

San Jose State University,
Mechanical Engineering Department,
ME-115, Thermal Engineering Lab., Section 04, Spring
2022

1 Course and Contact Information

Instructor: Dr. Ali Tohidi

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Office Location: Engineering Building, Room 310-K

Office hours: Wednesdays, 09:30 AM - 10:30 AM (PT); Most preferably virtual via Zoom (<https://sjsu.zoom.us/j/3072404720>)

Class days and time: Tuesdays, 09:00 AM - 11:45 AM (PT)

Class dates: January 26, 2022 - May 12, 2021

Prerequisite(s): ME-114, Heat Transfer (may be taken concurrently). By the 2nd class, you should either provide a class schedule showing that you are taking ME-114 this semester or an (un)official transcript that shows that you took it previously.

Class website: http://stage.sjsu.edu/people/nicole.okamoto/courses/me_115/index.html

2 Course Description

- Thermodynamics and heat transfer experiments. Temperature, pressure, and flow rate measurements. Technical reports and presentations.
- 1 unit

3 Course Format

The course format will be *in-person* however due to developing conditions in response to COVID-19 some modifications may apply that will be discussed in the first session of the class. ***In order to facilitate the logistics of the course, the first session of the class will be held online for all via Zoom.*** The link to the session is available via course Canvas page under Zoom tab. Please see health advisory web page—available via <http://www.sjsu.edu/healthadvisories/>— for most up-to-date information, requirements, and policies regarding this issue.

4 Resources

- If you need special accommodations throughout the course please contact me personally. Also, you can find support and useful information in [Accessible Education Center \(AEC\)](https://www.sjsu.edu/aec/index.php)'s page at <https://www.sjsu.edu/aec/index.php>
- The Learning Assistance Resource Center (LARC) is located at Room 600 in the Student Services Center. It is designed to assist students in the development of their full academic potential and to motivate them to become self-directed learners. The center provides support services, such as skills assessment, individual or group tutorials, subject advising, learning assistance, summer academic preparation, and basic skills development. The LARC web-site is <https://peerconnections.sjsu.edu/>. Additional tutoring may be available through the engineering honor societies.
- In case you need help with purchasing the textbook or obtaining the required technologies that are essential for being successful in this class, please visit [Affordable Learning Solutions](https://library.sjsu.edu/affordable-learning-solutions/affordable-learning-solutions) available at <https://library.sjsu.edu/affordable-learning-solutions/affordable-learning-solutions>
- If you need assistance with basic equipment needs please visit the [Learn Anywhere's Technology](https://www.sjsu.edu/learnanywhere/equipment/index.php) page at <https://www.sjsu.edu/learnanywhere/equipment/index.php>

5 Canvas, Communication, and Connect

- Copies of the course materials such as the *syllabus*, *assignments*, *exam review materials*, *eclectic presentations*, and etc. may be found on the **Canvas** site for the class. Canvas, also, shows you your grades and allows for discussion forums within the class. This feature may be helpful if you or your group need assistance on understanding a concept, a homework problem, or a project.
- To log in, go to the [Canvas URL](https://www.canvas.net) at <https://www.canvas.net>. Log in with your 9-digit *SJSU ID* and *Password*. For questions on how to use Canvas, please visit http://www.sjsu.edu/at/ec/canvas/student_resources/index.html
- You are responsible for regularly checking with the messaging system through Canvas. You can set up your account to forward all emails sent to your Canvas account to any other email address you regularly use.
- Copies of the course materials such as the syllabus, major assignment handouts, etc. may be found on the class web-site. Read all the related lab materials, available at http://stage.sjsu.edu/people/nicole.okamoto/courses/me_115/index.html, for each upcoming lab before the class starts.

6 Required Texts/Readings

6.1 Textbook

There is no textbook requirement for this course.

6.2 Technology requirements

- Due to the format of the course, you will need a reliable Internet connection as well as access to a computer to attend synchronous parts of the sessions and collaboration with your group members. In case for any reason, you are unable to access such resources please contact the department or your instructor. Please see the section 4 for more information.

7 Course Requirements

7.1 Lab Reports

- *Summary Reports* are required for each of the lab experiments. For all labs, detailed sample calculations must be included in an appendix in a clear, organized, and professional manner. All equations must be shown and numbered. If you use a program such as Excel for your calculations, also include sample calculations showing the equations used and how the calculations were performed.
- Professional summary report are required and guidelines can be found on the class web-site via http://stage.sjsu.edu/people/nicole.okamoto/courses/me_115/index.html.
- Lab reports are due by 11:59 PM in the instructor's mailbox two school days after your last lab for a given topic, unless otherwise instructed during class.
- You will work in groups during each lab except for the finite difference section. Each group should have two to four students. No teams of more than four students are permitted.

7.2 Grade Distribution

- Grading sheets for the *Summary Reports* are posted on the course web-site. Course grade breakdown is as follows: six (6) *Team Summary Reports*, 15% each, and one (1) *Individual Finite Difference* summary, 10%.
- A confidential peer evaluation form may be completed for each lab. You will not get credit for a lab if you do not participate in both the experiment and calculations or, previously have made arrangements with your instructor to make up your work.

Grade	Distribution
A+	[96.00 – 100.0]
A	[93.00 – 95.90)
A-	[90.00 – 92.90)
B+	[86.00 – 89.90)
B	[83.00 – 85.90)
B-	[80.00 – 82.90)
C+	[76.00 – 79.90)
C	[73.00 – 75.90)
C-	[70.00 – 72.90)
D+	[66.00 – 69.90)
D	[63.00 – 65.90)
D-	[60.00 – 62.90)

8 Classroom Protocols

8.1 University Policies

Students are responsible for understanding the policies and procedures about academic integrity, accommodations, **DROPPING AND ADDING A COURSE**, consent for recording of classes, and, etc. Per [University Policy S16-9](https://www.sjsu.edu/senate/docs/S16-9.pdf), available at <https://www.sjsu.edu/senate/docs/S16-9.pdf>, refer to the Office of Graduate and Undergraduate Programs' [syllabus information page](https://www.sjsu.edu/gup/syllabusinfo/) at <https://www.sjsu.edu/gup/syllabusinfo/> in order to access all related policies and procedures. Please, **make sure to review these policies**.

8.2 General Attendance Policies

- You should attend every class/sessions. However, extenuating circumstances may arise that can affect this. In case, you cannot attend a session, please let me know in advance; you may be able to attend a different lab session if space permits and you make advance arrangements with the instructor. You must spend both weeks for the given lab in that section.
- If you miss a lab unexpectedly due to illness (with a note from the medical center or a hospital) or other emergency, please contact your instructor as soon as possible to discuss your options.
- Please do not use cell-phones during sessions
- In virtual sessions use your full name
- Discussion forums/boards and chat sections are designed for enriching the course content and enhancing your learning experience. Please follow the **Netiquette** expectations available on Canvas.

8.3 The Instructional Team Code of Conduct

The instructional team affirms and commits to the following and encourages you to,

- Promote the diversity of opinions, ideas, and backgrounds which are crucial for academic pursuits
- Practice personal and academic integrity
- Respect the dignity and work of others
- Promote a culture of respect within and outside of the class and through discussion forums and/or other online platforms
- Respect the privacy, property, and freedom of others
- Reject bigotry, discrimination, and violence or intimidation of any kind

8.4 Zoom Classroom Etiquette

- This course or portions of this course (i.e., lectures, discussions, student presentations) may be recorded by the instructor for instructional or educational purposes. The recordings will only be shared with students enrolled in the class through Canvas. The recordings will be deleted at the end of the semester. If, however, you would prefer to remain anonymous during these recordings, then please speak with the instructor about possible accommodations (e.g., temporarily turning off identifying information from the Zoom session, including student name and picture, prior to recording).
- Please keep your camera on as long as it is possible for you and you can follow these guidelines,

- **Mute Your Microphone:** To help keep background noise to a minimum, make sure you mute your microphone when you are not speaking.
 - **Be Mindful of Background Noise & Distractions:** Find a quiet place to “attend” class, to the greatest extent possible.
 - **Position Your Camera Properly:** Be sure your webcam is in a stable position and focused at eye level.
 - **Limit Your Distractions/Avoid Multitasking:** You can make it easier to focus on the meeting by turning off notifications, closing or minimizing running apps, and putting your smartphone away (unless you are using it to access Zoom).
 - **Use Appropriate Virtual Backgrounds:** If using a virtual background, it should be appropriate and professional and should NOT suggest or include content that is objectively offensive or demeaning.
- Students are prohibited from recording class activities (including class lectures, office hours, advising sessions, etc.), distributing class recordings, or posting class recordings. Materials created by the instructor for the course (syllabi, lectures and lecture notes, presentations, etc.) are copyrighted by the instructor. This university policy (S12-7), available at <https://www.sjsu.edu/senate/docs/S12-7.pdf>, is in place to protect the privacy of students in the course, as well as to maintain academic integrity through reducing the instances of cheating. Students who record, distribute, or post these materials will be referred to the Student Conduct and Ethical Development office. Unauthorized recording may violate university and state law. It is the responsibility of students that require special accommodations or assistive technology due to a disability to notify the instructor.

9 Expected Time Commitment

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty-five hours over the length of the course (normally 3 hours per unit per week). The lab itself can count for 1.5 hours per unit per week with the additional 1.5 hours for analysis and report preparation.

10 Tentative Schedule

Please visit the [Spring 2022's academic calendar](https://www.sjsu.edu/registrar/calendar/spring-2022.php)—available at <https://www.sjsu.edu/registrar/calendar/spring-2022.php>— for a detailed schedule of the events, deadlines, and due dates. A tentative schedule of the course is shown in Table 1.

Table 1: Tentative schedule of the experiments and reports.

Class session	Topics/Experiments
1 & 2	Introductions/syllabus review/Internal combustion engine
3 & 4	Hilton air conditioning unit
5 & 6	Piping network experiment
7 & 8	Steam turbine experiment
9 & 10	Hot dog anemometer experiment
11 & 12	Centrifugal pump
13 & 14	Finite difference project
15 & 16	Photovoltaic lab.