

**University of Nevada Las Vegas**  
**Howard R. Hughes College of Engineering**  
**Department of Mechanical Engineering**

**ME 240 – 3D Modeling with SolidWorks**  
**Credit Hour: 1.0**  
**Spring 2020**

**Instructor:** Justin Neubauer  
**Office:** SEB 2171  
**Email:** neubau10@unlv.nevada.edu

**Text:** D. C. Planchard, 'Engineering Design with SolidWorks 2019 and Video Instruction', SDC Publications

**Software:** For download instructions, please visit:  
[http://support.egr.unlv.edu/student\\_use\\_SolidWorks.html](http://support.egr.unlv.edu/student_use_SolidWorks.html)  
And follow all email-related instructions using your school account

**Course Objectives:**

- To learn a Computer Aided Design (CAD) software.
- To understand various features of the SolidWorks interface.
- To be comfortable with creating basic 3D models of machine parts.
- Understand various SolidWorks tools that make modeling easier and faster.
- To create 2D engineering drawings from the 3D models.
- Familiarize forming assembly of a component/structure from 3D models of various parts.
- Apply the SolidWorks knowledge learned in this class on a project.

Week	Date	Topics	Assignments	Due Date
1	1/24/2020	Introduction SOLIDWORKS User Interface	-----	-----
2	1/31/2020	Defining sketches Extruded Boss & Extruded Cut	HW 1	-----
3	2/7/2020	Editing geometry Error Detection	HW 2	HW 1
4	2/14/2020	Patterns and mirror Fillet and Chamfer Hole Wizard Feature	HW 3	HW 2
5	2/21/2020	Revolve Shell	HW 4	HW 3
6	2/28/2020	Sweep Loft	HW 5	HW 4
7	3/6/2020	Review	HW 6	HW 5
8	3/13/2020	<b>Test 1</b>	-----	HW 6
9	3/20/2020	No Class	-----	-----
10	3/27/2020	Assemblies & Toolbox	HW 7	-----
11	4/3/2020	Engineering Drawing Sheet	HW 8	HW 7
12	4/10/2020	BOM & Assembly Drawings Project Discussion	HW 9	HW 8
13	4/17/2020	<b>Test 2</b>	-----	HW 9
14	4/24/2020	Solid Mechanics Modeling	-----	-----
15	5/1/2020	Heat Transfer Modeling	-----	-----
16	5/8/2020	Project (no official class held)	-----	Project

## Course Policies

### Homework Assignments:

- Homework is due, on the date(s) listed on the course syllabus, at the beginning of the class.
- Late Homework will only be accepted within two class days of the due date, and will be subject to a 50% penalty
- Students should submit homework electronically on Canvas, students are responsible for submitting all required elements for their file to be properly rendered on another computer

### In-class Assignments:

- In class assignments will be taken based on previous lecture and the same day lecture.
- Some part of the In-class grade will also involve the student's diligence (and attendance) towards the subject, which shall be gauged by the Instructor.

### Tests:

- Test # 1: this will be an in-class closed book test. Students will have to create a 3D model of a given part or parts. Depending on the complexity of the model, the test may last between 90-120 min.
- Test # 2: this will be an in-class closed book test and will involve 3D modeling and assembly, as well as 2D drawing.

### Project:

- There will be only one project.
- The instructor will assign the project topic.
- Unless otherwise instructed each student should work on the project independently.
- The project will involve 3D modeling, assembly, 2D engineering drawings, and may include simulations.

### Grading

Overall class grade is weighted as shown below (tentative, subjective to change based on class performance):

Homework	In-class Assignments	Tests	Project
30 %	15 %	30 %	25 %

Final Grades:	93 % and above	A	73 % to 78 %	B-
	88 % to 93 %	A-	63 % to 73 %	C
	83 % to 88 %	B+	50 % to 63 %	D
	78 % to 83 %	B	< 50 %	F

### Cheating:

Copying each other's homework/test/project is considered cheating. Any form of cheating on homework will result in a failing grade for the course.

**Academic Misconduct:**

Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution.

An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the Student Academic Misconduct Policy (approved December 9, 2005) located at: <http://studentconduct.unlv.edu/misconduct/policy.html>.

**Copyright:**

The University requires all members of the University Community to familiarize them and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://provost.unlv.edu/copyright/>.

**Disability Resource Center:**

The Disability Resource Center (DRC) determines accommodations that are "reasonable" in promoting the equal access of a student reporting a disability to the general UNLV learning experience. In so doing, the DRC also balances instructor and departmental interests in maintaining curricular standards so as to best achieve a fair evaluation standard amongst students being assisted. In order for the DRC to be effective it must be considered in the dialog between the faculty and the student who is requesting accommodations. For this reason faculty should only provide students course adjustment after having received this "Academic Accommodation Plan." If faculty members have any questions regarding the DRC, they should call a DRC counselor.

UNLV complies with the provisions set forth in Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. The DRC is located in the Student Services Complex (SSC- A), Room 143, phone (702) 895-0866, fax (702) 895-0651. For additional information, please visit: <http://drc.unlv.edu/>.

**Religious Holidays Policy:**

Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor no later than the last day of late registration of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. This policy shall not apply in the event that administering the test or examination at an alternate time would impose an undue hardship on the instructor or the university which could have been avoided. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=4&navoid=164>.

**Tutoring:**

The Academic Success Center (ASC) provides tutoring and academic assistance for all UNLV students taking UNLV courses. Students are encouraged to stop by the ASC to learn more about subjects offered, tutoring times and other academic resources. The ASC is located across from the Student Services Complex, #22 on the current UNLV map. Students may learn more about tutoring services by calling (702) 895-3177 or visiting the tutoring web site at: <http://academicsuccess.unlv.edu/tutoring/>

**UNLV Writing Center:**

One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance.

Appointments may be made in person or by calling 895-3908. The student's Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu/>

**RebelMail:**

By policy, faculty and staff should e-mail students' Rebelmail accounts only. Rebelmail is UNLV's Official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students' e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu.