

Spring 2024

ME 405-004: Mechanical Lab II

Swapnil Moon

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ME 405: Mechanical Lab-II

Room: MEC-110

Text: J.P. Holman, Experimental Methods for Engineers, Seventh Edition, McGraw Hill, 2001.
Mechanical Laboratory II Manual, Available on Canvas

Instructor: Dr. Swapnil Moon, MEC 333-CD
973-596-5670, swapnil.moon@njit.edu

Office Hours: Monday 3:00 - 4:30 PM

Prerequisite: ME 343, ME 312. Co-requisite: ME 407–Heat Transfer.

Description: Laboratory emphasizes the use of fundamental principles, and instrumentation systems, for the analysis, and evaluation of mechanical components within a system.

GRADING:

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|---|-----|
| Laboratory Reports | 50% |
| Midterm Exam | 20% |
| Preliminary Reports & Class Participation | 10% |
| Final Exam | 20% |

HOMEWORK:

1. **Lab reports are due two weeks after the lab. Late penalty is minus 15% each week. Lab reports more than one week late will not be accepted.**
2. Homework must be submitted in the format provided by the professor.
3. Lab reports should be submitted in the format provided by the professor.

Course Policies:

1. Attending class, completing assignments on time, and keeping up with the class material is important for success in this course and in college. Generally, late or missed assignments **will not** be accepted except for legitimate **(pre-approved when possible)** reasons as determined by the instructor. **The method of handling late or missed work is determined by the instructor.**
2. **ANY FORM OF CHEATING ON ASSIGNMENTS OR EXAMS WILL RESULT IN AN 'F' FOR THE COURSE.** This includes looking at another person's exam or copying another person's work for exams or assignments.

3. NJIT honor code will be used for all situations that involve cheating, copying, misrepresentation of student work, and misrepresentation of student information and any violations will be brought to the immediate attention of the Dean of Students (visit <http://www.njit.edu/academics/honorcode.php>.)
4. Soft copies of the lab have to be uploaded to Canvas.
5. Lab reports that are more than 1 week late will not be accepted.
6. Point deduction – Late Assignments: 1 Week-15%, 2 Weeks-30%
7. Lab reports will not be accepted without a signed preliminary report calculation sheet
8. Attendance, attitude, class participation and effort can and will be used to change borderline grades up or down.
9. For special accommodation student must approach the Office of Accessibility Resources and Services (OARS).
10. For issues regarding access to adequate computing equipment, or high-speed internet access, please contact the Office of the Dean of Students.
11. For any modifications or deviations from the syllabus throughout the course of the semester, the instructor will consult with students and the students must agree to.
12. The grading weightage may change slightly through the course of the semester and the students must agree to.

ACADEMIC INTEGRITY

“Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at:

<http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.** If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu”

Administration of Exams

- Exams will be administered using either a combination of Respondus + Lockdown Browser and Webex or through ProctorU Review+.
- Students need to have access to a laptop to be able to take the exam using the above mentioned tools.
- NJIT honor code will be strictly adhered to, any violations will be processed through the office of Dean of students.

Labs:

Performance Testing of a Centrifugal Pump

Performance Testing of a Gear Pump

Hydraulic Impulse Turbine

Pressure Distribution and Drag Force in Flow Past a Cylinder

Transient Conduction in Bodies of Finite Length