San José State University
Charles W. Davidson College of Engineering
Department of Mechanical Engineering
ME 190, Mechatronic Systems Design, Fall 2022

Instructor:	Prof. Winncy Du
Office Location:	E310-F
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Email:	winncy.du@sjsu.edu
Office Hours:	Tu & Th 17:00-18:00 (or by appointment) via Zoom or in E310-F
Lecture Time & Location:	Lecture, Sec. 1 (40292): TuTh 1:30 PM-2:20 PM **E329** (Prof. Winncy Du)
Lab Time & Location, and TA Information	Lab, Sec. 2 (40680): Tu 2:30 PM-5:15 PM **E135** (TA: Salman Saeed, salman.saeed@sjsu.edu) Lab, Sec. 3 (41827): Th 10:30 AM-1:15 PM **E135** (TA: Salman Saeed, salman.saeed@sjsu.edu) Lab, Sec. 4 (42108): Th 2:30 PM-5:15 PM **E135** (TA: Vincent Tran, vincent.v.tran01@sjsu.edu)
Prerequisites:	ME 106; co-req. ME147. With C- or better

Reference Textbooks

There are no required textbooks for this course. Lecture notes will be uploaded onto Canvas on a regular basis. The following references are highly recommended:

- William Palm III (2021). *System Dynamics*. McGraw-Hill Education, 4th edition. ISBN-10. 0078140056 ISBN-13. 978-0078140051.
- Åström, K. and Murray, R. (2012). *Feedback Systems*: An Introduction for Scientists and Engineers. Princeton University Press, Princeton, NJ. The complete text is available for free online at: http://www.cds.caltech.edu/~murray/books/AM08/pdf/am08-complete_28Sep12.pdf

Course Description

Process modeling from test data. Computer-aided dynamic system control analysis and design. Application and integration of microcontroller for digital process and servo control. Development of smart and intelligent products with microcontroller.

Course Learning Outcomes

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

1. *Develop models for electrical, mechanical, and electro-mechanical systems*
2. *Simulate the models of dynamic sy*

4. *Identify system characteristics by*

Grade	*Points*	*Percentage*
A plus	*95 to 100*	*95 to 100%*
A	*91 to 94.9*	*91 to 94.9%*
A minus	*88 to 90.9*	*88 to 90.9%*
B plus	*85 to 87.9*	*85 to 87.9%*
B	*81 to 84.9*	*81 to 84.9%*
B minus	*78 to 80.9*	*78 to 80.9%*
C plus	*75 to 77.9*	*75 to 77.9%*
C	*71 to 74.9*	*71 to 74.9%*
C minus	*68 to 70.9*	*68 to 70.9%*
D plus	*65 to 67.9*	*65 to 67.9%*
D	*61 to 64.9*	*61 to 64.9%*
D minus	*58 to 60.9*	*58 to 60.9%*
F	*0 to 57.9*	*0 to 57.9%*

Homework

Homework, to be submitted via Canvas, is generally due one week after its assignment. There will be **only one allowance** for late homework submission and that will include a **20% grade penalty**.

Lab Assignments

Lab instruction and materials will be posted on Canvas. All the MinSeg labs will be carrie

Tentative Course Schedule