



New Jersey's Science & Technology University

NEWARK COLLEGE OF ENGINEERING

ME 406 MECHANICAL LABORATORY – III

January 21, 2025

Spring 2025

COURSE ADMINISTRATIVE INFORMATION

Course Name:	Mechanical Laboratory – 3 (1-2-2)
Course-Section Number:	ME406-006 (Tuesday) (CRN: 14235)
Class meeting room / laboratory:	MEC-110
After Class office room:	MEC 330
Instructor's Name:	B. S. Mani
Office Téléphone:	(973) 596-3339
Cell Phone :	(630) 345-0558
e-mail id:	mani@njit.edu
Teaching Assistant:	Ketan Jawney
e-mail id:	kj355@njit.edu Tel: (862) 662-3807
Engine Lab Support:	Mr. Orlando Castillo & Mr. David Bailey
Class meeting hours:	Tuesday: 11:30 PM to 1:20 PM
After Class office hours:	Tuesday 2:30 PM to 3:30 PM Thursday: 11:30AM to 1:00 PM
Complaints / Compliments:	Dr. Zhiming Ji; (973) 596-3330 (ji@njit.edu)

TEXTBOOK

J. P. Holman, *Experimental Methods for Engineers*, 8th Edition, McGraw Hill, 2012

COURSE DESCRIPTION

Laboratory covering the testing and evaluation of complete mechanical systems.

Prerequisites: ME 405, ME 407.

LABORATORY REPORT

All reports shall be individually completed and submitted on schedule

Penalty for late submission: 10%

Group discussion is encouraged but not writing 'Group Report'

Grade for identical reports or very similar reports, will be divided among the number of students involved

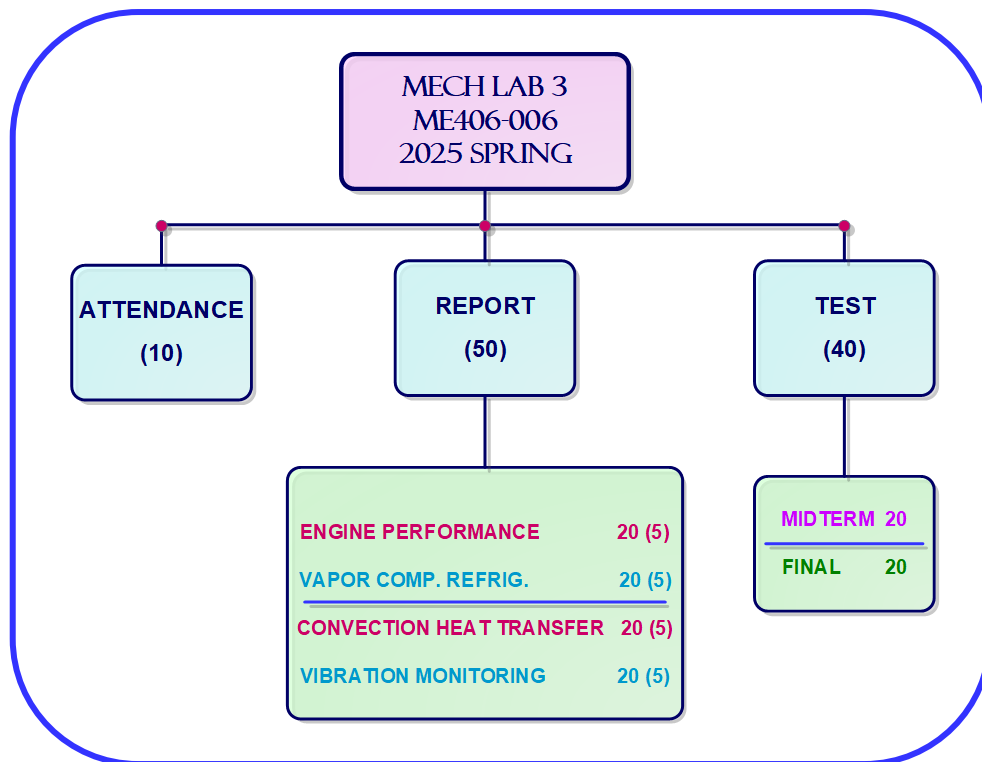
Laboratory report must follow the formal report format suggested

Grades in case of resubmitted reports (if allowed), will be averaged with the original grade

NO cheating in any manner in any laboratory report(s) / test(s) will be tolerated

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GRADING SCHEME



LETTER GRADE	QUANTITATIVE REQUIREMENT	QUALITATIVE ACHIEVEMENT
A	90% & above	Superior Achievement
B plus	85% to 89.99%	Excellent Achievement
B	80% to 84.99%	Very Good Achievement
C plus	75% to 79.99%	Good Achievement
C	70% to 74.99%	Acceptable Achievement
D	60% to 69.99%	Minimum Achievement
F	59.99% and below	Inadequate Achievement

GENERAL REQUIREMENTS

- Regular attendance to all lecture classes is required
- Staying attentive to lectures during class is expected
- 30 minutes or more delay in arriving at the lecture/lab session will be treated as absence
- Assignments shall be submitted on schedule – *penalty for late submission(s): 10%*
- Reasonably equal participation in team Laboratory Experiment is expected
- Team working for all general homework is highly encouraged
- Taking the Midterm & Final Examination is *mandatory to receive a final course grade*
- Safety instructions inside the laboratory shall be obeyed
- IPOD and Cell Phone use during Class or Laboratory will NOT be allowed

Make-up examination, except for authentic medical reason(s), will NOT be allowed

No tolerance for *cheating* in any manner in any test OR in report preparation

Any student found copying a report will be awarded zero for that report – with no option to resubmit

Any student found *cheating during a test* will be awarded a course grade of 'F.'

Please refer to the University Policy on Academic Integrity at

<https://www.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>

ME 406-006 (CRN 14236): MECHANICAL LABORATORY III

SPRING 2025

#	DATE	DAY	TEAM-1	TEAM-2	TEAM-3	TEAM-4	HIGHLIGHTS / REMARKS
1	01/21/25	Tuesday	Lecture	Lecture	Lecture	Lecture	Lecture: Syllabus
2	01/28/25	Tuesday	Lecture	Lecture	Lecture	Lecture	Lecture: Reports, IC Engines
3	02/04/25	Tuesday			Refrigeration: TA	Engine:Orlando (Bailey,Mani)	Lecture: Refrigeration
4	02/11/25	Tuesday	Refrigeration: TA	Engine:Orlando (Bailey,Mani)	Analysis & Report	Analysis & Report	
5	02/18/25	Tuesday	Analysis & Report	Analysis & Report	Engine:Orlando (Bailey,Mani)	Refrigeration: TA	
6	02/25/25	Tuesday	Engine:Orlando (Bailey,Mani)	Refrigeration: TA	Analysis & Report	Analysis & Report	
7	03/04/25	Tuesday	Review + Analysis & Report	Review + Analysis & Report	Review + Analysis & Report	Review + Analysis & Report	Review for Midterm
8	03/11/25	Tuesday	Submit Reports+Midterm	Submit Reports+Midterm	Submit Reports+Midterm	Submit Reports+Midterm	1 Long+1 Short Reports due
	03/18/25	Tuesday	Spring Break	Spring Break	Spring Break	Spring Break	No Class
9	03/25/25	Tuesday	Lecture	Lecture	Lecture	Lecture	Lecture: Heat Trans+Vibn
10	03/26/25	Tuesday	Vibrations:TA	Heat Trans: Mani	Analysis & Report	Analysis & Report	
11	04/01/25	Tuesday	Analysis & Report	Analysis & Report	Vibrations:TA	Heat Trans: Mani	
	04/07/25	Monday	Last day to Withdraw	Last day to Withdraw	Last day to Withdraw	Last day to Withdraw	Last day to Withdraw
12	04/08/25	Tuesday	Heat Trans: Mani	Vibrations:TA	Analysis & Report	Analysis & Report	
13	04/15/25	Tuesday	Analysis & Report	Analysis & Report	Heat Trans: Mani	Vibrations:TA	
14	04/22/25	Tuesday	Review + Analysis & Report	Review + Analysis & Report	Review + Analysis & Report	Review + Analysis & Report	Review for Final
15	04/29/25	Tuesday	Review	Review	Review	Review	Last day of classes
16	Exam Date		Reports Due	Reports Due	Reports Due	Reports Due	1 Long+1 Short Reports due
			Final exam	Final exam	Final exam	Final exam	On Registrar's exam date
	05/18/25	Monday	Grades Due	Grades Due		Grades Due	Grades due
GRADING SCHEME						REPORT SET 1 (PINK)	REPORT SET 2 (TEAL)
Report - long (#1)	20		Mid Term Exam (1)	20		Engine Perf. (Long)	Refrigeration (Long)
Report - long (#2)	20		Final Exam (1)	20		Heat Transfer (Long)	Vibration (Long)
Report - short (#1)	5		Attendance (15 meetings)	10		Refrigeration (Short)	Engine Perf. (Short)
Report - short (#2)	5		Total	100		Vibration (Short)	Heat Transfer (Short)
INSTRUCTOR: B. S. Mani bmani@njit.edu , (x 3339), (630) 345-0558					TEACHING ASSISTANT: Ketan Jawney, kj355@njit.edu , (862) 622-3807		
ENGINE PERFORMANCE TEST: Mr. David Bailey (x 3320), david.bailey@njit.edu + Mr. Orlando Castillo, (orlando.castillo@njit.edu), (x3320)							

B. S. Mani

CAUTION: PLEASE DO NOT FOLLOW AVERAGES SHOWN ON CANVAS

01/21/2025