

Spring 2021

## **ME 406-006: Mechanical Laboratory III**

Balraj Mani

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**NEWARK COLLEGE OF ENGINEERING**

**ME 406 MECHANICAL LABORATORY – III**

January 19, 2021

Spring 2021

**COURSE ADMINISTRATIVE INFORMATION**

<b>Course Name:</b>	<b>Mechanical Laboratory – 2 (1-2-2)</b>
<b>Course-Section Number:</b>	ME406-002, 104 (Tuesday) ME406-006 (Friday)
<b>Class meeting room / laboratory:</b>	Online Asynchronous mode
<b>After Class office room:</b>	WebEX (on demand)
<b>Instructor's Name:</b>	<b>B. S. Mani</b>
<b>Office Telephone:</b>	(973) 596-3339
<b>Cell Phone :</b>	(630) 345-0558 (suggested for access)
<b>e-mail id:</b>	<a href="mailto:mani@njit.edu">mani@njit.edu</a>
<b>Teaching Assistants ME406-001:</b>	<b>Mr. Islam Benouaguef, <a href="mailto:ib43@njit.edu">ib43@njit.edu</a></b> <b>Ms. Suchandra Das, <a href="mailto:sd585@njit.edu">sd585@njit.edu</a></b> <b>Mr. Joseph Glaz, <a href="mailto:glaz@njit.edu">glaz@njit.edu</a></b>
<b>Engine Lab Support:</b>	
<b>Class meeting hours:</b>	Tuesday: 12:30 PM to 1:50 PM (Section 006) Tuesday: 6:00 PM to 8:50 PM (Section 104) Friday: 12:30 PM to 1:50 PM (Section 002)
<b>After Class office hours:</b>	WebEX, by schedule, Monday 7:30 – 8:55 AM
<b>Complaints / Compliments:</b>	<b>Dr. Joga Rao, <a href="mailto:I.j.rao@njit.edu">I.j.rao@njit.edu</a>, (973) 596-3330</b>

**TEXTBOOK**

J. P. Holman, *Experimental Methods for Engineers*, 8<sup>th</sup> 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'

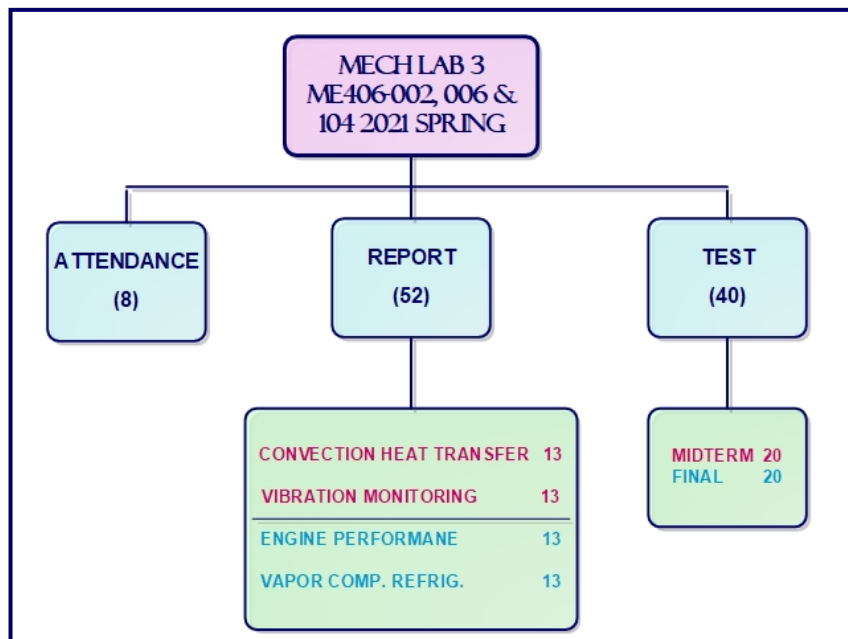
Grade for identical reports or very similar reports, will be divided among the number of students involved

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

## GRADING SCHEME



LETTER GRADE	QUANTITATIVE REQUIREMENT	QUALITATIVE ACHIEVEMENT
<b>A</b>	90% & above	Superior Achievement
<b>B plus</b>	85% to 89.99%	Excellent Achievement
<b>B</b>	80% to 84.99%	Very Good Achievement
<b>C plus</b>	75% to 79.99%	Good Achievement
<b>C</b>	70% to 74.99%	Acceptable Achievement
<b>D</b>	60% to 69.99%	Minimum Achievement
<b>F</b>	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 – 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 406-002 - SPRING 2021 CLASS PLAN

#	DATE	DAY	ACTIVITY	SUBMISSION DUE
1	01/19/20	Tuesday	Start - Syllabus - Report writing	
2	01/26/20	Tuesday	Convection Heat Transfer - Lecture	
3	02/02/20	Tuesday	Convection Heat Transfer - Discuss data	
4	02/09/20	Tuesday	Vibration Analysis - Lecture	
5	02/16/20	Tuesday	Vibration Analysis - Discuss data	
6	02/23/20	Tuesday	Open room (attendance not taken)	
7	03/02/20	Tuesday	Review For exam	Vibration. Analysis - Report Due
8	03/09/20	Tuesday	Midterm Exam (attendance not taken)	Heat Transfer - Report Due & Midterm Exam
	03/16/20	Tuesday	Spring Break - No class meeting	
9	03/23/20	Tuesday	Vapor Compression (Refrigeration)	
10	03/30/20	Tuesday	Vapor Comp - (Refrigeration) - Discuss data	
11	04/06/20	Tuesday	IC Engine - Lecture & Discuss data	
12	04/13/20	Tuesday	Open room (attendance not taken)	
13	04/20/20	Tuesday	Review For exam	Vapor Compression - Report Due
14	04/27/20	Tuesday	Final Exam (attendance not taken)	IC Engine - Report Due & Final Exam

## ME 406-006 - SPRING 2021 CLASS PLAN

#	DATE	DAY	ACTIVITY	SUBMISSION DUE
1	01/22/20	Friday	Start - Syllabus - Report writing	
2	01/29/20	Friday	Convection Heat Transfer - Lecture	
3	02/05/20	Friday	Convection Heat Transfer - Discuss data	
4	02/12/20	Friday	Vibration Analysis - Lecture	
5	02/19/20	Friday	Vibration Analysis - Discuss data	
6	02/26/20	Friday	Open room (attendance not taken)	
7	03/05/20	Friday	Review For exam	Vibration. Analysis - Report Due
8	03/12/20	Friday	Midterm Exam (attendance not taken)	Heat Transfer - Report Due & Midterm Exam
	03/19/20	Friday	Spring Break - No class meeting	
9	03/26/20	Friday	Vapor Compression (Refrigeration)	
	04/02/20	Friday	Good Friday - No class meeting	
10	04/09/20	Friday	Vapor Comp - (Refrigeration) - Discuss data	
11	04/16/20	Friday	IC Engine - Lecture & Discuss data	
12	04/23/20	Friday	Open room (attendance not taken)	
13	04/30/20	Friday	Review For exam	Vapor Compression - Report Due
14	05/04/21	Tuesday	Final Exam (attendance not taken)	IC Engine - Report Due & Final Exam

## ME 406-104 - SPRING 2021 CLASS PLAN

#	DATE	DAY	ACTIVITY	SUBMISSION DUE
1	01/19/20	Tuesday	Start - Syllabus - Report writing	
2	01/26/20	Tuesday	Convection Heat Transfer - Lecture	
3	02/02/20	Tuesday	Convection Heat Transfer - Discuss data	
4	02/09/20	Tuesday	Vibration Analysis - Lecture	
5	02/16/20	Tuesday	Vibration Analysis - Discuss data	
6	02/23/20	Tuesday	Open room (attendance not taken)	
7	03/02/20	Tuesday	Review For exam	Vibration. Analysis - Report Due
8	03/09/20	Tuesday	Midterm Exam (attendance not taken)	Heat Transfer - Report Due & Midterm Exam
	03/16/20	Tuesday	Spring Break - No class meeting	
9	03/23/20	Tuesday	Vapor Compression (Refrigeration)	
10	03/30/20	Tuesday	Vapor Comp - (Refrigeration) - Discuss data	
11	04/06/20	Tuesday	IC Engine - Lecture & Discuss data	
12	04/13/20	Tuesday	Open room (attendance not taken)	
13	04/20/20	Tuesday	Review For exam	Vapor Compression - Report Due
14	04/27/20	Tuesday	Final Exam (attendance not taken)	IC Engine - Report Due & Final Exam