Course Description: A computer-aided modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work. **Corequisite: DFTG 1309**

Text, References, and Supplies: *Technical Drawing 101 with AutoCAD 2017,* Douglass Smith, Antonio Ramirez

This class will utilize the required text throughout the entire semester; therefore, having a book is essential.

Software: AutoCAD

The student will need to provide his/her own:
- USB Flash Drive - **REQUIRED**
- Protractor
- Architectural Scale
- Engineering Scale
- Mechanical Drafting Pencil
- Soft Eraser
- Triangles 45, 30-60
- Circle Template 1/16” – 3” Diameter

These supplies may be needed in future classes.

Course Goals/Objectives: The modern drafting offices use computers to generate and maintain their drawings. These skills require a basic knowledge and understanding of the fundamentals of drafting. Knowledge of basic geometric layout and sketching is an important part of the draftsman skills. Computer skills combined with drafting fundamentals are essential to the modern draftsperson to be successful in today’s industry. The following list of course goals will be addressed in the course. The goals are directly related to the performance objectives. Upon successful completion of the course the student will have demonstrated the ability to:

1. Create free-hand multi-view sketches.
2. Use traditional drafting tools to prepare technical drawings.
4. Set-up, create and print multi-view CAD drawings.
6. Dimension architectural drawings following accepted practices.
8. Prepare isometric drawings with AutoCAD.
10. Create, insert and edit blocks with AutoCAD.
11. Use AutoCAD to prepare working drawings for a mechanical assembly complying with the ASME Y14.34M standard.
12. Use AutoCAD to prepare working drawings (floor plan and elevations) for a small residence.
13. Use AutoCAD to create 3D models.

Student Contributions and Class Policies:

1. Students are expected to exhibit professional behavior during scheduled class times.
2. Regular and punctual attendance is expected of all students in all classes for which they have registered.
3. All absences are considered to be unauthorized unless the student is absent due to sickness or emergencies.
4. The instructor is responsible for judging the validity of any reasons given for absence.
5. Students will not be allowed to make up an examination missed due to an absence unless they have reasons acceptable to the instructor.
6. Students may be dropped from a class by the registrar, on or before the twelfth day of class, upon recommendation of the instructor who feels the student has been unjustifiably absent or tardy a sufficient number of times to preclude meeting the course objective.
7. After the twelfth day of class, it is the student's responsibility to initiate the drop in the Office of Student Services. Failure to do so may result in the students receiving a grade of “F.”
8. Students are responsible for maintaining, organizing, and backing-up copies of all digital files. Failure to maintain an up-to-date backup may result in data loss.

Evaluation of Students:

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<thead>
<tr>
<th>Assignment Type</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments</td>
<td>35%</td>
</tr>
<tr>
<td>Attendance &amp; Regular Daily Work</td>
<td>25%</td>
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<tr>
<td>Final Project</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
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<tr>
<th>Grade</th>
<th>Score Range</th>
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<tr>
<td>B</td>
<td>80-89</td>
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<tr>
<td>C</td>
<td>70-79</td>
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<tr>
<td>D</td>
<td>60-69</td>
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<tr>
<td>F</td>
<td>0-59</td>
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Course Schedule: This class meets two or four times a week, for a total of two (2) lecture hours and four (4) lab hours. Due dates for course assignments will be announced throughout the semester. This will be subject to the progression of the class, therefore attendance is very important.

Scans Information: INFORMATION: Students will acquire and evaluate information from existing sources and determine its relevance and accuracy as needed to build a systematic information base. Students will employ computers to acquire, organize, analyze, and communicate information.

TECHNOLOGY: Applies technology to task, understands overall intent and proper procedures for setup and operation of equipment and computer hardware and software.

READING: Students will locate, understand, and analyze data in documents including manuals, graphs, and schedules to perform tasks. The students will learn from a text to determine the main idea or essential message, the relevant facts and specifications, the meaning of unknown or technical vocabulary, and the appropriateness of theories of other writers.

MATHEMATICS: Approaches practical problems by choosing appropriately from a variety of math techniques. Students will use basic math calculations throughout the course work.

LISTENING/SPEAKING: Students will receive, attend to, interpret, and respond to verbal messages and other cues such as body language in ways that are appropriate to the purpose; for example, to comprehend; to learn; to critically evaluate; to appreciate; or to support the speaker.

PERSONAL QUALITIES: The students will display responsibility, self-esteem, sociability, self-management, integrity and honest toward goal attainment and perseverance.
Students with Disabilities:

Any student who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact Shep Grinnan as soon as possible. Mr. Grinnan’s office is located in the Scharbauer Student Center Building. These conditions may include documented physical or educational disabilities. Please be aware that services or accommodations are not automatic. Each student must request them and secure the proper authorizations/documentation.

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies: Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu; Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. For further information on notice of non-discrimination, visit http://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm or call 1 (800) 421-3481.

Spanish

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