**KISHWAUKEE COLLEGE SYLLABUS**

 SPRING 2014

COMPUTER – AIDED MANUFACTURING(3 Credits)

MT-296-5001

ROOM A-1411 , WEDNESDAY 3:00 to 5:45 pm

JANUARY 15, 2014 to May 14, 2014

Final Exam Date: May 15, 2014 at 3:00 pm , A1411

**INSTRUCTOR:**

 Instructor: Bob Lawrence

 Phone: 825‑2086, ext. 3240 Office Hours: See posting on office door (A1423)

 Email address: Robert.Lawrence@kishwaukeecollege.edu

 Appointment Hours: by appointment only

 Office: A1423

**COURSE DESCRIPTION:**

This course is designed to introduce the student to the computer assisted part programming as it applies to N.C. and C.N.C. Students will be given instruction on various types of programming systems. Instruction will include piece‑part geometry definition, computer input of this geometry and post‑processing this informa­tion into C.N.C. code. This code will then be used to machine that part.

**EXPECTED LEARNER OUTCOMES (OBJECTIVES):**

A. The student will become familiar with (CAM) Computer Aided Manufacturing Software

B. The student will demonstrate a measurable level of skill in geometry definition in CAM systems.

C. Develop a skill in the use of math aids usually found in CAM systems.

D. Use post‑processors effectively to modify programs for learning and generate CNC code.

E. Apply CAD drawing and model geometry to generate production CNC code.

F. Use the Internet to research information pertaining to CAD/CAM Technology

**COURSE CLIENTELE:**

Individuals who will be taking this class will have completed or currently enrolled in CNC­

(MT 294). This class will enhance their knowledge in computer automation. Individuals currently in industry may also benefit from this class since many industries are upgrading their systems to include this type of programming. This class is a part of the CNC certificate and two year degrees.

**CLASS MATERIALS:**

1. CNC MILL and LATHE programming manuals
2. Calculator

C. Flash Drives

D. Assignment sheets (8)

E. Assignment program prints and set­up sheets

**TEXT:**

 No text will be required. However, materials will be issued by instructor that will have all necessary training information and worksheets.

**GRADING SYSTEM:**

Assignment Sheets 8 @ 10 pts. ea 80

Program Assignments 5 @ 30 pts. ea 150

Mid‑Term Exam 50

Final Exam 75

 TOTAL POINTS 355

Grade reports will not be mailed out. Please check KishSOS, My Student Info, under Academic

Profile, Grades, for grade reports

**CONVERSION TO LETTER GRADE:**

355-320.....A

319-284.....B

283-249.....C

248-213.....D

212‑below..F

**COURSE OUTLINE:**

Week l Introduction

Week 2 CAM Demonstration

Week 3 Geometry Definition

Week 4 Using the Math Aids

Week 5 Outline Definition

Week 7 Review for Midterm

Week 8 Midterm (program)

Week 9 Introduction to CAD ­CAM

Week 10 Working with file management

Week 11 CAD and CAM Programming

Week 12 Introduction to Lathe Programming using CAM

Week 13 Lathe Part Geometry, Outlines, and Post processing

Week 14 Open Programming Period

Week 15 Review

Week 16 Final Exam May 15, 2014 at 3:00 pm.A1411

**LAB CLEAN‑UP:**

Each person shall be responsible for replacing the tools they have used to their proper place and additional clean‑up assignments will be posted after the class roster has been made up.

**OPEN LAB TIME:**

Open lab time will be given; the course is designed so that the student who uses his time wisely can complete the exercises with time to spare for independent exercises.

**MAKE-UP POLICY FOR TESTS AND OTHER COURSE REQUIREMENTS**:

Tests, quizzes and lab activities can be made up with instructor approval during the time slot before the scheduled CNC class time. 2:30-3:30 pm on Wednesdays.

Students must contact instructor “before” the scheduled quiz, test or lab to arrange a make-up time.

CLASS WITHDRAWAL

A “W” cannot be given as a final grade. The student is responsible for officially withdrawing from the class according to procedures described in the college catalog. Any student that does not officially withdraw from the class will receive a letter grade. The last date for withdrawal for this course can be found at “My Class Schedule” on KishSOS. Kishwaukee College reserves the right to administratively withdraw at midterm those students who are not actively pursuing course objectives or who are in violation of standards of behavior as outlined in the Student Code of Conduct and Discipline. For a copy of the student conduct policy, contact the Vice President of Student Services Office or refer to the Kishwaukee College catalog.

***INCOMPLETE GRADE***

***All course requirements must be completed by the end date for the course. In the event that extremely difficult circumstances merit granting a student more time to finish course requirements, an “Incomplete” (I) grade may be given.  Taking an Incomplete is possible only at the instructor's discretion.  To receive an Incomplete, a contract between the student and the instructor must be completed and approved regarding the completion of all remaining work within a strictly defined period of time.  If the conditions of the contract are not met, an “I” grade may revert to an “F”.***

CLASS CANCELLATIONS

Class cancellations due to inclement weather will be posted on the College Website: www.kishwaukeecollege.edu. or announced by the local radio stations. Students may also call the College at (815) 825-2086. Class cancellations due to instructor absence will be posted on the classroom door and posted at [www.kishwaukeecollege.edu/class\_cancellations](http://www.kishwaukeecollege.edu/class_cancellations). Room changes will be announced in advance whenever possible and posted on the classroom door.

ACADEMIC DISHONESTY

In order to evaluate student work, faculty must be able to trust that the work is original with a student and not the work of someone else. Cheating, falsifying information, forgery, plagiarism, and other dishonest actions will not be tolerated. Sanctions for academic dishonesty are at the discretion of the instructor and subject to appeal as provided in the Student Code of Conduct and Discipline. A complete explanation of the policy and procedures surrounding academic dishonesty are outlined in the Kishwaukee College Catalog.

COPYRIGHT

As a Kishwaukee College Student, you may have copyrighted materials or software made available to you by the college for course use. Please understand that copyright law may prohibit copying these materials. Violation of copyright laws can lead to prosecution for a criminal offense. You are required to abide by the specific copyright and licensing agreements that apply to each particular piece of software.

GRADUATION REQUIREMENTS FOR TRANSFER DEGREE STUDENTS

All students intending to graduate with an A.A., A.S., A.E.S., or A.F.A. are required to submit a complete Degree Portfolio. The Degree Portfolio is a means for the institution to measure its effectiveness in preparing students for successful completion of a degree at a transferring institution. Save your college-level work throughout your academic career in order to facilitate the portfolio compilation. Also, submit a completed application for graduation from the college the semester that you plan on graduating prior to submitting the complete Degree Portfolio. Guidelines and the specific requirements (along with the rubrics used for assessment) for the Degree Portfolio can be found at [www.kishwaukeecollege.edu/portfolio](http://www.kishwaukeecollege.edu/portfolio).

ASSISTIVE RESOURCES CENTER/DISABILITY SERVICES

Any student with a documented disability or special learning need and wanting to request accommodations, should contact the Coordinator in A1317 or at (815) 825-2086 ext 3960, (815) 825-9106 (TTY), or send an email to awilson@kishwaukeecollege.edu. The student’s disability must impact their ability to participate in the educational environment and be documented by an appropriate professional prior to accommodations being approved.

LEARNING SKILLS CENTER (A1300)

Students must present their Kishwaukee College student ID when using any Learning Skills Center services. For more information on the Learning Skills Center go to <http://www.kishwaukeecollege.edu/go/lsc>. Tutoring is available to all Kishwaukee students free of charge. The Writing Center (Learning Skills Center, A1306) answers your writing-related questions regardless of the class or assignment. Students are expected to bring all material related to the assignment, including textbooks, paper prompts, etc.

Make-up tests, online tests, and placement tests are available through Testing Services, also located in the Learning Skills Center

EMERGENCY PROCEDURES/SAFETY

Yellow and red Emergency Information flipcharts are located in each classroom. These are quick reference sheets with telephone numbers to reach emergency assistance and a brief description of the correct actions to take in the event of a tornado, fire or other emergency on campus.

RELIGIOUS OBSERVANCES

Students faced with schedule conflicts related to a religious observance should make prior arrangements with the instructor a minimum of seven (7) school days in advance of the examination or other activity involved.

STUDENT E-MAIL

Your Kishwaukee College e-mail account will be the only way to receive official notices from the College. If you choose to forward your e-mail to another account, please be advised that all communication from and within the college will use your Kishwaukee student e-mail. When communicating with instructors or employees of the college, you are required to use your Kishwaukee e-mail address.

COMMUNITY RESOURCES

There are numerous community resources that are available to assist students in addressing a variety of personal needs. A listing and description of community resources can be found at <http://www.kishwaukeecollege.edu/go/communityresources>

This workforce solution was funded by a grant awarded by the U.S. Department of Labor’s Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timelines, usefulness, adequacy, continued availability, or ownership. This solution is copyrighted by the institution that created it. Internal use, by an organization and/or personal use by an individual for  non-commercial purposes, is permissible. All other uses require the prior authorization of the copyright holder.