Spring 2024

ME 406-010: Mechanical Lab III

Balraj Mani

NJIT New Jersey's Science & Technology University

NEWARK COLLEGE OF ENGINEERING

ME 406 MECHANICAL LABORATORY – III

January 16, 2024 **Spring 2024**

COU6RSE ADMINISTRATIVE INFORMATION

Course Name:	**Mechanical Laboratory – 3 (1-2-2)**
Course-Section Number:	ME406-010 (Tuesday) (CRN: 15966)
Class meeting room / laboratory:	MEC-110
After Class office room:	MEC 330
Instructor's Name:	**B. S. Mani**
Office Telephone:	**(973) 596-3339**
Cell Phone :	**(630) 345-0558**
e-mail id:	*mani@njit.edu*
Teaching Assistant:	**Mohammad Moghanjooghi**
e-mail id:	**mm422@njit.edu** Tel: **(646) 240-7561**
Engine Lab Support:	**Mr. Orlando Castillo & Mr. David Bailey**
Class meeting hours:	Tuesday: 1:00 PM to 3:50 PM
After Class office hours:	Tuesday 11:30 to 12:50 AM
Complaints / Compliments:	Dr. Joga Rao; (973) 596-3330 (*i.j.rao@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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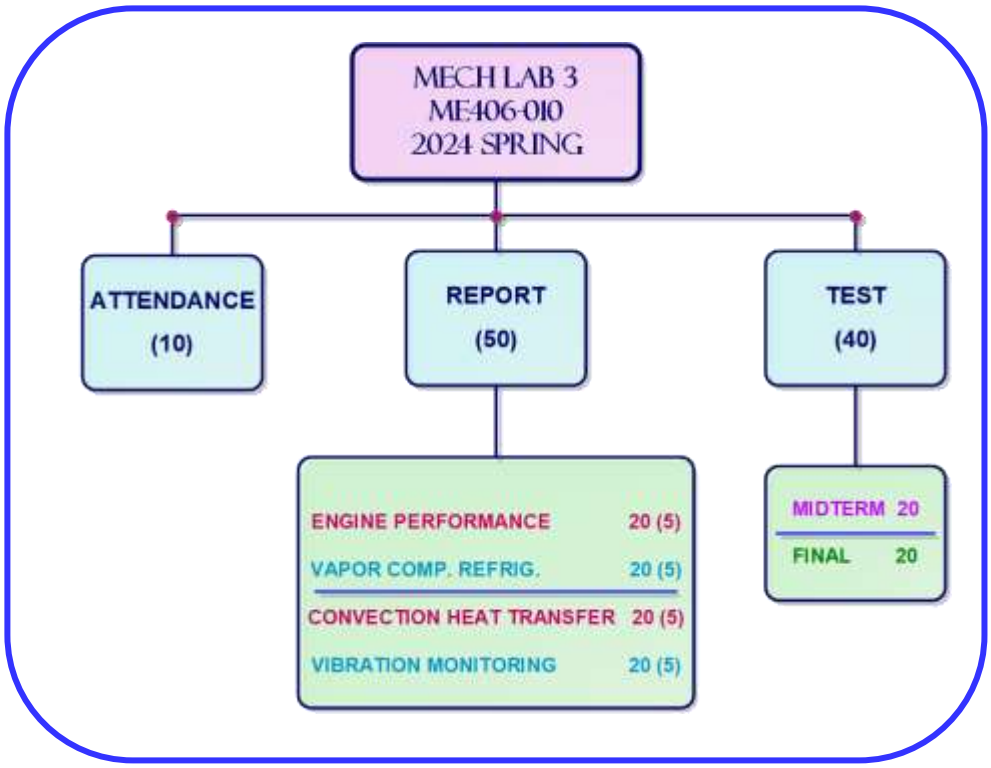

GRADING SCHEME

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 406-010 (CRN 15966): MECHANICAL LABORATORY III — SPRING 2024

#	DATE	DAY	TEAM-1	TEAM-2	TEAM-3	TEAM-4	HIGHLIGHTS / REMARKS
1	01/16/24	Tuesday	Lecture	Lecture	Lecture	Lecture	Lecture: Syllabus
2	01/23/24	Tuesday	Lecture	Lecture	Lecture	Lecture	Lecture: Reports, IC Engines
3	01/30/24	Tuesday			Refrigeration: TA	Engine:Orlando (Mani, Bailey)	Lecture: Refrigeration
4	02/06/24	Tuesday	Refrigeration: TA	Engine:Orlando (Mani, Bailey)	Analysis & Report	Analysis & Report	
5	02/13/24	Tuesday	Analysis & Report	Analysis & Report	Engine:Orlando (Mani, Bailey)	Refrigeration: TA	
6	02/20/24	Tuesday	Engine:Orlando (Mani, Bailey)	Refrigeration: TA	Analysis & Report	Analysis & Report	
7	02/27/24	Tuesday	Review + Analysis & Report	Review + Analysis & Report	Review + Analysis & Report	Review + Analysis & Report	Review for Midterm
8	03/05/24	Tuesday	Submit Reports+Midterm	Submit Reports+Midterm	Submit Reports+Midterm	Submit Reports+Midterm	1 Long +1 Short Reports due
	03/12/24	Tuesday	Spring Break	Spring Break	Spring Break	Spring Break	
9	03/19/24	Tuesday	Lecture	Lecture	Lecture	Lecture	Lecture: Heat Trans+Vibration
10	03/26/24	Tuesday	Vibrations:TA	Heat Trans: Mani	Analysis & Report	Analysis & Report	
	04/01/24	Monday	Last day to Withdraw	Last day to Withdraw	Last day to Withdraw	Last day to Withdraw	Last day to Withdraw
11	04/02/24	Tuesday	Analysis & Report	Analysis & Report	Vibrations:TA	Heat Trans: Mani	
12	04/09/24	Tuesday	Heat Trans: Mani	Vibrations:TA	Analysis & Report	Analysis & Report	
13	04/16/24	Tuesday	Analysis & Report	Analysis & Report	Heat Trans: Mani	Vibrations:TA	
14	04/23/24	Tuesday	Review + Analysis & Report	Review + Analysis & Report	Review + Analysis & Report	Review + Analysis & Report	Review for Final
	04/30/24	Tuesday	Friday Schedule	Friday Schedule	Friday Schedule	Friday Schedule	Last day of classes
15	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
	05/11/23	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 mani@njit.edu, (x 3339), (630) 345-0558					TEACHING ASSISTANT: Mohammad Moghanjooghi, mm422@njit.edu, (646) 240-7561		
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 — 01/16/2024