Syllabus

Descriptive Geometry – TEC D 109

Olympic College – Bremerton, WA

Credits: 4

Instructor: Peter Sanchez
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Course Description:
Introduction to principles of descriptive geometry used to solve 3-dimensional problems graphically via successive auxiliary projections. Study of space relationships for points, lines and planes that precede design. Also, an introduction to development of surfaces and intersections

Course Outcomes:
The successful student will perform the analysis and solution of three-dimensional problems through the application of orthographic or multi-view projections principles. Demonstrate the ability to analyze and make measureable space relationships that precede design using the principles of descriptive geometry. Work and communicate effectively with others, as well as independently to analyze and solve graphical problems involving points, lines, and planes.

Course Content:
1. Introduction to orthographic projection fundamentals and multi-view projections solving for: True Line Lengths, Point Views of Lines, Planes and Edges, and Planes in True Size.
2. Introduction and demonstration of the descriptive geometry principles and methods used to solve for: a) True Length and true slope of a line. b) Obtaining edge and true size views of a plane. c) Shortest distance between lines. d) Line piercing of a plane. e) Plane intersections. f) Dihedral angles. g) Lines perpendicular to planes. h) Angles between a line and a plane. i) Revolution; view saving method for solving problems. j) Developments; including parallel-line, radio-line and triangulation. k) Intersections of two or more 3-dimensional objects. l) Vectors.
3. Practical application assignment problems for each of the principle areas covered for students to solve graphically.

Prerequisite: TEC-D 107 – TECHNICAL DRAWING

Required Text:
Applied Descriptive Geometry – Second Edition
ISBN: 0-8273-7912-9 By Katherine Holliday - Darr

Required Materials:
* Scales: Architectural, Engineering, & Metric
* Circle & Ellipse Templates
* Protractor
* Erasing Shield
* Tape or Drafting Dots
* Bow Compass
* Triangle: 30-60-90 degrees (10” to 12”)
* Triangle: 45-45-90 degrees (10” to 12”)
* Eraser
* Dusting Brush
* Pencils: 0.5mm & 0.7mm (others as desired)
* Dividers

Course Requirements:

Final course grade will be based on:

Attendance and Participation	100 pts. (5 pts. ea. day)
Graphic Assignments	700 pts (10 pts. ea. assignment)
Total:	**800 pts.**

Grading procedure

The final grade is calculated by dividing your total points by the total possible points. The percentage result is then multiplied by 4.00 to determine your decimal grade.

Example: ***800*** *total points* ***possible*** ***620*** *points* ***earned by student***

620 / 800 = .775 *.775 x 4.0 =* ***3.1*** ***GPA***

Attendance and Participation

Because of the extensive amount of information required to complete the drawing assignments in this class, regular attendance in class will be expected. Participation will play an essential role in getting through this class. Participation is interpreted by the student's undivided attention during the lecture, understanding of course material when called upon, interest, and enthusiasm.

Note:

1. If a student is over 15 minutes late for class, the student is considered tardy that day. **(Each Tardy = - 5 pts.)**

2. If a student is an hour or more late for class, the student is considered absent for the day. **(Each Absent = - 10 pts.)**

Graphic Assignments

Drawings: As a matter of routine, drawings can be started in class and then completed at home. As a general rule, assignments will be due once a week, on the last day of class for that week.

Your work will be assessed and graded employing the following criteria:
Proper Drawing Development, Proper Line Types/Quality, Correct Scale, Annotation, Technical Accuracy

Classroom Policies:

Cell Phones:
Classroom use is prohibited. Either turn off completely or set mode to vibrate. Do not use cell phone during active lecture or demonstration time. Break times will be provided and phones can be used during that time period.

Cheating
Cheating in any form is grounds to fail the course and will be reported to Olympic College and the Apprentice School Administrator.

Note: Tracing or copying others work is considered cheating!

Resources:

American Disabilities Act Statement:
Any student who feels he/she may need an accommodations based on the impact of a disability should contact the office of Access Services located in Humanities 114, or call (360) 475-7540 for information or an appointment.

Special Needs and/or Issues:
Any student who feels that they might have special needs in order to meet the requirements of this class, or if you run into problems, or have extenuating circumstances that may affect your class attendance or overall participation, please let me know at your earliest opportunity. My goal here is to not only help you get through this class, but to help you get the most out of it as well.