

SCARBOROUGH HIGH SCHOOL

COURSE OUTLINE

COURSE TITLE: INTRODUCTION TO CAD
LENGTH OF COURSE: 1 SEMESTER
GRADE LEVEL: 10-12

DEPARTMENT: COMPUTER SCIENCE
CREDIT: 1/2 CREDIT

CLASS FORMAT:

This course is NOT “taught” in the traditional class format. There are no lectures. At the beginning of the course the student will be given a syllabus of assignments and due dates.

For each unit, the student will:

1. read and following directions in a tutorial,
2. complete assignments based on skills learned doing the tutorials, and
3. take test and/or quizzes as defined in the course syllabus.

Several years ago Scarborough High School offered a junior/senior elective course in architectural design. AutoCAD was used as a tool in that course. When the teacher retired, I agreed to “coach” students who wished to learn the AutoCAD program.

Role of the teacher:

- In this format, the teacher takes on the role of a resource person and “coach”.
- There are no lectures and no direct teaching.
- The teacher will provide a courses syllabus, tutorials, worksheets, tests, quizzes and other materials needed by the student to be successful.
- The teacher will answer appropriate questions.
 - If the student asks “How do I do this drawing?”, my response is going to be “Go back and re-read the tutorial”. Questions need to be very specific.
 - If the student says “The tutorial says to press the F1 key and a circle will be drawn, I keep doing it but I don’t get a circle - what’s wrong?”. I will work with that student until we get it to work correctly.
 - If the student says, “I can’t find the snap button”, I will help him find it.

Role of the student:

- The student takes on full responsibility for his/her own learning.
- The student is expected to spend 2 to 3 hours per week on the computer outside of class unless all work due is completed and passed in.

Student Pre-requisites:

To be successful:

- The student must have excellent reading and study skills. The student must be able read, understand, and following directions in a tutorial, then apply the skills learned in the tutorials to new situations.
- The student must have good organizational skills so that he/she will keep on schedule and complete assignments and pass them in on time.
- The student must have the attention span to be able to work the full period each day without getting distracted by fellow students.
- The student must have the motivation and dedication to come in before school, after school, and/or during study halls to make sure all assignments are completed on time.
- The student must feel comfortable enough to seek help and ask specific questions when needed.

Juniors and seniors generally achieve high grades in this course than do underclassmen because they are better at the skills listed above. Some freshmen and sophomores students may be wise to postpone taking this course until their junior or senior year.

COURSE DESCRIPTION:

INTRODUCTION TO CAD (CS424)

This course is an introduction to using CAD (Computer Aided Drafting) software. This is a hands-on self-paced course where students will learn to use a full blown CAD software package. Students will be expected to read and follow directions in a tutorial to learn basic skills and then reproduce additional drawings using the skills they learned in the tutorial. Although this is not intended to be a design class, students will have the opportunity to use their design skills in some of the assigned projects.

Expectations:

To be successful, students must have good reading skills. Although some students will complete drawing projects during class, you should plan on spending 2-3 hours in the lab outside of class time per week. Students are expected to be in class on time and be prepared to work the full period. Evaluation will be based on participation, tutorial completion, and drawing projects.

MATERIALS REQUIRED:

Each student is expected to have the following:

1. Three-ring, hard covered loose-leaf notebook and dividers with tabs that stick-out beyond the pages.
2. Occasional access to a calculator.
3. Pencils with erasers.
4. Extra 3 ½" Floppy diskettes (Optional)

COURSE EVALUATION

The grade for this course will be based upon the student's performance according to the chart below. Actual percentages may vary from quarter to quarter and will be announced at the beginning of the ranking period.

A typical grading system is shown here:

Category	Percentage	
PARTICIPATION (participation, Conduct, effort, teamwork, etc.)	20 %	All these grades will be multiplied by attendance grade percentage.
QUIZZES	10 %	
DRAWINGS & PROJECTS	65 %	
NOTEBOOK	5 %	

	100 %	

DATES:

Although students may go at their own pace, some students may find they need to put in time outside of class to meet the minimum requirements. The following is a list of assignments and suggested completion dates. No points will be deducted for late work, but no assignment will be accepted for credit more than 5 school days late.

It is expected that students will complete all assignments up to and including ACAD12 by the end of the first quarter and up to and including ACAD-21 by the end of second quarter.

(Dates for Fall Semester 2002-2003 School Year)

Assignment #	Assignment Topic	Days Elapsed	Due Date
ACAD-1	Main Menu & lines	4	Sep 6
ACAD-2	Circles, Ellipses & Arcs	2	Sep 10
ACAD-3	Erase, Redraw & Oops	2	Sep 13
ACAD-4	Obtaining Help, Drawing with the keyboard	3	Sep 19
ACAD-5	Grabbing Points	3	Sep 24
ACAD-6	Special Features	3	Sep 27
ACAD-7	Grid, Snap & Axis, U, Redo, Undo	3	Oct 3
ACAD-8	Chamfer, Break & Fillet	4	Oct 9
ACAD-9	Change, Move, Copy Mirror & Offset	4	Oct 15
ACAD-10	Array	4	Oct 21
ACAD-11	Array (Part 2)	4	Oct 28
ACAD-12	Stretch, Scale, Rotate, Trim, Extend	3	Nov 1
ACAD-13	Zoom, Regen, ViewRes	4	Nov 7
ACAD-14	Pan, View & more Zoom	4	Nov 13
ACAD-15/16	Townhouse	14	Nov 26, Dec 4, 11
ACAD-17	DOS functions, Text	3	Dec 13
ACAD 18	Prototypes, Layering	3	Dec 19
ACAD-19	Basic Dimensioning	4	Jan 3
ACAD-20	Advance Dimensioning	5	Jan 10
ACAD-21	Heavy Lines & Solid Objects	3	Jan 16

ATTENDANCE:

Attendance is a very important part of this course. You will be assigned a daily attendance grade. If you are in class, you will receive a grade of 100. If you are not in class you will receive a zero. When you make-up an excused absence, you will receive a 100.

When you are absent it is your responsibility to:

1. Show your "Class Permit" slip to Mr. Z and make sure that he writes it down.
2. If it was an excused absence, make-up the class. When you come in to make-up the class, bring your "Absent from Class" form and make sure that Mr. Z marks it down so that your attendance grade will get changed.

At the end of the ranking period you will receive an Attendance grade. Your average will be multiplied by the Attendance grade expressed as a percentage. This roughly translates into losing 4 points off your quarter grade for each class period that you do not make-up.

If you are not in your assigned seat when the bell rings, you are late and will lose 50 points off your attendance grade. It is your responsibility to make-up the class-work and time missed.

If you miss class for any reason (illness, field trip, class trip, class meeting, dismissal, etc.) you are expected to make-up the class.

In addition to the above all information concerning tardies and absences listed in the student handbook also apply.

PARTICIPATION (20%) Participation, Conduct and Effort, etc.

Meaningful participation in this course is extremely important and will count 20% of your quarter grade. If you come to class prepared each day, participate in the activities of the day, and follow the class and school rules, you will get a good grade. An average participation grade is 85. You will have to show extra effort, etc. to receive a grade higher than 85. This grade will include observations by the teacher to include:

DAILY PARTICIPATION: You are expected to be prepared for class. Reading other materials, writing letters, taking a nap, or doing homework from another class is not considered participating in the activities of the class.

CONDUCT: Under the assertive discipline system, if you break a class or school rule, it will be reflected in your participation grade. If you get a "warning", you lose 50 points, further infractions will result in a zero for that day. You may earn back points lost because of poor conduct by making arrangements with the teacher. This make-up will be above and beyond the detention assigned through the discipline system.

EFFORT: The student is expected to apply himself/herself to the job at hand to the best of his/her ability and to put in sufficient outside time so that he/she can be successful.

QUIZZES: (10%) Announced and unannounced quizzes will be given periodically.

1) Periodic multiple choice quizzes will be given according to an announced schedule. These quizzes will be on the computer and will come from the questions in the tutorial packets. All students present will take the quiz. These quizzes may not be made up.

2) Students will not be allowed to converse during quizzes.

3) All students present will take the quiz. The only exception will be students returning from extended illness.

4) In general students may not re-take quizzes.

DRAWINGS & PROJECTS (65%)

All hand written titles are to be done in **PENCIL !** Ten points will be deducted from papers done in pen. All of the tutorial sheets will be collected and graded according to the grading system on the sheet.

Most assignments have the details of the grading criteria clearly printed on the top of the sheet. Read the grading criteria before you start - make sure you understand what is expected of you.

NOTEBOOK: (5%)

A notebook is required for this course. It **MUST** be a hard covered three-ring loose-leaf binder. It should have at least 1 inch rings and must be able to hold 8.5 x 11 inch sheets. The notebook must include:

1) class notes: done as neatly as possible in pencil.

2) all work booklets done in pencil.

Each sheet must be punched and remain unfolded. A three-hole paper punch is available for student use in the computer room. If the holes rip-out, they should be repaired with tape or reinforcements. Loose papers must not be stuffed into the notebook.

Notebooks will be graded for neatness, accuracy, order, and completeness. Notebooks will be checked periodically during lab periods. Since notebooks may be checked without warning, they should always be neat and orderly. Notebook grades will be based on:

10 points - proper type of hard covered 3-ring binder

30 points - general organization

20 points - general neatness, pages unfolded, punched/reinforced where needed

40 points - contents (all there and in pencil)

See the notebook grading sheet for more details.

MAKE-UP

Make-up of work due to excused absences will be handled according to the procedure outlined in the student handbook.

In addition it should be noted:

- 1) Due dates are not changed because of an absence. If you have an excused absence on the day an assignment is due, it is due the day you return to school. If you have an unexcused absence, you receive a zero.**
- 2) Except in the case of an extended illness, all students present on the day of a test or quiz will take the test or quiz.**
- 3) Students should expect to make-up a test or quiz missed because of an excused absence on the day they return to school. Quizzes or tests not made-up within one week will remain a zero grade.**

BECAUSE OF POOR PERFORMANCE:

If a student is not satisfied with a grade on an assignment, he/she may make arrangements with the instructor to re-do the assignment. Generally the student can receive up to half of the points lost on the drawings. Written parts of an assignment may not be made up. Points lost because an assignment was late or because the student showed a lack of effort while the work was being done the first time may not be made-up.

EXTRA CREDIT:

Extra credit assignments are NOT given. Keep up on your daily work.

IN and OUT boxes:

There are IN and OUT boxes in the classroom. All assignments are to be passed in there. After papers are corrected, they will be placed in the OUT box.

DISCIPLINE POLICY - Mr. Zaharis

In order to insure that one student's right to succeed in our educational system is not interfered with by another student's disruptive behavior, and that the disruptive student and his/her parents are forewarned and fully aware of the consequences of his/her behavior, the following policy will be used:

CLASS RULES:

- 1. Follow all directions the first time they are given. This includes following proper procedures for using equipment, discs, etc. Use equipment and lab materials with permission only.**
- 2. Be prepared for class - bring notebook, pencils, discs, calculators, etc. and be in your assigned seat before the bell rings. Work the full period. Stay away from the doorway. Walkmen and other audio players are not allowed in the classroom.**
- 3. Students may not bring food, drinks, or candy into the classroom at any time.**
- 4. No off-color language or graphics (spoken or in print - this includes on clothing, notebooks, book covers, etc), name calling, teasing, horseplay, or inappropriate physical contact.**
- 5. Pick-up after yourself. Turn off computers and printers. Return other equipment and supplies when you have finished with them.**
- 6. No speaking out of turn. Raise your hand and wait to be called on unless instructed otherwise.**
- 7. Respect the property of the school and the property of others.**
- 8. Tape players, radios, CD players, etc. are not allowed in the classroom. If they are seen in the classroom, they will be taken away and may be picked-up after school by the parent only.**

CONSEQUENCES:

- 1. Warning and 50 points off participation grade.**
- 2. Detention (7:15-7:40 AM in Room 123) and zero participation grade. When detention is given, the student is expected to provide his own transportation and be there on the next school day unless other arrangements have been made in advance. If the student does not show up, then he/she receives the consequence of the next level (in addition to his/her current consequences) as well as the consequences described in the student handbook.**
- 3. Additional detention (7:00-7:40 AM in Room 123) and zero participation grade.**
- 4. Additional detention (7:00-7:40 AM in Room 123), parents notified & zero.**
- 5. Additional detention (7:00-7:40 AM in Room 123), parents notified, sent to administration & zero participation grade.**

SEVERE CLAUSE: Sent to office immediately! and zero participation grade.