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ME 406-101: Mechanical Laboratory III

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Mechanical Engineering
New Jersey Institute of Technology
ME406 - 101 Mechanical laboratory III
Fall 2020
Updated: August 28, 2020
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It is the responsibility of the student to read and understand this course syllabus. This syllabus is subject to change and may be updated throughout the semester.

Office Hours

Instructor will inform students of office hours in the class. In addition, office hours for individual instructors are posted in the ME Department office.

Update for remote / converged learning due to the SARS-CoV-2 virus: In place of typical in person office hours, office hours will be held using WebEx. Details will be determined in each specific section individually. <https://njit.webex.com/join/samardzi>

Repeat Students: Students repeating the course are required to repeat the entire course. Assignments, laboratory practices, exams, and laboratory reports cannot be transferred from previous semesters.

Exams: For the final exam, the time and place announced by the registrars office. For conflicts, we follow the NJIT policy for final exams provided online. The policy generally indicates that the course with the higher numerical value takes place during the regularly scheduled period. The NJIT honor code will be upheld and any violations will be brought to the attention of the dean of students. Only calculators are allowed during exams. Mobile phones, smart watches, headphones and similar electronic devices, are expected to remain out of sight — the sight of a mobile phone, smart watch, or any other unpermitted resource during an exam results in a grade of F for the class. Also, students are not allowed to wear a hats during the exam. Failure to show for an exam results in a grade of zero and employment is not considered a valid reason for missing an exam. The NJIT best practices related to academic integrity, indicates that makeup exams “should

not be administered unless an unforeseen extraordinary circumstance . . . prevents a student from taking an exam at the designated time.” We adhere to that practice, and **NO MAKEUP EXAMS WILL BE GIVEN**, and only one appropriately excused exam absence accommodation is possible per semester per student. In case of an appropriately excused absence from the exam the student should write an email to the professor indicating that he/she is going to contact the dean of students office about their absence from the exam. The dean of students office may be contacted at dos@njit.edu. Those expecting official travel (i.e., athletes, academic conferences, etc.) must notify the professor and the dean of students office at least 2 weeks prior to the exam. In extreme cases (i.e., unforeseen sickness, death, etc.) the student must notify the professor and dean of students office within 48 hours after the originally scheduled. In the email sent to the dean of students office, students should at a minimum include the following: (i) name; (ii) ID number; (iii) course and section; (iv) professor’s name and email; (v) regularly scheduled exam time; (vi) valid evidence for the unforeseen extraordinary circumstance that caused absence. 2. Upon receiving notice from the dean of students office, the professor will contact the course coordinator and provide the relevant information.

In case that multiple students can be in a similar situation, the course coordinator will make a decision that is equitable to everyone involved. Typically for final exams, if appropriately excused, a grade of incomplete is given if appropriate. For those students that will make use of the NJIT Office of Accessibility Resources and Services (OARS), please make note that OARS requires accommodation requests must be submitted no later than 3 business days prior to the exam date. However, if the instructors do not receive at least 2 business days notice, we cannot guarantee any OARS accommodation and the exam should be taken normally. Therefore, we encourage students that makes use of OARS accommodations to do so in a timely manner such that you are well before the deadlines.

Update for remote / converged learning due to the SARS-CoV-2 virus: Exam will be **CLOSED BOOK – CLOSED NOTES** and it will be conducted remotely online and require the **Respondus LockDown** browser coupled with a webcam. To make sure that everyone is well prepared, an ungraded practice exam will be administered so that any technical difficulties may be worked out prior to the exam. A few general comments about online exams using the LockDown browser:

1. When it comes to showing your environment, please do so completely, include the entire room and your desk space, including under your desk. We are looking for phones, smart watches, other computers, other people, etc. If you do not show the room completely we must assume the worst, we are really looking. We have posted content on canvas to clarify the environment check and our expectations.
2. If you encounter technical issues, students must work through the IST Service Desk.

3. If you do not have appropriate hardware, students must contact the dean of students office, well before the exam date.
4. Scratch paper allowance will be announced prior to the exam.
5. The format of the online exam questions may not be the same as previous semester the face-to-face exam questions.

Lastly, instructors and TAs have neither the in-depth knowledge nor the admin rights to help resolve any technical issues. If issues arise, students must work through the IST Service Desk. Additionally, if you do not have the appropriate equipment, you must contact the dean of students office. Do not contact instructors or TAs, we will only direct you to either the IST Service Desk or the dean of students office.

Laboratory and Laboratory Reports: Safety in the laboratory is a high priority – students are required to wear safety glasses at all times in the laboratory an experiment is being performed. Laboratory attendance is mandatory, students are required to complete all laboratory practices and submit all corresponding laboratory reports to pass the course. Attendance of laboratory sessions is mandatory.

Employment is not considered a valid reason for missing an exam, missing a lab practice, or any other compulsory assignment.

Laboratory reports are due **two weeks** after the experiment is finished. Due dates for full reports and for preliminary reports will be posted on Canvas.

Note: Plagiarism checks are in place for lab reports, when an excessive amount of plagiarism is found, a grade of zero will be given for that lab report. In addition, experience has shown that a scan or other image saved as a PDF is not readable for a plagiarism check. Accordingly, such files are also deemed unacceptable and given a grade of zero since they cannot be evaluated consistently with the rest. The exception is that the original data sheet may be scanned as part of the overall lab report.

No resubmissions will be considered, even if uploaded to Canvas, past the due date, or once graded, whichever comes first. Prior to the due date, or any grading performed, students may resubmit to fix their work. Past experience shows that a resubmission uploaded after the due date will only lower the score previously given. This is due to the automatically computed late policy.

Lastly, past experience has shown a few students will knowingly submit an entirely incorrect document in an attempt to circumvent the policy that the lack of a submission leads to a failure. Professor is the only person responsible to determine if a report was submitted in good faith or not. A report that has been deemed submitted not in good faith will be marked as if it were never submitted.

Update for remote / converged learning due to the SARS-CoV-2 virus: For the laboratory, the following items will help clarify what we are doing and what is expected of students for the laboratory portion of ME406. Some of the items below seem obvious, but they serve to clarify any conflict with the text in prior face-to-face versions of the syllabus or general lab instructions.

1. The lab schedule and mode of delivery (synchronous online with at least one hands-on lab practice in person) for the Fall 2020 semester. The overall plan is to hold all laboratory modules online, followed by an optional (but limited for safety) hands on experience in the laboratory.
2. Online attendance is required
3. In an effort to most effectively replicate a standard in person full classroom laboratory experience, the instructional team has prepared documents that overviews the main content, which is supported by videos and synchronous demonstrations by technicians (when possible), and a synchronous summary and Q&A session during the assigned lab period.
4. Data will be disseminated to each group on the date the laboratory would have normally occurred via canvas, on the lab report upload page

Grading: Note that late assignments, reports, etc., will not be accepted after the last day of class for the semester (i.e., the university wide last day of class, not the last day of lecture for your section). The weights shown in the table will be used in determination of the final course grade. Alongside are the letter grades and their corresponding description as written in the university undergraduate academic policy.

Final Exam: 30%

Lab Report 1: 30%

Lab Report 1: 30%

4 Preliminary Reports & class attendance and participation: 10% (2.5% each)

NJIT university undergraduate academic policy letter grades:

A Superior

B+ Excellent

B Very Good

C+ Good

C Acceptable

D Minimum

F Inadequate

Also, as mentioned previously an inability to submit or attend all labs will result in a failure regardless of performance. And note that external factors (such as level of effort, ability in other courses, time management, etc.) are typically not considered in the computation of grades.

Any disagreement over grades must be brought to the attention of the instructor no later than the first two weeks of the following semester, grades will not be altered after that. Further, final grades are typically not discussed via email, an appointment should be made.

Update for remote / converged learning due to the SARS-CoV-2 virus: Please note that although the health crisis has altered typical instruction, this course still maintains the same expectations and rigor employed during normal times.

Requirements for students: Prior to the start of the lab class period, print a hard copy of the lab manual, read it, and bring it to the lab class period. The student is responsible to attend all labs, and complete all reports as assigned for each student since they are mandatory. It is the responsibility of the student to inform the dean of students of any missed exam or other mandatory materials. Employment is not considered a valid reason for missing an exam, class, lab, or any portion of the class. If you feel you are not going to pass this course, please reach out to your instructor with adequate time before the drop date.

Update for remote / converged learning due to the SARS-CoV-2 virus:

- Instructors – There are no more exam booklets for the online exams. There is no need for pre-lab quizzes and their record keeping for makeup labs. There is no need to arrange for laptops, but perhaps an OWL camera.
- TA's –The specific lab schedule is already set.
- Students – Verify that you are able to take the online exams with ample time prior to the exam. Now that we have moved to mostly remote laboratory, students are not to come in person for routine laboratory. If you wish to partake in a hands on experience in the laboratory, we will have a sign up form available on canvas (with a deadline).

Fall 2020 Laboratory Experience and Rationale (This entire section is devoted to specific details for remote / converged learning due to the SARS-CoV-2 virus): To support transparency, in planning for the Fall 2020 laboratory portion of ME406 the instructional team attempted to make the laboratory experience as hands-on as possible for those students wishing to attend in person laboratory. However, early in planning, the instructional team ran into multiple roadblocks that

are not easily overcome safely. In making the plans for the laboratory portion of the class, we have made use of CDC guidance for 6 feet social distancing and for disinfecting a facility, which may be found online. The most relevant portions of the CDC guidance for facility disinfection are summarized here:

- Disinfect – Recommend use of EPA-registered household disinfectant. – Follow the instructions on the label to ensure safe and effective use of the product. – Many products recommend:
 - * Keeping surface wet for a period of time (see product label, e.g. For reference, Clorox Performance Bleach indicates 5 minutes wet, followed by a rinse and air drying, and Kirkland Signature (Costco) Disinfecting Wipes indicate 15 minutes wet, followed by air drying. At the time of writing this syllabus, the specific disinfectant to be provided in the classroom is unknown.).
 - * Precautions such as wearing gloves and making sure you have good ventilation during use of the product.
- Electronics (such as tablets, touch screens, keyboards, remote controls, and ATM machines)
 - Consider putting a wipeable cover on electronics.
 - Follow manufacturers instruction for cleaning and disinfecting. If no guidance, use alcohol-based wipes or sprays containing at least 70% alcohol. Dry surface thoroughly.
- Soft surfaces (such as carpeted floor, rugs, and drapes)
 - Clean the surface using soap and water or with cleaners appropriate for use on these surfaces.
 - Launder items (if possible) according to the manufacturers instructions. Use the warmest appropriate water setting and dry items completely.

This plan is also made upon the assumption that the individual faculty, TA and students will be in responsible for disinfecting the laboratory equipment/tools/components that would have been in use that lab class period.