

**Technical Department  
Course Syllabus**

**Course Prefix and Number:** MFG 200

**Course Title:** Geometric Dimensioning & Tolerancing---Advanced Blueprint Reading

**Curriculum:** Mechanical Production Technology & Precision Machining

Credit	Hrs/Week	Hrs/Week
Hours <u>3</u>	Lect/Disc <u>2</u>	Lab <u>2</u>

**Prerequisite:** Successful completion of MFG 115 or CAD 101.

**Catalog Description:**

A review of blueprint reading procedures and machining specifications with major emphasis on geometric dimensioning and tolerance. Geometric dimensioning and tolerancing is a means of dimensioning and tolerancing a drawing with respect to the actual function and/or relationship of part features, which can be most economically produced. In general, it is a system of building blocks for good drawing practice, which provides the means of stating necessary dimensional, and tolerance requirements on the drawing not otherwise covered by implication or standard interpretation.

**Course Objectives:**

Upon successful completion of this course, the student will be able to:

1. Interpret machine shop blueprints to include: lines and views of prints, dimensions, tolerances, surface texture, threads, fasteners, gears, machine terms, and machine requirements.
2. Interpret prints using universal language geometric dimensioning and tolerancing to include: Straightness, parallelism, perpendicularity, angularity, roundness, cylindricity, profile of a line, profile of a surface, maximum material condition, least material condition, true positioning, and datum's.

Student Materials:

A. Textbooks

Madsen, David	Geometric Dimensioning & Tolerancing	Good heart/Wilcox.	Latest
Author	Title	Publisher	Edition

**B. Other Required Materials**

1. Notebook, paper, pencils.
2. Calculator

**Course Requirements:**

Written tests	
Laboratory exercises (hands-on experience)	
Projects (to be assigned by the instructor)	
Oral quizzes	
8 chapter tests	80%
Midterm Exam	10%
Final Exam	<u>10%</u>
	100%

The performance of each student will be based upon a system of letter grades derived from all assignments as listed above under course requirements.

- A = 93% - 100%
- B = 85% - 92%
- C = 77% - 84%
- D = 70% - 76%
- E = 69% & Below

**Make-up Work:**

If a student is absent from class, it is the responsibility of the student to contact their instructor during the instructor’s office hours to obtain information about assignments missed. Any test missed due to absence must be made up before the next class meeting.

**Tardiness, Absence, and Leaving Early:**

- A. A student is allowed to be absent a total of three (3) occasions.
- B. Tardiness and leaving early will be counted as 1/3 day for each occurrence.
- C. The student will have 10 points deducted from their total semester grade point average for each instance after the times listed above.
- D. The instructor may drop a student if in the opinion of the instructor the student’s excessive tardiness, absenteeism, or leaving class early will prevent the student from completing the course requirements.

**INTELLECTUAL HONESTY:** It is expected that students in this course will maintain the highest standards of intellectual honesty. Anyone involved in dishonesty – i.e. plagiarism, granting or receiving assistance on exams, etc. – will receive a failing grade in the course. (See college catalog and/or student handbook for further information on academic misconduct.)

**PLEASE NOTE:** All hands-on laboratory exercise projects must be worked on in their entirety to their completion within the MFG machine shop, under the supervision of a courses instructor. Any class project completed at an out-side facility and submitted for a class grade will receive a failing grade.

- Cell phones, blue tooth, iPods or any other similar electronic devices are not permitted within the MFG laboratory during active class times.

<u>Week</u>	<u>Topic/Class Activity</u>
<p><b>1</b>     <b>Introductions</b></p> <ul style="list-style-type: none"> <li>➤ Blueprint Reading pre-test</li> </ul>	<p><b>9</b>     <b>Chapter 5</b></p> <ul style="list-style-type: none"> <li>➤ Tolerances of form and profile</li> <li>➤ Review midterm exam</li> </ul>
<p><b>2</b>     <b>Chapter 1</b></p> <ul style="list-style-type: none"> <li>➤ Conventional Dimensioning and tolerancing</li> <li>➤ Visualization</li> </ul>	<p><b>10</b>    <b>Chapter 5</b></p> <ul style="list-style-type: none"> <li>➤ Workbook exercises</li> <li>➤ Chapter 5 test</li> </ul>

<b>3</b>	<b>Chapter 1</b> ➤ Visualization exercises ➤ Chapter 1 test	<b>11</b>	<b>Chapter 6</b> ➤ Orientation and Run out Tolerances ➤ Workbook exercises
<b>4</b>	<b>Chapter 2</b> ➤ Symbols ➤ Terms ➤ Cad applications	<b>12</b>	<b>Chapter 6</b> ➤ Hands on measuring ➤ Chapter 6 test
<b>5</b>	<b>Chapter 2</b> ➤ Chapter 2 test ➤ Workbook exercises	<b>13</b>	<b>Chapter 7</b> ➤ Location Tolerances ➤ Workbook exercises ➤ Chapter 7 test
<b>6</b>	<b>Chapter 3</b> ➤ Datums ➤ Chapter 3 test	<b>14</b>	<b>Chapter 8</b> ➤ Location Tolerances Part 2 ➤ Workbook exercises
<b>7</b>	<b>Chapter 4</b> ➤ Material Condition Symbols ➤ Symbols ➤ Chapter 4 test	<b>15</b>	<b>Final Exam Review</b> ➤ Review of all home work ➤ Review of all assignments/Labs ➤ Chapter 8 test
<b>8</b>	<b>Midterm Exam</b>	<b>16</b>	<b>Final Exam</b> ➤ Good Luck

Prepared by:

Reviewed by:

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July 2010

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July 2010

Joseph Gladkowski

Date

Department Chairperson

Date