

**DRET-120 – Drafting 1 Sec. T02**  
**Fall Semester 2021**

**Course Description:** Fundamentals of drafting through the use of sketching and computer graphics as applied to orthographic views, section views, isometric views, and threads and fasteners. Also the student will be introduced to computer graphics early in the program and will be required to produce much of their work using CAD.

**Textbook:** SOLIDWORKS 2021 and Engineering Graphics – An Integrated Approach, R. H. Shih, SDC Publications, [www.SDCpublications.com](http://www.SDCpublications.com), 2021.

**Web Page:** [eCampus.wvu.edu](http://eCampus.wvu.edu)

**Course Instructor:** Dr. Bernhard Bettig  
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**Office Hours:** Mon: 11:00-1:00  
Tue/Thu: 4:00-5:00  
Wed/Fri: 2:00-4:00 (via Zoom)  
by appointment, or just drop by!

**Course Schedule:**

<u>Week</u>	<u>Topic</u>	<u>Chapter</u>
8/16	Orientation & History of Engineering Graphics	1
8/23	SolidWorks User Interface & Parametric Fund.	1, 2
8/30	Solid Geometry Concepts	3
9/6	Geometric Constructions & Constraints	4
9/13	Feature Design Tree	5
9/20	Geometric Construction Tools	6
9/27	Sketching Orthographic Views	7
10/4	<b>Midterm Exam</b> (10/7)	NA
10/11	Multiview Constructions & Drawings	7
10/18	Dimensioning & Notes	8
10/25	Tolerancing & Fits	9
11/1	Pictorials & Sketching & Graphics Software	10
11/8	Section Views & Symmetrical Features	11
11/15	Auxiliary Views & Reference Geometry	12
11/29	3D Printing, Threads & Fasteners	13, 14
12/6	Assembly Modeling & Working Drawings	15
12/13	<b>Final Exam</b> (12/16)	NA

**Evaluation:**

Daily Assignments	50%
Midterm Exam	25%
Final Exam	25%

**Equipment/Supplies:** Flash drive or cloud file storage  
Pad of engineering paper  
Basic drawing equipment – kit from bookstore or, at minimum, pencil, eraser, inch & mm rulers, protractor & compass

**Learning Outcomes:** Upon successful completion of this course, the student will be able to:

1. Identify and use the basic tools of traditional (non-CAD) drafting to complete drawings
2. Demonstrate the ability to create accurate orthographic projections of small objects.
3. Demonstrate the ability to apply dimensional information to orthographic projections
4. Demonstrate the ability to create pictorial drawing for presentations and aid in visualization.
5. Demonstrate the ability to create and understand the applications of various section views.
6. Demonstrate an understanding of the standards relating to screw threads.
7. Use SolidWorks to complete various assignments related to student outcomes 2 through 6.

**Academic Integrity:** The integrity of the classes offered by any academic institution solidifies the foundation of its mission and cannot be sacrificed to expediency, ignorance, or blatant fraud. Therefore, instructors will enforce rigorous standards of academic integrity in all aspects and assignments of their courses. For the detailed policy of West Virginia University regarding the definitions of acts considered to fall under academic dishonesty and possible ensuing sanctions, please see the West Virginia University Academic Standards Policy (<http://catalog.wvu.edu/undergraduate/coursecreditstermsclassification>). Should you have any questions about possibly improper research citations or references, or any other activity that may be interpreted as an attempt at academic dishonesty, please see your instructor before the assignment is due to discuss the matter.

**Inclusivity:** The West Virginia University community is committed to creating and fostering a positive learning and working environment based on open communication, mutual respect, and inclusion. If you are a person with a disability and anticipate needing any type of accommodation in order to participate in your classes, please advise your instructors and make appropriate arrangements with the Office of Accessibility Services. (<https://accessibilityservices.wvu.edu/>) More information is available at the Division of Diversity, Equity, and Inclusion (<https://diversity.wvu.edu/>) as well. [adopted 2-11-2013]

**COVID-19:** WVU is committed to maintaining a safe learning environment for all students, faculty, and staff. Should campus operations change because of health concerns related to the COVID-19 pandemic, it is possible that this course will move to a fully online delivery format. If that occurs, students will be advised of technical and/or equipment requirements, including remote proctoring software.

In a face-to-face environment, our commitment to safety requires students, staff, and instructors to observe the social distancing and personal protective equipment (PPE) guidelines set by the University at all times. While in class, students will sit in assigned seats when applicable and wear the required PPE. Students who fail to comply will be dismissed from the classroom for the class period and may be referred to the Office of Student Conduct for further sanctions.

If a student becomes sick or is required to quarantine during the semester, they should notify the instructor. The student should work with the instructor to develop a plan to receive the necessary course content, activities, and assessments to complete the course learning outcomes.