*Principles of DE Machining 3 Syllabus

Part 1: Course Information

Instructor Information

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Course Description

Principles of Machining III is an advanced level contextual course that builds on the introductory skills learned in the entry-level manufacturing and machining courses, stressing the concepts and practices in a production environment supported by advanced machining and engineering facilities. Working with the course instructor and team members in a cooperative learning environment, students will design, produce, and maintain products that are defined by detailed technical specifications. Emphasis is placed on quality control, safety and engineering codes and standards, and production-grade machining systems, building on the learner's past knowledge, current experiences, and future conduct as a career machinist. Upon completion of this course, proficient students will be able to examine blueprints and specification drawings to plan and implement the manufacture of products, machine parts to specifications using both manual and computer-controlled machine tools, and measure, examine, and test completed products to check for defects and conformance to specifications.

Prerequisite

Principles of Manufacturing/DE Machining 1/ DE Machining 2

General Education/High School Pathway Area

- Credentials are aligned with postsecondary and employment opportunities and with the competencies and skills that students acquire through their selected program of study. For a listing of promoted student industry credentials.

Textbook & Course Materials

Required Text

- Machining Fundamentals Ninth Edition John R. Walker Bob Dixon ISBN 978-1-61960-209-0

Recommended Texts & Other Readings or Resources

- Titan Gillroy "Titans of CNC"

Course Requirements

- Internet connection (DSL, LAN, or cable connection desirable)
- Access to /Web site/Other
- *Paper, pencil*

Course Structure

*The class will be delivered by lecture, discussion, activity, lab-based, test, groups, homework, and classwork.

Part 2: Student Learning Outcomes

* Expected student learning outcome for this course. The student learning outcomes for each course can be found in the Tennessee State Standards, course pacing guide, and other resources pertaining to your course. These can be found on TN. Gov under Academic Standards.

A bulleted list is a good way to display these objectives as shown below:

- Advanced measuring
- Advanced machine tool operation
- CNC machining processes

You will meet the objectives listed above through a combination of the following activities in this course:

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Most objectives will be met through 1) Classwork, 2) Homework, 3) Test,) 4 Groups. Students will be provided dates to complete assignments. If a student is absent and it is excused the student will be allowed 3 days to make up any missed work.

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Part 3: Topic Outline/Schedule

Semester 1

Week	Topic	Readings/ Resources	Activities	Due Date
1	Measurement & Mathematical Concepts:	Lecture	Notes	Aug 2021
2	Measurement & Mathematical Concepts:	Lecture	Notes	Aug 2021
3	Measurement & Mathematical Concepts:	Lecture	Notes	Aug 2021
4	Safety	Lecture/Test	Test	Sept 2021
5	Design	Lecture	Notes	Sept 2021
6	Design	Lecture	Notes	Sept 2021
7	Operation & Control	Lecture	Notes	Oct. 2021
8	Operation & Control	Lecture	Notes	Oct. 2021
9	Production & Processing	Lecture	Notes	Nov 2021
10	Production & Processing	Lecture	Notes	Nov 2021
11	Production & Processing	Lecture	Notes	Dec. 2021
12	Production & Processing	Lecture	Notes	Dec 2021
13				
14				
15				
16				
17				
18				

Semester 2

Week	Topic	Readings/ Resources	Activities	Due Date
1	Measurement & Mathematical Concepts:	Lecture	Notes	Jan 2022
2	Measurement & Mathematical Concepts:	Lecture	Notes	Jan 2022
3	Measurement & Mathematical Concepts:	Lecture	Notes	Jan 2022
4	Safety	Lecture/Test	Test	Feb. 2022
5	Design	Lecture	Notes	Feb. 2022
6	Design	Lecture	Notes	Feb. 2022
7	Operation & Control	Lecture	Notes	Mar. 2022
8	Operation & Control	Lecture	Notes	Mar. 2022
9	Production & Processing	Lecture	Notes	April 2022
10	Production & Processing	Lecture	Notes	April 2022
11	Production & Processing	Lecture	Notes	May 2022
12	Production & Processing	Lecture	Notes	May 2022
13				
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Calendar/Schedule: The class schedule maybe subject to change if school is cancelled due to snow or any unforeseen circumstances such as school scheduling which may arise during the school year. If you have any questions pertaining to the schedule you may reach the instructor with the above email for further questions.

This class has a semester exam.

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Part 4: Grading Policy

Graded Course Activities

Assignments for details about each assignment listed below.

1st 9 Weeks	
Points	**Description**
*#100%	*Homework, Classwork, Test, Groups, Absenteeism, Projects will determine students grade.
2nd 9 Weeks	
Points	**Description**
*#100%	*Homework, Classwork, Test, Groups, Absenteeism, Projects will determine students grade.
3rd 9 Weeks	
Points	**Description**
*#100%	*Homework, Classwork, Test, Groups, Absenteeism, Projects will determine students grade.
4th 9 Weeks	
Points	**Description**
*#100%	*Homework, Classwork, Test, Groups, Absenteeism, Projects will determine students grade.

Late Work Policy

***Example:** Be sure to pay close attention to deadlines—there will be no make up assignments or quizzes, or late work accepted without a serious and compelling reason and instructor approval.

Viewing Grades in ASPEN (optional)

Points you receive for graded activities will be posted to the ASPEN Grade Book. Click on the My Grades link on the left navigation to view your points.

*Your instructor will update the online grades each time a grading session has been complete—typically 3 days following the completion of an activity. You will see a visual indication of new grades posted on your ASPEN home page under the link to this course.

Letter Grade Assignment

*Final grades assigned for this course will be based on the percentage of total points earned and are assigned as follows:

100%-Grades are averaged pertaining to assignments turned in to the instructor.

Grading Scale:

A = 90 -100

B = 80 - 89

C = 70– 79

D = 60 – 69

F = 0 – 59

I = Incomplete

X = No Credit

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Part 5: Course Policies

Attend Class

Students are expected to attend all class sessions as listed on the course calendar.

If a student has chronic absenteeism it may affect their grades. If a student has an excused absence, he/she will be allowed to make up their work.

Participate

- Students score participation will be monitored by the work they turn in; grades will be posted to the ASPEN account for all assignments graded.

Build Rapport

If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let your instructor know as early as possible. As you will find, building rapport and effective relationships are key to becoming an effective professional. Make sure that you are proactive in informing your instructor when difficulties arise during the semester so that they can help you find a solution.

Complete Assignments

Assignments must be submitted by the given deadline or special permission must be requested from instructor *before the due date*. Extensions will not be given beyond the next assignment except under extreme circumstances. Late or missing discussion assignments will affect the student's grade.

All discussion assignments must be completed by the assignment due date and time. Late or missing discussion assignments will effect the student's grade.

Incomplete Policy

Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned upon approval by the principal and timeframe will be determined.

Academic Dishonesty Policy

This is an example:

1. Academic dishonesty includes such things as cheating, inventing false information or citations, plagiarism and helping someone else commit an act of academic dishonesty. It usually involves an attempt by a student to show possession of a level of knowledge or skill that he/she does not possess.

2. Course instructors have the initial responsibility for detecting and dealing with academic dishonesty. Instructors who believe that an act of academic dishonesty has occurred are obligated to discuss the

matter with the student(s) involved. Instructors should possess reasonable evidence of academic dishonesty. However, if circumstances prevent consultation with student(s), instructors may take whatever action (subject to student appeal) they deem appropriate.

3. Instructors who are convinced by the evidence that a student is guilty of academic dishonesty shall assign an appropriate academic penalty. If the instructors believe that the academic dishonesty reflects on the student's academic performance or the academic integrity in a course, the student's grade should be adversely affected. Suggested guidelines for appropriate actions are: an oral reprimand in cases where there is reasonable doubt that the student knew his/her action constituted academic dishonesty; a failing grade on the particular paper, project or examination where the act of dishonesty was unpremeditated, or where there were significant mitigating circumstances; a failing grade in the course where the dishonesty was premeditated or planned. The instructors will file incident reports with the Vice Presidents for Academic Affairs and for Student Affairs or their designees. These reports shall include a description of the alleged incident of academic dishonesty, any relevant documentation, and any recommendations for action that he/she deems appropriate.

Student Testing Code of Ethics and Security

It is important for you as a student to know that the following guidelines are to be strictly followed. This year the TNReady EOC test will count at least 15% of your final semester grade. Your work on this test is very important and it deserves your best effort.
I understand that during testing on the days of the assessment, I am responsible for:

- Not having any electronic devices on me or in my purse/backpack/pockets
    - Including but not limited to cell phones, smart phones, smart watches, etc. **during testing or during breaks.**
    - Best practice is for students to leave devices at home or in their lockers on the day of testing.
    - If I am caught with a device during testing or during breaks, my test may be nullified, resulting in a zero as at least 15% of my semester grade, and any school level disciplinary action as deemed appropriate by the administration.
- Trying my best on the test
    - If I do not attempt to test (I give **no answers or randomly answer** questions) my test score may be nullified, resulting in a zero as at least 15% of my semester grade, and any school level disciplinary action as deemed appropriate by the administration.
    - The testing administrators and proctors in the testing environment will determine if no answers or random answering is taking place.
    - I will focus and put forth effort on the test .
- Being honest and not cheating
    - If I am caught cheating (taking pictures of the test, writing down and passing answers, talking to other students, looking on other computers, using software outside the testing platform), my test may be nullified, resulting in a zero as at least 15% of my semester grade, and any school level