***Computer-Aided Design and Fabrication (CAD 161)***

***2016-2017***

***Instructor’s Name:*** Mr. Corey Duzan

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***Classroom Location:*** Room 607

***Office Location:*** CTE Office (Room 184)

***Office Telephone:*** 847-486-4495

***Course Description:***

CADD 101 is an introductory course covering the operation of a typical CAD system. Content stresses CAD graphic commands and proper manipulation of industrial CAD software and hardware to produce engineering drawings. Emphasis is placed on developing entry-level CAD user skills using the current version of the AutoCAD software package.

***Course of Study:***

The course of study for this class includes:

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| Introduction to AutoCAD | Construction Tools and Multiview Drawings | Obtaining Drawing Information |
| Drawings and Templates | Text Styles and Multiline Text | Dimension Standards and Styles |
| Introduction to Drawing and Editing | Single-Line Text and Additional Text Tools | Creating and Editing Dimensions |
| Basic Object Commands | Modifying Objects | Tables |
| Line Standards and Layers | Arranging and Patterning Objects | Section Views and Graphic Patterns |
| View Tools and Basic Plotting | Grips, Properties, and Additional Selection Techniques | Blocks |
| Object Snap and AutoTrack | Polyline and Spline Editing Tools | Isometric Drawing |

***Books, Supplies, and Supplementary Materials:***

There is no textbook for this course. All reference materials are electronic and will available via CAD 161 Website, GBS Engineering Website, and/or Google Drive. File storage will be done on the student’s school H: during the semester. However, it is recommended that students back-up their files throughout the year (particularly a quarter and conclusion of the class) to a cloud-based storage system like Google Drive or Dropbox.

***Student Course Fees:***

$5.00 to cover the cost of all disposable materials used throughout the course of the semester.

***General Course Objectives:***

Know the parts of a PC based CAD system and their functions.

* Create, save, and edit CAD drawings, perform basic disk file management functions, and use prototype drawings.
* Analyze drawings and establish their proper settings.
* Use layers, line-types, and color for clarity and to show function in drawings.
* To draw accurately using snap, object-snap, typed input, and the various User Coordinate Systems.
* Speed drawing time by using the View, Pan, and Zoom commands to control screen display.
* Understand and use Model Space and Paper Space to produce prints at specific scales.
* Prepare and use a set of title blocks in standard sizes for use with all drawings.
* Use the inquiry, Help, Undo and other commands to manage the drawing session.
* Create and use symbols and symbol libraries.
* Produce section drawings using the hatch and BHATCH commands.
* Produce simple assembly drawings using block and XREF techniques.
* Produce drawings dimensioned in various styles.
* Add verbal information to symbols by use of attributes.
* Use the isometric grid and other settings to produce isometric drawings.

***General Student Expectations:***

1. Come prepared (paper, pencil, notebook, student laptop, etc.)
2. Be on time to class
3. Follow all school discipline codes
4. Follow all school academic honor codes
5. Participate in classroom discussions in a positive manner
6. Follow and use the lab and classroom rules when applicable
7. Students are not permitted to access the supply cabinets, storage area, or instructor’s office without permission from the instructor.

***Evaluation:***

The student will have the right to correct drawing problem and exercise assignments according to the grading comments. The corrected work accompanied by the original work may be resubmitted for consideration of a higher grade. The resubmission process ends as outlined by teacher. The final exam will be graded according to the grading scale. Grades are based only on your individual performance; no ‘curve’ is applied.

Evaluation & Grading Scale:

The grade will be on a percentage system with points assigned to each activity assigned. The following schedule is an estimate of the work that will be included in the final percentage total. Should items be eliminated the same percentages will stand for the adjusted point total. The student’s grade is based on the individuals completed and corrected work.

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| --- | --- | --- | --- | --- |
| **Category** | **Weight** |  | **Grade** | **Percentage** |
| Drawing Problems and Exercises (approximately 65 assignments @ 10 pts.) | 40% |  | A | 100% - 90% |
| Quizzes (approximately 3 quizzes @ 15 pts.) | 10% |  | B | 89% - 80% |
| Projects (approximately 3 projects @ 25 pts.) | 10% |  | C | 79% - 70% |
| Portfolio (1 @ 100 pts.) | 5% |  | D | 69% - 60% |
| Midterm Exam (1 @ 100 pts.) | 15% |  | F | 59% and Below |
| Final Exam (1 @ 100 pts.) | 20% |  |
| Total | **100%** |  |
| Bonus Drawings-Extra Credit (22 @ 10 pts.) | 2% |  |

***Attendance:***

Consecutive attendance is crucial to the development of the course materials and students are expected to attend. It is the student’s responsibility to obtain missed lecture notes, handouts, announcements, and assignments from the instructor, classmates, class website, or calendar. **Any items assigned for that class are due according to assignment guidelines.**

***Electronic Policy:***

Electronic devices will be allowed to be used in this course. Students may use electronic devices during the Electronic Option time only during class as indicated by the instructor.