**E10 Course Syllabus Spring 2024**

## Schedule

**Lecture sect. 01: MW 12:00 – 12:50 pm Room: MD 101**

**Lecture sect. 02: MW 3:00 pm – 3:50 pm Room: MD 101**

**Labs in E 391/393** See the course syllabus for lab schedule

**GE/SJSU Studies Category: Area E**

## Instructors

**Lecture:** Ken Youssefi and Jack Warecki

**Lab:** Spoorthy Ananthaiah, Vasuna Bhatia, Ahmed Banafa, Smita Duorah, Glenn Friedman, Jane Huynh, Denise Gip, Saied Rafati, Steve Sepka, Javier Valencia, Ken Youssefi

## Office Hours

## Office hours will be held via zoom. The list for all faculty and student assistants are found on E10 lecture course Canvas.

**Health and Safety Protocols for attending campus**

If you are attending E10 labs in person you are expected to fully comply with the protocols and guidelines outlined in SJSU web site, <https://www.sjsu.edu/healthadvisories/health-safety-protocols/index.php> to ensure the well-being of our campus community.

## E10 Canvas site, web site, and MySJSU Messaging

Course materials such as syllabus, course content, lecture slides, handouts, notes, assignment instructions and due dates, quizzes and due dates, useful resources, etc. can be found on the E10 lecture Canvas site. You are responsible for regularly checking Canvas for assignment due date and the messaging system through MySJSU on [Spartan App Portal](http://one.sjsu.edu) http://one.sjsu.edu (or other communication system as indicated by the instructor) to learn of any updates. For help with using Canvas see [Canvas Student Resources Page](http://www.sjsu.edu/ecampus/teaching-tools/canvas/student_resources) (<http://www.sjsu.edu/ecampus/teaching>

tools/canvas/student\_resources)

## Course Description

## E10 is designed to allow students to explore engineering through hands-on design projects, case studies, and problem-solving using computers. Students will learn about the various aspects of the engineering profession and acquire both technical skills and non-technical skills, in areas such as communication, teamwork, and engineering ethics. The course also supports students entering the complex social system of the university in their efforts to succeed in engineering through personal and professional development, including understanding themselves as integrated physiological, social, and psychological entities who are able to formulate strategies and employ available university resources to support their academic and personal development. Finally, students in this course will understand the connections between engineering and the human users of the engineering designs from a lifespan perspective by examining the psychological (cognitive, emotional), socio-cultural, and physiological developmental needs of those users.

**Prerequisites**: Eligible for [MATH 19](https://catalog.sjsu.edu/search_advanced.php?cur_cat_oid=2&search_database=Search&search_db=Search&cpage=1&ecpage=1&ppage=1&spage=1&tpage=1&location=33&filter%5Bkeyword%5D=engr+10&filter%5Bexact_match%5D=1#tt6439) and Writing Enrollment Category W-I or W-II, or [ENGL 1AF](https://catalog.sjsu.edu/search_advanced.php?cur_cat_oid=2&search_database=Search&search_db=Search&cpage=1&ecpage=1&ppage=1&spage=1&tpage=1&location=33&filter%5Bkeyword%5D=engr+10&filter%5Bexact_match%5D=1#tt6026) with a grade of CR, or [ENGL 1A](https://catalog.sjsu.edu/search_advanced.php?cur_cat_oid=2&search_database=Search&search_db=Search&cpage=1&ecpage=1&ppage=1&spage=1&tpage=1&location=33&filter%5Bkeyword%5D=engr+10&filter%5Bexact_match%5D=1#tt558) with a grade of C- or better. Engineering Majors Only

## Course Goals

E10 is designed to allow students to explore engineering through hands-on design projects, case studies, and problem-solving using computers. Students will learn about the various aspects of the engineering profession and acquire both technical skills and non-technical skills, in areas such as communication, teamwork, and engineering ethics. The course also supports students entering the complex social system of the university in their efforts to succeed in engineering through personal and professional development, including understanding themselves as integrated physiological, social, and psychological entities who are able to formulate strategies and employ available university resources to support their academic and personal development. Finally, students in this course will understand the connections between engineering and the human users of the engineering designs from a lifespan perspective by examining the psychological (cognitive, emotional), socio-cultural, and physiological developmental needs of those users.

**Course Learning Outcomes (CLO)**

Upon successful completion of this course, students will be able to:

1. Summarize the steps of the engineering design process
2. Apply basic physics concepts to the design and analysis of built systems
3. Apply teamwork skills and resolve team conflict using individual member or team evaluations reports
4. Construct a research report and an engineering report, present the report orally
5. Use tools such as spreadsheets, C++ programming, and CAD software to support engineering design and analysis
6. Use ethical reasoning to address and evaluate ethical dilemmas
7. Explain principles of sustainability and how they affect engineering design
8. Recognize the value of participation in professional activities
9. Perform a literature search for design options for wind turbines and autonomous robot mechanics
10. Perform a literature search for topics that influence 18 to 25-year old’s human development and well-being
11. Develop strategies for identifying university resources and tools needed for successful interrelationships and well-being.
12. Design a human-machine interface required to interact with both a developing child and a senior adult

**GE Learning Outcomes (GELO)**

Upon successful completion of this GE course, students will be able to:

1. Recognize the physiological, social/cultural, and psychological influences on their well-being
2. Recognize the interrelation of the physiological, social/cultural, and psychological factors on their development across the lifespan.
3. Use appropriate social skills to enhance learning and develop positive interpersonal relationships with diverse groups and individuals
4. Recognize themselves as individuals undergoing a particular stage of human development, how their well-being is affected by the university’s academic and social systems, and how they can facilitate their development within the university environment

**Textbooks:** Introduction to Engineering, E10 custom book, McGraw-Hill, ISBN# 978-1-307-00917-0 All lecture notes, assignments, and special instructions are contained in the E10 course web site ([sjsu.edu/e10/](http://engineering.sjsu.edu/e10/)) and in the course management system Canvas.

**Other Technology Requirements/Equipmet/Material**

Access to the internet, Canvas (for taking quizzes/test and uploading assignments) and Zoom.*For help with using Canvas see Canvas Student Resources page (*<http://www.sjsu.edu/ecampus/teaching-tools/canvas/student_resources>)

## Library Liasons:

## *Megwalu, Anamika  Phone: 408-808-2089  Email:*[*anamika.megwalu@sjsu.edu*](mailto:anamika.megwalu@sjsu.edu)

*Silverstein, Rachel   
Email:*[*rachel.silverstein@sjsu.edu*](mailto:rachel.silverstein@sjsu.edu)

**Canvas** contains **online quizzes** and student scores for the various activities and assignments as well as links to the Library for readings related to human development issues: http://www.sjsu.edu/at/ec/canvas/index.html

**Laboratory:   
All students must register for and attend (in person) a weekly lab**

* + All lab activities/projects will be “team based.” Each team will consist of six members and will be engaged in at least four different projects, each revealing issues pertinent to the various engineering disciplines.
  + Each student will be expected to complete a brief lab “Activity Report” and a “Personal Reflection” at the end of each lab period, which will be graded. Your lab instructor will provide you with more information.
  + Projects, technical reports and presentations and any other assignment will be done in a team format unless instructed otherwise by the lab instructor, and are at the specified due time assigned by your lab instructor. Writing will be assessed for grammar, clarity, conciseness and coherence, as well as adherence to assignment requirements and the correctness/accuracy of the content itself. Assignments will use APA format for references, in-text citations, and formatting where appropriate or required.

**Health and Safety:**

The Health/Safety guidelines are to be followed if you come to campus. For the latest information and protocol refer to the Health/Advisory at https://www.sjsu.edu/healthadvisories/ or <https://www.sjsu.edu/healthadvisories/health-safety-protocols/index.php>.

Symptom Monitoring

Students, faculty, and staff returning to campus must conduct symptom monitoring every day before traveling to (or, for on-campus residents, moving through) campus. You must be free of **ANY** symptoms potentially related to COVID-19.

At this time, these symptoms include one or more of the following:

* Cough
* Shortness of breath or difficulty breathing
* Fever
* Chills
* Repeated shaking with chills
* Runny nose or new sinus congestion
* Muscle pain or body aches
* Headache
* Sore throat
* Fatigue
* Nausea
* Vomiting
* Diarrhea
* New Gl symptoms
* New loss of taste or smell

You may not return to campus if you have:

Traveled to/from a country that has been flagged by the Centers for Disease Control and Prevention's (CDC) travel advisory within the last 14 days,

Been in close contact with someone who has traveled to/from one of the countries on the CDC’s travel advisory within the last 14 days,

Tested positive for COVID-19. The local Public Health Department will be notified by the testing agency when an individual tests positive for COVID-19. Even if you aren’t exhibiting symptoms, SJSU requests that you complete a “[Reporting a Case of COVID-19](https://cm.maxient.com/reportingform.php?SanJoseStateUniv&layout_id=15)” online form. A report case manager will contact you shortly after the initial survey. They will offer support resources and inquire about recent on-site activity and university related contacts that could require notification.

**Lecture (two 50 minute lectures per week):**

**Lectures will not be recorded**

* In addition to topics pertinent to the labs, lectures will cover various aspects of the engineering profession, engineering toolsand non-technical skills, such as communication skills, team skills, global and environmental issues, and engineering ethics.
* Lecture homework should be uploaded to Canvas.
* **Late Homework:** The due date is set on Canvas, upload your work, **no late homework will be accepted**.
* The Final Examination at the end of the semester will be online via Canvas. The due dates are in the class schedule. **There will be no “early” finals, plan accordingly.**

**Participation in discussion**

**Laboratory:** Laboratory participation credit will be based on attending and participate in the discussion. Any student who fails to attend a lab meeting will lose the participation points (4 points).

## Teamwork You will be required to work in teams for a number of assignments. Your contribution towards all assigned team projects must be proportionally equivalent to the rest of the team. Your Lab Instructor will form all the teams during the start of the semester. Not contributing to the projects will affect your grade.

**Campus policy in compliance with the Americas with Disability Act:**

“If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with your instructor as soon as possible, or see your instructor during office hours. Presidential Directive 97-03 requires that students with disabilities register with DRC to establish a record of their disability.”

## Academic Honesty

**Academic honesty is expected without question in this course**. Students who are found to have submitted work that was obtained or produced dishonestly will suffer the following two consequences: (a) a grade of zero will be given for the assignment in question; and (b) a report of the incident will be filed with Office of Student Conduct and Ethical Development. This report may stay on your permanent collegiate record and may also be subject to further disciplinary action being taken by the university. Examples of such work include, but are not limited to: papers/homework you wrote for someone else or that someone else wrote for you, plagiarism, and tests/quizzes that you took for someone else or that someone else took for you. You can view the SJSU academic integrity policy at [www.sa.sjsu.edu/judicial\_affairs/index.html](http://www.sa.sjsu.edu/judicial_affairs/index.html)

**Important note:** Bringing an absent student’s smart phone to class and responding for him or her is “acting as a surrogate for another student.” This is strictly forbidden by university policy S07-2 and will be reported to the Office of Student Conduct and Ethical Development for disciplinary action.

**Credit Hour Policy**

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 with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to labs. For ENGR 10 this means **9 hours per week**: lecture (1.7 hours), lab (2.75 hours), homework/reading/studying/quizzes (4.5 hours).

## Grading

**Lecture: 50%**

Online Quizzes (in lecture and lab) 10%

Homework 5%

Participation quizzes 5%

Draft and final paper, and preparation assignments on developmental 20%

issues & challenges commonly faced by first year college students

Final Exam 10%

**Laboratory Project and Activities\*: 50%**

Lab Activity Reports (participation) and Personal Reflections10.3%

Excel report/results 5%

Solar Lab report/results 2.5%

Intro CAD lab 1.2%

Turbine project 15%

Robotics project 15%

Designing across the lifespan (500 word essay) 1%

**TOTAL: 100% = 1,000**

**Extra Credit Points**

Students can earn extra credit points bytaking the Final Exam Review Quiz up to 15 points and by joining an **engineering club** (20 points). **The deadline to join an engineering club is March 25 by 11:59. Upload a membership proof, email by one of the club officers to the instructor is sufficient.**

**Letter Grade Distribution:**

**88% ≤A-, A, A+ ≤ 100%**

**75% ≤B-, B, B+ ≤ 87%**

**68% ≤ C-, C, C+≤74%**

**58% ≤ D-, D, D+≤67%**

**58% ≤ F**

**A+ 980+ C+ 730-749**

**A 900-979 C 700-729**

**A- 880-899 C- 680-699**

**B+ 860-879 D+ 660-679 F <579**

**B 770-859 D 600-659**

**B- 750-769 D- 580-599**

Students are responsible for ensuring that they have access to reliable Wi-Fi for the final exam. If students are unable to have reliable Wi-Fi, they must inform the instructor, as soon as possible or at the latest one week before the test date to determine an alternative. See Learn Anywhere website for current Wi-Fi options on campus. <https://www.sjsu.edu/learnanywhere/equipment/index.php>

**Recording of in-person lectures**

You must obtain permission in advance to record any course materials. Such permission allows the recordings to be used for a student’s private, study purposes only. Students will not be permitted to share any class recordings with someone who isn’t enrolled in the class or without permission. The recordings are protected by instructor’s copyright.

Any student that needs accommodations or assistive technology due to a disability should work with the Accessible Education Center (AEC), and the instructor.

**Technical difficulties**

**Internet connection issues**: Canvas autosaves responses a few times per minute as long as there is an internet connection. If your internet connection is lost, Canvas will warn you but allow you to continue working on your exam. A brief loss of internet connection is unlikely to cause you to lose your work. However, a longer loss of connectivity or weak/unstable connection may jeopardize your exam.

**Other technical difficulties**: Immediately email the instructor a current copy of the state of your work/exam and explain the problem you are facing. Your instructor may not be able to respond immediately or provide technical support.

**Contact the SJSU technical support for Canvas:**

Technical Support for Canvas Email: ecampus@sjsu.edu Phone: (408) 924-2337 https://www.sjsu.edu/ecampus/support/