

Instructor: Hassan Qandil	
Office: F102K	Email: Hassan.Qandil@unt.edu
Lecture Times and Locations:	(Section-1: F 08:30 a.m.-09:20 a.m.) > Room: F175 (Section-2: F 10:30 a.m.-11:20 a.m.) > Room: D207A (Section-3: F 02:30 p.m.-03:20 p.m.) > Room: B190
Instructor Office Hours:	Thursday 11:30 a.m.-12:30 p.m. & Friday 9:30 a.m.-10:30 a.m.
Pre/co-requisites:	MEEN 3240, MEEN 3120; (Co-requisite) MEEN 3210
Lab Location:	F158 MEE undergraduate Teaching Lab
Experiments' Manual:	Uploaded to CANVAS (PRINT A HARD COPY)
Reference Textbook:	Experimental Methods for Engineers, 8 th ed (or 7 th ed) J. P. Holman (ISBN: 978-0-07-352930-1)

TA's:

Madasani, Ravichandra	RavichandraMadasani@my.unt.edu
Shuai, Ju	shuaiju@my.unt.edu
Farzanehkordi, Mahsa	SayedehmahsaFarzanehdehkordi@my.unt.edu

Lab Sessions:

Day	Time	Session		Course Code	TA
Monday	08:30-11:20	1	08:30-09:50	3242.301	Ravichandra
		2	10:00-11:20	3242.301	Shuai
Tuesday	08:30-11:20	3	08:30-09:50	3242.302	Ravichandra
		4	10:00-11:20	3242.302	Shuai
Tuesday	02:30-05:20	5	02:30-03:50	3242.303	Shuai
		6	04:00-5:20	3242.303	Ravichandra
Wednesday	11:30-02:20	7	11:30-12:50	3242.304	Shuai
		8	01:00-02:20	3242.304	Shuai
Thursday	08:30-11:20	9	08:30-09:50	3242.305	Ravichandra
		10	10:00-11:20	3242.305	Ravichandra
Thursday	02:30-05:20	11	02:30-03:50	3242.306	Ravichandra
		12	04:00-5:20	3242.306	Ravichandra
Friday	02:30-05:20	13	02:30-03:50	3242.307	Shuai
		14	04:00-05:20	3242.307	Ravichandra

Course Description:

A continuation of MEEN 3240, MEE Lab I, covers principles of experimentation. Students perform a series of experiments in key areas of fluid mechanics and heat transfer. Experiments will cover flow velocity measurement, flow across a circular cylinder, drag force measurement and velocity boundary layers, thermal conductivity measurement, fin performance, transient heat conduction, natural and forced convection and radiation.

Grades: Lab Reports	40%	≥ 90%	A
Lecture Attendance	20%	80-89.9%	B
Midterm (labs 1-4)	20%	70-79.9%	C
Final (labs 5-9)	20%	60- 69.9%	D
Total	100%	< 60%	F

Reports: Two (and BOTH) Submissions are required

- **Submission #1: PDF Electronic format to CANVAS.** Each student should upload his/her group report in one single PDF document.
- **Submission #2: hardcopy to session TA.** Submit a **hard copy** of your lab report to your session TA on the due day before your new lab session starts.

NO LATE LAB REPORTS WILL BE COLLECTED

A **Template** for lab report in MS Word format has been posted in Blackboard. **Download and use the template DIRECTLY.** Convert your report to PDF before submitting (this is for submission #1).

Due days for lab reports (also definition of “late” lab reports): if not otherwise stated, lab reports will due EXACTLY one week after your lab session. For example, if your group lab session is Thursday, 11:00 a.m.-12:20 p.m., this means you will do your experiment on every Thursday 11:00 a.m.-12:20 p.m. Therefore, your lab report will due next Thursday 11:00 a.m., before the new experiment starts. In this case, lab report turned in after 11:00 a.m. Thursday will be considered as “late” and will not be collected.

Lecture attendance:

Lecture attendance is mandatory; attendance sheet will be provided and collected for each individual lecture. Lecture attendance will contribute 10% to your final grade.

Lab attendance:

Lab attendance is mandatory; a group picture in front of the lab equipment on the experiment day is required. This group picture should be included in your lab report as appendix and will be used to check the lab attendance. Lab attendance will be incorporated in your peer evaluation score.

Teamwork:

Each group should consist of 5 students. Once the group is formed, students will have to stay in the same group and may NOT change group for the entire semester.

By definition, a group must have more than one individual. Anyone unwilling or unable to work in a group with multiple other individuals will receive an ‘F’ in MEEN 3242. **Reports submitted by individuals will not be graded.**

Peer Evaluation:

A peer evaluation will be performed for any individual experiment if any group member requests such a peer evaluation. Each group member will evaluate the **lab performances** and **report contributions** of other members in the same group anonymously by a scale of 0-100%. 100% means a good job on the assigned part of work while 0% means completely no contribution to the lab and the report. Results of peer evaluation should be sealed in an envelope and turned in to the instructor or TA. The **(average percentage)* (group lab report score)** will be the score of that particular student for that particular lab report.

For example, we assign max 100 points for each lab report, and the score for one group report is 94; Suppose one student received an average peer evaluation of 50%, then this individual student will receive a credit of $94 * 50\% = 47$ points for that particular lab report.

Exam:

- (1) **Exams are closed book and closed notes with formula sheets.**
- (2) Formula sheets could be maximum 5 pages on top of instructor’s handouts, A4 or letter size, both sides
- (3) Student is responsible for preparing his/her own formula sheet
- (4) Formula sheets could include anything BUT: data or data analysis in lab report or experimental manual. Student who failed to follow this rule will score zero in the exam and this cheating matter will be reported to the department and university.
Student who failed to follow this rule will score zero in the exam and this cheating matter will be reported to MEE department and university.
- (5) Formula sheets must be turned in with the exam papers (in the case of formula sheets were not checked by the instructor during the exam). Student who failed to follow this rule will score zero in the exam and this cheating matter will be reported to MEE department and university
- (6) **There will be NO make-up exam. Exceptions:** medical emergence (student and important ones), transportation/traffic emergency; religious holidays/duty, jury duty and military duty. **Documentary evidences** must be submitted.

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.

Professionalism: One of the goals of this course is to teach students about professionalism, including the standards and expected behavior of your chosen profession. With this in mind, students are expected to demonstrate a behavior consistent with the conduct of an individual practicing in the engineering profession. Students are expected to: (1) come prepared for class; (2) respect faculty and peers; (3) demonstrate responsibility and accountability for your own actions; (4) sensitivity and appreciation for diverse cultures, backgrounds, and life experiences; (5) offer and accepts constructive criticism in a productive manner; (6) demonstrate an attitude that fosters professional behavior among peers and faculty; (7) be punctual to class meetings; (8) maintain a good work ethic and integrity; and (9) recognize the classroom as a professional workplace.

Classroom Inclusivity Statement: I consider this classroom to be a place where you will be treated with respect, and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class.

UNT Official Academic Calendar: Spring 2019

Date	Event
January 14, 2019	First Class Day (Monday)
January 21, 2019	MLK Day (no classes; university closed)
March 11-15, 2019	Spring Break (no classes)
May 1-2, 2019	Pre-finals Days
May 2, 2019	Last Class Day
May 3, 2019	Reading Day (no classes)
May 4-10, 2019	Finals

MEEN 3242.001/002/003 MEE Lab II

Week	Dates	Lecture Topics (Friday)	Lab Activity	Reports Due
#1	Jan.14 th - Jan.18 th	Overview of syllabus; Team up instructions;	No Lab	No report
#2	Jan.21 st - Jan.25 th	Lecture 1: Fluid Mechanics #1 Flow Velocity Measurement	Team up in lab F158 Meet your TA and group members; Collect contact information	No report
#3	Jan.28 th - Feb.1 st	Lecture 2: Fluid Mechanics #2 Flow Across a Cylinder	Flow Velocity Measurement	No report
#4	Feb.4 th - Feb.8 th	Lecture 3: Fluid Mechanics #3 Golf Ball Drag Force	Flow Across a Cylinder	Flow Velocity Measurement
#5	Feb.11 th - Feb.15 th	Lecture 4: Fluid Mechanics #4 Velocity Boundary Layer	Golf Ball Drag Force	Flow Across a Cylinder
#6	Feb.18 th - Feb.22 nd	Lecture 5: Heat Transfer #1 Thermal Conductivity	Velocity Boundary Layer	Golf Ball Drag Force
#7	Feb. 25 th - Mar.1 st	Mar.1st (Friday) Midterm Exam: (labs 1-4) in classroom Fluid Mechanics Experiments	Thermal Conductivity	Velocity Boundary Layer
#8	Mar. 4 th - Mar.8 th	Lecture 6: Heat Transfer #2 Extended Heat transfer-Fin	No Lab	Thermal Conductivity
#9	Mar. 11 th - Mar.15 th	SPRING BREAK!		
#10	Mar.18 th - Mar.22 nd	Lecture 7: Heat Transfer #3 Transient Conduction	Extended Heat transfer-Fin	No report
#11	Mar.25 th - Mar.29 th	Lecture 8: Heat Transfer #4 Natural Convection and Radiation	Transient Conduction	Extended Heat transfer-Fin
#12	Apr.1 st - Apr.5 th	Lecture 9: Heat Transfer #5 Forced Convection and Radiation	Natural Convection and Radiation	Transient Conduction
#13	Apr.8 th - Apr.12 th	Lecture 10: Group designed experiment	Forced Convection and Radiation	Natural Convection and Radiation
#14	Apr.15 th - Apr.19 th	No Lecture	Group designed experiment	Forced Convection and Radiation
#15	Apr.22 nd - Apr.26 th	Apr.26th (Friday) Final Exam (labs 5-9) in classroom Heat Transfer Experiments	No Lab	Group designed experiment