1**.** **COURSE** **TITLE**: Introduction to Engineering Graphics

**2.** **CATALOG – PREFIX/COURSE NUMBER/COURSE SECTION\*:** ENDS 1140

**3.**  **PREREQUISITES**: \* None **COREQUISITE**: \* None

**4. COURSE TIME/LOCATION/MODALITY: (*Course Syllabus – Individual Instructor Specific*)**

**5.** **CREDIT** **HOURS**: 3 **LECTURE** **HOURS**: 3

**LABORATORY** **HOURS**: 0 **OBSERVATION** **HOURS**: 0

**6. FACULTY CONTACT INFORMATION: *(Course Syllabus – Individual Instructor Specific)***

**7.** **COURSE** **DESCRIPTION**: \*

 This is a beginning drafting course that will introduce the basics of manual drafting and

an introduction to AutoDesk’s 2D AutoCAD. Students are introduced to fundamental knowledge and skills such as line work, lettering, scale use, sketching, multi-view drawings, sectional views, and working drawings (detail, assembly, floorplans, elevations, electrical) with the basics of manual drafting techniques and the use of computer aided drafting equipment.

**8.** **Learning Outcomes**: \*

* 1. Student will learn about drafting regulation.
	2. Learn the proper use of drafting equipment.
	3. Student will understand drafting terminology.
	4. Develop the ability for manual lettering, sketching, and line techniques.
	5. Learn to produce a technical drawing with traditional drafting equipment and a CAD system.
	6. Student will learn dimensioning and geometric construction.
	7. Student will create, read, and interpret technical drawings, including auxiliary views and sections.
	8. Student will learn the proper use and creation of blocks and wblocks in CAD.
	9. Student will develop ability to draft detail, assembly, floorplan, and elevation drawings.

**9.** **ADOPTED** **TEXT**: \*

Up and Running with AutoCAD 2023

 2D and 3D Drawing and Modeling

Gindis, Elliot and Kaebisch, Robert C.

Academic Press

 ISBN 978-0-323-99665-5

**9a. Supplemental Texts: N/A**

**10. OTHER REQUIRED MATERIALS:**

Scientific calculator, graph paper, compass, protractor, and a graduated scale, 30◦/60◦ and 45◦ triangle set, typical drafting equipment, laptop or personal computer with the **Educational Version** of AutoDesk AutoCAD loaded and operational prior to the week 4.

**11. GRADING**: \*\*\*

Grading will follow the policy in the catalog. Typically, grading will be based on the

following point system:

 1000 – 900 = A

 899 – 800 = B

 799 – 700 = C

 699 – 600 = D

 599 – 0 = F

**12.** **Grading Procedures or Assessments**:

Students that have passed the AutoDesk AutoCAD 2019 Certified User Exam and

received certification can request Prior Learning Credit for this class.

Assignments will be evaluated according to instructor directives and project instructions.

The grade will be determined by periodic examination, comprehensive final examination, homework, and quizzes.

Assignments are due on time. Late assignments will not be accepted.

**Typical weight assigned:**

|  |  |  |  |
| --- | --- | --- | --- |
| Assessment method | % of Final Grade | Total Points | Grade scale based on points earned |
| Assignments | 40 | 400 | A= 900+ |
| Quizzes | 10 | 100 | B= 800-899 |
| Tests | 30 | 300 | C= 700-799 |
| Comp. Final Exam | 20 | 200 | D= 600-699 |
|  | 100% | 1000 points | F= 0-599 |

**13.** **COURSE METHODOLOGY:**

Course Methodology is at the discretion of the instructor. The course material will be primarily delivered through the lecture/discussion method. Lecture experiences are included as well as hands-on demonstrations and in-class work.

**14.** **COURSE** **OUTLINE**:

|  |  |  |
| --- | --- | --- |
| Week # | Topic | Learning outcomes |
| 1 | Introduction to the history of drafting and drafting standards | 1 |
| 2 | Introduction to drafting techniques and Multiview drawings | 2,3 |
| 3 | Multiview drawings, Introduction to traditional drafting tools and techniques. | 1,2,3,4 |
| 4 | Test 1, Basics of CAD | 1,2,3,4 |
| 5 | Basics of CAD | 1,2,3,4 |
| 6 | Layers and properties | 1,2,3,5 |
| 7 | Text, editing, and style | 1,2,3,5,6 |
| 8 | Hatch Patterns TEST 2 | 1,2,3,5,6 |
| 9 | Dimensioning | 1,2,3,5,7 |
| 10 | Blocks | 1,2,3,5,7 |
| 11 | Arrays, TEST 3 | 1,2,3,5,8 |
| 12 | Basic Printing and output | 1,2,3,5,6,7,8,9 |
| 13 | Advanced Output-Paper Space | 1,2,3,5,6,7,8,9 |
| 14 | Mechanical/Architectural working drawings-Floor plans, electrical | 1,2,3,5,6,7,8,9 |
| 15 | Mechanical/Architectural working drawings- elevations | 1,2,3,5,6,7,8,9 |
| 16 | FINAL EXAM, Monday for M-W, Tuesday for T-TH classes | 1-9 |

**15.** **SPECIFIC** **MANAGEMENT** **REQUIREMENTS**: \*\*\*

Class attendance and participation are strongly recommended. It is the responsibility of the student to ensure ample time to complete assignments so they can be turned in prior to the deadline to receive credit.

**16. FERPA:** \* Students need to understand that your work will be seen by others. Others

 will see your work when being distributed, during group project work, and if it is chosen

 for demonstration purposes. Students also need to know that there is a strong possibility that your work may be submitted to other entities for the purpose of plagiarism checks.

**17** **ACCOMMODATIONS: \***

Students requesting accommodations may contact the Academic Affairs office administrative assistant, Barb Fleming, at bfleming@sscc.edu or 937-393-3431 X-2620.

Students seeking a religious accommodation for absences permitted under Ohio’s Testing Your Faith Act must provide the instructor and the Academic Affairs office with written notice of the specific dates for which the student requires an accommodation and must do so no later than fourteen (14) days after the first day of instruction or fourteen (14) days before the dates of absence, whichever comes first.  For more information about Religious Accommodations, see the full policy at <https://www.sscc.edu/services/accessibility-services.shtml#religious-accommodations>

or contact the Academic Affairs office administrative assistant, Barb Fleming, at bfleming@sscc.edu or 937-393-3431 X-2620.

**18. OTHER INFORMATION\*\*\*:**

**SYLLABUS TEMPLATE KEY**

**\*** Item cannot be altered from that which is included in the master syllabus approved by the Curriculum Committee.

**\*\*** Any alteration or addition must be approved by the Curriculum Committee

**\*\*\*** Item should begin with language as approved in the master syllabus but may be added to at the discretion of the faculty member.