# Clackamas Community College

Online Course/Outline Submission System

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**Section #1 General Course Information**

**Department:** Manufacturing

**Submitter**

First Name: Paul
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**Course Prefix and Number:** MFG - 106

**# Credits:** 3

**Contact hours**

Lecture (# of hours): 33
Lec/lab (# of hours):
Lab (# of hours):
Total course hours: 33

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

**Course Title:** Advanced Applied Geometric Dimensioning and Tolerancing for Manufacturing

**Course Description:**

Introduces participants to the application of gauging and inspection using Geometric Dimensioning and Tolerancing (GDT). Students will identify inspection equipment and inspect GDT characteristics while experiencing their manufacturing implications.

**Type of Course:** Career Technical Preparatory

**Is this class challengeable?**

**Yes**

**Can this course be repeated for credit in a degree?**

**No**

**Is general education certification being sought at this time?**

**No**

**Does this course map to any general education outcome(s)?**

**No**

**Is this course part of an AAS or related certificate of completion?**

**Yes**

**Name of degree(s) and/or certificate(s):**Manufacturing Programs

**Are there prerequisites to this course?**

**No**

**Are there corequisites to this course?**

**No**

**Are there any requirements or recommendations for students taken this course?**

**No**

**Are there similar courses existing in other programs or disciplines at CCC?**

**No**

**Will this class use library resources?**

**No**

**Is there any other potential impact on another department?**

**No**

**Does this course belong on the Related Instruction list?**

**No**

**GRADING METHOD:**

A-F or Pass/No Pass

**Audit:Yes**

**When do you plan to offer this course?**

**✓ Spring**

**Is this course equivalent to another?**

If yes, they must have the same description and outcomes.

**No**

**Will this course appear in the college catalog?**

**Yes**

**Will this course appear in the schedule?**

**Yes**

**Student Learning Outcomes:**

Upon successful completion of this course, students should be able to:

1. state GDT principles proficiently,
2. identify correct advanced applications of GDT,
3. apply GDT to a company drawing in a team setting,
4. describe inspection procedures or gaging to verify GDT,
5. perform calculations of applicable tolerances,
6. perform calculations of tolerance stacks within the part,
7. design a gage that verifies part function or assembly requirements.

***This course does not include assessable General Education outcomes.***

**Major Topic Outline:**

1. GDT review.
2. Understanding datum requirements.
3. Unrepeatable datum references.
4. Implied datum sequences.
5. Common datum feature types.
6. Fully defined part features checklist.
7. Proper applications of coordinate tolerances.
8. Identify leaders of an assembly or functional requirement.
9. Identify followers of an assembly or functional requirement.
10. Advanced positional controls.
11. Composite positional controls.
12. Multiple segment positional controls.
13. Composite profile controls.
14. Multiple segment profile controls.

**Does the content of this class relate to job skills in any of the following areas:**

| | |
|---|---|
| 1. Increased energy efficiency | **No** |
| 2. Produce renewable energy | **No** |
| 3. Prevent environmental degradation | **No** |
| 4. Clean up natural environment | **No** |
| 5. Supports green services | **No** |

Percent of course:0%

**First term to be offered:**

**Next available term after approval**
: