

# Beginning Mathcad

## Course Design

2001-2002

### Course Information

<b>Organization:</b>	Eastern Arizona College
<b>Division:</b>	Mathematics
<b>Course Number:</b>	MAT 110AG
<b>Title:</b>	Beginning Mathcad
<b>Credits:</b>	0.5
<b>Developed by:</b>	William S. Weber
<b>Lecture/Lab Ratio:</b>	0.5 lecture/0 lab
<b>Transfer Status:</b>	Pending evaluation
<b>Extended Registration</b>	
<b>Class:</b>	Yes
<b>CIP Code:</b>	11.0101
<b>Assessment Mode:</b>	Pre/Post Test 10 questions/10 points
<b>Semester Taught:</b>	Upon Request Only
<b>Gen. Ed. Area:</b>	None
<b>Separate Lab:</b>	No
<b>Awareness Course:</b>	No
<b>Intensive Writing</b>	
<b>Course:</b>	No
<b>Prerequisites:</b>	1. MAT 154 or higher with a grade of "C" or higher, or concurrent enrollment in MAT 154, or appropriate EAC Placement Score of 81 or higher or equivalent.
<b>Description:</b>	Students will become familiar with beginning level functions of Mathcad, a calculation software package. Identical to CMP 110AG.
<b>Textbooks:</b>	None.
<b>Supplies:</b>	None

## Competencies and Performance Standards

<b>1. Become familiar with the Mathcad workspace</b>			
<i>Domain--Cognitive</i>	<i>Level--Application</i>	<i>Importance--Important</i>	<i>Difficulty--Low</i>
<p><b>Criteria--</b>Criteria - Performance will be satisfactory when:</p> <ul style="list-style-type: none"> <li>• learner can identify, select, size, move, cut, copy, and paste the various types of worksheet regions.</li> <li>• learner can add and remove space from a worksheet.</li> <li>• learner can find, open, close, and reposition Mathcad toolbars.</li> </ul>	<p><b>Conditions--</b> Competence will be demonstrated:</p> <ul style="list-style-type: none"> <li>• during class activities</li> <li>• on the Pre/Post test</li> <li>• on the class project</li> </ul>	<p><b>Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>Identify, select, size, move, cut, copy, and paste the various types of worksheet regions.</li> <li>Add and remove space from a worksheet.</li> <li>Find, open, close, and reposition Mathcad toolbars.</li> </ol>	
<b>2. Utilize Mathcad as a wordprocessor</b>			
<i>Domain--Cognitive</i>	<i>Level--Application</i>	<i>Importance--Important</i>	<i>Difficulty--Medium</i>
<p><b>Criteria--</b>Criteria - Performance will be satisfactory when:</p> <ul style="list-style-type: none"> <li>• learner can shape, size, format, and align text regions.</li> <li>• learner can use both toolbar, and keyboard options.</li> <li>• learner can insert a math region into a text region.</li> </ul>	<p><b>Conditions--</b> Competence will be demonstrated:</p> <ul style="list-style-type: none"> <li>• during class activities</li> <li>• on the Pre/Post test</li> <li>• on the class project</li> </ul>	<p><b>Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>Shape, size, format, and align text regions.</li> <li>Use both toolbar, and keyboard options.</li> <li>Insert a math region into a text region.</li> </ol>	
<b>3. Utilize Mathcad to do math</b>			
<i>Domain--Cognitive</i>	<i>Level--Application</i>	<i>Importance--Important</i>	<i>Difficulty--High</i>
<p><b>Criteria--</b>Criteria - Performance will be satisfactory when:</p> <ul style="list-style-type: none"> <li>• learner can type a variety of mathematical expressions into a Mathcad worksheet using both toolbars and keyboard options.</li> <li>• learner understands the difference between Mathcad's various equals signs.</li> <li>• learner can use Mathcad's equation editor to modify equations.</li> <li>• learner can use Mathcad's numeric and symbolic engines to solve problems.</li> </ul>	<p><b>Conditions--</b> Competence will be demonstrated:</p> <ul style="list-style-type: none"> <li>• during class activities</li> <li>• on the Pre/Post test</li> <li>• on the class project</li> </ul>	<p><b>Learning Objectives:</b></p> <ol style="list-style-type: none"> <li>Type a variety of mathematical expressions into a Mathcad worksheet using both toolbars and keyboard options.</li> <li>Understand the difference between Mathcad's various equals signs.</li> <li>Use Mathcad's equation editor to modify equations.</li> <li>Use Mathcad's numeric and symbolic engines to solve problems.</li> </ol>	

## Types of Instruction

- Lecture
- Computer Lab

## Grading Policy

**Evaluation Methods:** Each student must specify either Pass/Fail or Traditional grading.

**Grading Scale:**

<b>Grade</b>	<b>Requirement</b>
<b>A</b>	90%-100%
<b>B</b>	80%-89%
<b>C</b>	70%-79%
<b>D</b>	60%-69%
<b>F</b>	Below 60%
<b>P/F</b>	P above 70%, F below 70%

# Learning Plans

## Learning Plan 1-- Beginning Mathcad

### Overview:

**Become familiar with the Mathcad workspace**

**Utilize Mathcad as a wordprocessor**

**Utilize Mathcad to do math**

### Learning Activities:

- \_\_\_\_\_1. listen to a lecture and take notes
- \_\_\_\_\_2. participate in a discussion
- \_\_\_\_\_3. participate in class activities
- \_\_\_\_\_4. demonstrate a procedure for others
- \_\_\_\_\_5. work on assigned project individually

### Performance

### Assessment Activities:

- \_\_\_\_\_1. Mathcad project
- \_\_\_\_\_2. Pre/Post test