test will be conducted. Software COMOSOL will be used for simulation. Student will also have to report to the instructor about the research progress once every week. A final report will be submitted and graded.

Prerequisite(s): No Prerequisites

<b>Grades:</b>	Final Report	100%
	≥ 90%	A
	80-89.9%	В
	70-79.9%	C
	60-69.9%	D
	< 60%	F

**Disability Accommodations:** If you need academic accommodations for disability you must have document which verifies the disability and makes you eligible for accommodations, then you can schedule an appointment with the instructor to make appropriate arrangements.

## **Academic Dishonesty:**

There is a zero tolerance policy. Cheating of whatsoever will result in an automatic 'F' in this course and the matter will be turned over to the appropriate student disciplinary committee.

UNT Official Academic Calendar: Fall 2016			
Date	Event		
August 29, 2016	First Class Day (Monday)		
September 5, 2016	Labor Day (no classes; university closed)		
November 24-27, 2016	Thanksgiving Break (no classes; university closed)		
December 7-8, 2016	Pre-finals Days		
December 8, 2016	Last Class Day		
December 9, 2016	Reading Day (no classes)		
December 10-15, 2016	Finals		
December 24, 2016 - January 1, 2017	Winter Break (no classes; university closed)		

## MEEN 3996 Honors College Mentored Research Experience Schedule Overview (Subject to change)

Week	Date	Meeting Topics	
#1	Aug.29 <sup>th</sup> - Sept.2 <sup>nd</sup>	Discussion on solar thermoelectric battery, research papers assigned.	
#2	Sept.5 <sup>th</sup> – Sept.9 <sup>th</sup>	Design and Build the prototype of solar thermoelectric battery	
#3	Sept.12 <sup>th</sup> – Sept.16 <sup>th</sup>	Design and Build the prototype of solar thermoelectric battery	
#4	Sept.19 <sup>th</sup> – Sept.23 <sup>rd</sup>	Design and Build the prototype of solar thermoelectric battery	
#5	Sept.26 <sup>th</sup> – Sept.30 <sup>th</sup>	Design and Build the prototype of solar thermoelectric battery	
#6	Oct.3 <sup>rd</sup> – Oct.7 <sup>th</sup>	Filed Test of solar thermoelectric battery	
#7	Oct. 10 <sup>h</sup> – Oct.14 <sup>th</sup>	Filed Test of solar thermoelectric battery	
#8	Oct. 17 <sup>th</sup> – Oct.21 <sup>st</sup>	Literature review and research paper reading Simulation in COMSOL of solar thermoelectric battery	
#9	Oct. 24 <sup>th</sup> – Oct.28 <sup>th</sup>	Literature review and research paper reading Simulation in COMSOL of solar thermoelectric battery	
#10	Oct.31 <sup>st</sup> – Nov.4 <sup>th</sup>	Simulation in COMSOL of solar thermoelectric battery	
#11	Nov.7 <sup>th</sup> – Nov.11 <sup>th</sup>	Simulation in COMSOL of solar thermoelectric battery	
#12	Nov 14 <sup>th</sup> – Nov.18 <sup>th</sup>	Simulation in COMSOL of solar thermoelectric battery	
#13	Nov.16 <sup>th</sup> – Nov.25 <sup>th</sup>	Simulation in COMSOL of solar thermoelectric battery	
#14	Nov.28 <sup>th</sup> – Dec. 2 <sup>nd</sup>	Simulation in COMSOL of solar thermoelectric battery	
#15	Dec. 5 <sup>th</sup> – Dec. 9 <sup>th</sup>	Simulation in COMSOL of solar thermoelectric battery	
#16	Dec. 10th – Dec. 15th	Final report Due	