Salem High School  
Syllabus: Computer Aided Design and Drafting (CADD) 2  
2014-2015

Instructor: Mr. Scott Kukshtel  
Email: scott.kukshtel@sau57.org  
Phone: 603-893-7073 ext. 5293  
Website: http://ssd.sau57.org/cte-computer-aided-drafting

Classroom: Room V203  
Class Times: 7:30AM – 8:59AM  
Dept. Office: Career and Technical Education Center  
Dept. Office Hours: 7:30AM – 3:30PM  
Dept. Phone: 893-7073 ext. 5337

Welcome!

CADD 2 is a year-long course that is designed to provide each student with the advanced skills needed to produce and print/plot AutoCAD two and three-dimensional drawings utilizing the AutoCAD program.

Students will also be given exposure to and instruction in the use of Autodesk Architecture and Autodesk Revit that will be used to produce architectural drawings and Autodesk Inventor for production of engineering drawings.

In addition (depending on time and student interest), additional engineering and/or architectural projects may be introduced, including (but not limited to) CNC, 3D Printing, and Robotics.

All students who study AutoCAD (and other programs of its type) need to fully understand that mastering the program requires a process that builds upon a continuous progression of skills and techniques. Only through continuous use, review, and practice of previously learned commands and techniques can an understanding and appreciation of the power and use of AutoCAD be attained. This class will be taught through the use of lectures, demonstrations, and exercises that will teach and direct the student in the proper and correct use of the program.

Course Objectives

1. The student will learn and understand the terminology, function, and use of two and three-dimensional AutoCAD commands and be able to use and define them accurately and correctly.
2. The student will be able to use the commands and functions learned to properly and accurately produce and print/plot two dimensional drawings that are both visually and technically correct.
3. The student will learn and understand the terminology, function, and use of rendering and special effect AutoCAD commands and be able to use and define them accurately and correctly.
4. The student will be able to successfully pass all quizzes, tests, and exams given.
5. The student will be able to produce and deliver, in both written and oral form, presentations that relate to the work being produced.

Computer Programs Used in this Class

- Autodesk AutoCAD 2014 (free license for home use is available; please see Mr. Kukshtel for details)
- Other Autodesk software as needed: AutoCAD Architecture, Revit, Inventor, etc.
- Microsoft Office
Required Materials

- Three-ring binder (minimum 1 inch)
- Blue or black ink pens
- Pencils (#2, wood or mechanical - for sketching)
- Optional: Flash drive

College Credit

College credit for this course is available through NHTI’s Running Start program, and aligns with NHTI’s AR 101 AutoCAD 2D and AR 103 AutoCAD 3D courses.

Core Competencies

Upon completion of this course, students will:

1. Understand the necessary employability skills in order to achieve success in today’s workplace.
2. Understand the importance of personal growth and leadership to enhance career success.
3. Understand the concepts of design intent and the options to solve the problem in communicating with the client.
4. Understand the concepts, processes and procedures of the use of sketches to extend the design process.
5. Understand the concept, procedure and use of replication in order to increase efficiency of design documentation.
6. Understand the concept and procedures for measuring in different coordinate systems.
7. Understand the concept of planning drawings.
8. Understand the concepts, processes and procedures of developing charts and schedules.
9. Understand the concepts of dimensioning/measurement processes and procedures.
10. Understand the concepts and procedures used to develop a design presentation
11. Understand the fundamental concepts of entrepreneurship and how entrepreneurship influences the economy.

Sample Assignments and Projects

*(Specific project details and due dates will be announced)*.

1. Each student will design, draw, and print/plot a complete and accurate drawing that will be submitted for review as the 2014-15 class logo. 2D, 3D, and/or combinations of AutoCAD skills should be utilized.
2. Each student will design, draw, and print/plot a complete and accurate set of drawings based on a holiday season theme. *Note: These drawing(s) will be due the Wednesday before Holiday Vacation.*
3. The students as a group will produce a class drawing project based on a game (to be determined). This will be an ongoing project over the course of the school year.
4. Each student will design, draw, and print/plot a complete and accurate set of drawings that will demonstrate a good working knowledge of architecture. The drawing can be a layout of the students’ choice.
5. Working in teams of +/- 4 the student will accurately and correctly design, draw, and print/plot a complete and accurate two and three dimensional set of drawings for an
engineering/robotics project. The teams will also construct and operate (competition) the final design.

6. Each student will design, draw, and print/plot a complete and accurate final set of drawings that will demonstrate and showcase what the student has learned over the two years of the CADD course. The drawing can be of the students’ choice in either architecture or engineering while utilizing any or all of the AutoCAD programs. These drawing(s) will be due the day of final exams, and will count as 30% of your final exam grade.

**Engineering Notebook** - Students will be required to keep an Engineering Notebook that will include their notes on all lecture material, classroom activities, and on-going project work. The Notebook will be submitted on a regular basis so that the instructor may review all completed assignments.

**Portfolio** - Students will develop and maintain a portfolio in both hard copy and electronic format of work produced within the class.

### Grading

Your final grade will be calculated from the following criteria and letter grades assigned based on the following scale:

<table>
<thead>
<tr>
<th>Activities / Homework</th>
<th>15%</th>
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<tbody>
<tr>
<td>Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>CADD Project Deliverables</td>
<td>50%</td>
</tr>
<tr>
<td>Midterm and Final Exam</td>
<td>20%</td>
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</table>

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Range</th>
<th>Regular</th>
<th>Honors</th>
<th>AP</th>
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<tr>
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<td>90-92</td>
<td>3.7</td>
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<tr>
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<tr>
<td>B-</td>
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<td>2.7</td>
<td>2.9</td>
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</tr>
<tr>
<td>C+</td>
<td>77-79</td>
<td>2.3</td>
<td>2.5</td>
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<td>73-76</td>
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### Course Assessment Activities

**In-Class / Homework Activities:** These are formative exercises, intended to check your knowledge and mastery of new material. In general, sufficient time will be allotted to complete most of these activities in class, although depending on your pace of work, some additional time outside of class may be required.

**Unit Quizzes:** These quizzes are formative assessments, and are used to assess your understanding of each instructional unit’s standards.

**CADD Projects:** These are longer term, multi-day summative assessment projects that are completed either individually or as part of a team. Their goal is to assess your learned knowledge of the course standards and your ability to apply those standards in a practical manner.

**Mid-Term and Final Exams:** These are summative assessments that measure how well you have retained course knowledge and skills over the course of the semester and the school year, respectively.
Design Project Assignments

A significant portion of the course time is spent undertaking projects in which you will work either individually or as a team to produce specified work. All project assignments will be discussed in class and will be posted online with instructions and the project due date. You are normally expected to be able to complete projects during regular class time.

- **Project Rubric:** Project deliverables and oral presentations will be evaluated according to a rubric distributed with the project description.
- **Oral Presentation:** Upon completion of each project, teams may be called upon to present the results of their work to the rest of the class. Presentations will occur on the specified project due date, whether or not the team declares themselves to be ready. Project assessments will focus more on the process and thinking used to arrive at a solution, rather than the ultimate success of the solution itself.
- **Project Journal:** During project work, you will maintain a personal journal of designs, tests, changes, and reasoning in your Engineering Notebook. The project journal will be used to assess your ability to apply scientific principles, engineer creative solutions, and work successfully as part of a team.

**Absences:** You have 1 school day for every day you are absent (with excuse) to make-up work. Students are expected to make up all assignments missed during their absence from class, and should check with the teacher and/or online to find out what was missed during their absence. Students will take tests/quizzes whether or not they were present for review.

**Office Hours/ Academic Support:**

You may arrange for extra help or computer time with Mr. Kukshtel either before or after school. Please contact Mr. Kukshtel by email, phone, or in person to schedule this time in advance.

**Behavioral Expectations**

The CADD 2 classroom is first and foremost a professional learning environment where students are expected to demonstrate civility and respect for others.

- All Salem High School rules and regulations as outlined in the SHS Student Handbook will be observed and enforced.
- Plagiarism: The copying of original computer works (e.g AutoCAD files) or the representation of the computer works of others as your own is considered plagiarism in the same sense as the copying of words or text. When discovered and verified, the penalties for such cheating will be as outlined in the SHS Student Handbook (a grade of “zero” for all involved parties and notification of parents).
- Students will strictly observe all classroom and shop safety rules and protocols. There is absolutely no room for misbehavior, careless or reckless treatment of equipment, or any actions which would endanger yourself or others.
- Treat all classroom and shop equipment and tools with respect and extreme care. Abuse or breakage of equipment or tools may result in a charge for replacement and/or disciplinary action.
- Take care of the room: No writing on the desks; no feet on the desks or other chairs
- Clean-up and return of equipment and supplies at the end of class is an important part of daily work. This includes being sure to log-off your computer.
- All books, supplies, and reference materials will be returned to their proper place at the end of class.
• Food/Drink: No food or drink is allowed to be consumed in the classroom without the explicit permission of the instructor. *Exception: Water is allowed as long as it is in a plastic, sealable container.*

• Trash: You make the mess, you clean it up!

• While the teacher is talking, all personal electronic devices will be turned off and put away. Non-compliance with this rule will be subject to the disciplinary consequences outlined in the Code of Conduct contained in the SHS Student Handbook.

• Students may be allowed to listen to personal music devices during computer work sessions, but *through headphones only.*

**Computer Usage**

• You are to never access, alter, tamper with, or destroy any computer files or directories other than those that are contained within your individual working directories.

• You are to never copy, transfer, or download any files, of any type, onto any computer without the express consent of the instructor.

• You are not allowed to access, tamper with, add or remove any cables, wires, or other peripherals located at the rear of the computer.

• No playing of games, music or non-curriculum-related video is allowed at any time on the classroom computers.

**Suggestions for Success**

• To the best of your ability, attend class every day, and be on time and prepared to work when the bell rings.

• Computer time is precious - Take advantage of provided class time to complete your work and avoid the need to come before or after school to finish your assignments.

• Bring to class: Engineering Notebook, pens/pencils.

• Maintain and continually update and revise your notebook. Keep it in a neat and orderly fashion, so that you may use it as both a reference and study guide.

• Be responsible - finish projects (especially team projects) in a timely manner.

• Poor grades should always be reviewed with the teacher ASAP either before or after school and by appointment.

• Extra help is available most days and by appointment – be productive with your free time.

  • Pay attention.
  • Be a good listener.
  • Respect other people’s opinions.
  • Respect other people’s time and space.
  • Take responsibility for proactively resolving conflicts.

  • Be a good team player.
  • Don’t speak ill of others.
  • Value differences.
  • Watch your language!
  • Accept and give constructive criticism / accept and give praise.
Instructor’s Notes

- I look forward to working with each one of you this year. Please do not hesitate to ask me questions. My goal is to provide you with the knowledge and skills necessary to be successful in this class and future classes.

- I reserve the right to modify and revise the syllabus as needed.

- Instructional accommodations and modifications will be delivered as identified in a student’s 504 or IEP plan.

- Mr. Kukshtel
I have read and understand the attached *Computer Aided Design and Drafting (CADD)* 2 syllabus and fully understand all expectations for students.

__________________________
Date

__________________________
Student’s Signature