Syllabus

MEMS 0024 – Introduction to Mechanical Design (Sec. 2)

Fall Semester 2022

Lecture Times:	Wedn. 8:15~11:00 am	**Instructor:**	Dr. Jin Xu
Classroom:	4-212	**Office:**	4-219
Office Hours:	T&W 11 am~12 pm	**Email:**	jin.xu@scupi.cn

Catalog Description:

This 3-credit course is an introduction to solid and parametric modeling techniques. The lessons proceed in pedagogical fashion to guide students from construction basic shapes to building intelligent complex solid models and creating multi-view drawings. The students are expected to take a hands-on, exercise intensive approach to all the important parametric modeling and concepts that helps them in their future design courses.

Course Outcomes:

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

- Develop an understanding of the iterative engineering design process.
- Demonstrate proficiency in technical communication, including conveying graphical mechanical engineering information and delivering orthographic, part, and working drawings.
- Use parametric modeling software *SolidWorks* to graphically communicate 3-D designs of moderate complexity.

Required Textbook:

David C. Planchard, *Engineering Graphics with SOLIDWORKS 2021*.

Course Policies:

Regular class attendance is expected. Each student is responsible for both in-class activities and homework assignments. Exams will emphasize sketching and modeling skills covered in lectures. In general, no late in-class activities or make-up exams will be given. Exceptions will be made for a valid excuse consistent with University Policy. If you cannot attend an exam or meet a due date, you must contact the instructor ***prior to*** the exam or due date.

Integrity and Academic Expectations:

"Violations of academic integrity include, but are not limited to, cheating, plagiarism, or misrepresentation in oral or written form. Such violations will be dealt with severely, in accordance with University policy. Plagiarism means representing someone else's idea or writing as if it were your own. If you use someone else's ideas or writing, be sure the source is clearly designated." It is expected that students adhere to the academic integrity policy that is presented in the Student's Honor Code of Conduct / Student Handbook.

Grading Policy:
Midterm = 25%, Final = 35%, In-Class Activity = 20%, and Homework = 20%. Grades will ***not*** be curved, and the official SCU grading scale will be used when determining your final letter grade (based on the numerical grade).

Students with Disabilities:

If you have special needs because of a learning, physical, or other disability, please contact the instructor in advance so accommodations will be provided in a timely manner.

Tentative Course Schedule:

Week	Topics
1	No Class
2	CAD & CAM
3	SolidWorks Fundamentals
4	Basic Sketching
5	Sketching
6	Modeling
7	Part Modeling
8	Advanced Modeling
9	**Midterm**
10	Views
11	Part Drawings
12	Assembly
13	Working Drawings
14	Intro to CSWA
15	Geometric Dimensioning & Tolerancing
16	Surface Modeling
17	Sheet
18	**Final Exam**
19	End of Semester