

CADD II

Teacher: Scott Danielson

September 2020
CADD II

Content	Skills	Learning Targets	Standards	Assessment	Resources & Technology
<p>CEQ: WHAT AND HOW IS COMPUTER AIDED DRAFTING AN INFLUENCE IN INDUSTRY?</p> <p>UEQ: <i>•What is this course about and what is expected of students?</i> A. Course Introduction</p> <p>A1. Class Outline A2. Grading procedure </p> <p>UEQ: <i>•What careers are available with drafting training?</i> B. Careers</p>	<p>A. Course Introduction</p> <p>A1. Identify how computer-aided drafting (CAD) impacts the manufacturing industry A2. List required projects and grading method.</p> <p>B. Careers</p> <p>B1. Identify possible career opportunities in drafting today.</p>	<p>A. Course Introduction</p> <p>A1. I can identify 5 ways CAD impacts manufacturing. A2. I can keep a portfolio of all materials required for this course</p> <p>B. Careers</p> <p>B1. I can list 8 occupations that might interest me related to drafting careers</p>		<p>A. Course Introduction</p> <p>A1. Discussion with students A2. Portfolio</p> <p>B. Careers</p> <p>B1. List career activity</p>	<p>A. Course Introduction</p> <p>B. Careers</p> <p>B1. World Wide Web B1. Engineering Drawing and Design - Delmar publishing -pages 2-13</p>

<p>UEQ: •<i>What is needed to know to get started with drafting?</i></p> <p>C. Preparation to Drafting review</p> <p>C1. Tools and Materials C2. Sketching C3. Measurement C4. Scales C5. Alphabet of lines</p> <p>UEQ: •<i>How is the computer used in 2D drafting?</i></p> <p>D. Advanced 2Dimensional AutoCAD</p> <p>D1.Dimensioning D2.Tolerancing D3.Instances D4.Parts library D5.Customizing</p>	<p>C. Preparation to Drafting review</p> <p>C1. Identify all tools and materials needed to complete drawings. C2. Demonstrate the ability to sketch lines, arcs and circles. C3. Create sketches and detailed drawings utilizing inch and metric measurement. C4.Measure using mechanical, civil and architectural scales. C5. Identify and apply the "Alphabet of lines" according to ASME (American Society of Mechanical Engineers) standards.</p> <p>D. Advanced 2Dimensional AutoCAD</p>	<p>C.Preparation to Drafting review</p> <p>C1. I can identify all tools and materials needed to complete drawings. C2. I can demonstrate the ability to sketch lines, arcs and circles. C3. I can create sketches and detailed drawings utilizing inch and metric measurement. C4.I can measure using mechanical, civil and architectural scales. C5.I can identify and apply the "Alphabet of lines" according to ASME (American Society of Mechanical Engineers) standards.</p> <p>D. Advanced 2Dimensional AutoCAD</p>	<p>C. Preparation to Drafting review</p> <p>C1. Quiz on drafting tools and materials C2-C4. Teacher observation of student project C5. Quiz on "Alphabet of lines" C1-C5. Teacher led class discussion</p>	<p>C. Preparation to Drafting review</p> <p>C1-C5. Engineering Drawing and Design - Delmar publishing -pages 22-41</p> <p>D. Advanced 2Dimensional AutoCAD</p> <p>D1-D6. Engineering Drawing and Design - Delmar publishing - pages 97-131</p>
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<p>menus</p> <p>D6. Layering</p> 	<p>D1. Recognize standardized dimensioning symbols</p> <p>D2. Recognize standardized tolerancing symbols</p> <p>D3. Create instances to be placed in your own drawing as well as in shared drawings.</p> <p>D4. Create your own symbols library, then share with the rest of the class.</p> <p>D5. Create menus customized to own preferences.</p> <p>D6. Place necessary objects on various layers.</p>	<p>D1. I can properly dimension a drawing using standardized symbols.</p> <p>D2. I can draw in tolerances where needed.</p> <p>D3. I can create instances and place in multiple drawing.</p> <p>D4. I can create different symbol libraries , such as bolts and mechanical parts.</p> <p>D5. I can customize menu items to my own liking.</p> <p>D6. I can work with layers to help cleanup my drawings.</p>		<p>D.</p> <p>Advanced 2Dimensional AutoCAD</p> <p>D1-6</p> <p>CSA-Modeling lab</p> <p>assignments</p> <p>handout</p> <p>problems</p> <p>4.2,5.5,5.7</p>	
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October 2019
CADD II

Content	Skills	Learning Targets	Assessment	Resources & Technology
<p>UEQ: •How is the computer used in 3D drafting?</p> <p>E. Advanced 3dimensional CAD</p> <p>E1.Constraining E2.Assembly features E3.Shelling E4.Revolving profiles E5.Sweeping profiles E6. Parametric dimensioning</p>  <p>UEQ: •What is tolerancing in drafting?</p> <p>F. Tolerances F1. Plus and Minus Dimensions F2. Limit Dimensions</p>	<p>E. Advanced 3dimensional CAD</p> <p>E1 Demonstrate the proper use of the constraint tools. E2. Create assembly drawings using center axes,mating, offset, and align constraining features. E3. Create a shelled object. E4-E5. Draw objects using revolve and sweep functions. E4-E5. Create threaded fasteners to include helical sweeps. E6. Draw objects using parametric dimensioning</p> <p>F. Tolerances F1. Read and create plus and minus</p>	<p>E. Advanced 3dimensional CAD</p> <p>E1 I can demonstrate the proper use of the constraint tools. E2. I can create assembly drawings using center axes,mating, offset, and align constraining features. E3. I can create a shelled object. E4-E5. I can draw objects using revolve and sweep functions. E4-E5. I can create threaded fasteners to include helical sweeps. E6. I can draw objects using parametric dimensioning</p> <p>F. Tolerances F1. I can read and create plus and minus</p>	<p>E. Advanced 3dimensional CAD</p> <p>E1- E6. CSA- Solid modeling lab assignments Autodesk Inventor handout</p> <p>F. Tolerances F1-F2 CSA-Modeling assignments</p>	<p>E. Advanced 3dimensional CAD</p> <p>E1-E5. Engineering Drawing and Design - Delmar publishing - pages677-681</p> <p>F. Tolerances F1-F2. Technical Drawing- Prentice Hall pages329-360</p>

<p>UEQ: •What are the basic concepts to drafting? G. Drafting Concepts</p> <p>G1. Multiview Projection G2. Sectional views G3. Assembly drawings</p> 	<p>dimensions. F2. Describe the nominal size, tolerance limit and allowance of two mating parts. F1.-F2. Dimension two mating parts using limit dimensions, unilateral tolerances, and bilateral tolerances</p> <p>G. Drafting Concepts G1. Draw any three views using proper conventions, placement and alignment. G1. Transfer height ,width or depth dimensions between views. G1. Identify and draw visible and hidden lines in all six standard views. G2. Identify 7 different types of sections</p>	<p>dimensions. F2. I can describe and illustrate the nominal size, tolerance limit and allowance of two mating parts. F1.-F2.I can dimension two mating parts using limit dimensions, unilateral tolerances, and bilateral tolerances</p> <p>G. Drafting Concepts G1. I can draw any three views using proper conventions, placement and alignment. G1. I can transfer height ,width or depth dimensions between views. G1. I can identify and draw visible and hidden lines in all six standard views. G2. II can list 7 different types of</p>	<p>G. Drafting Concepts G1. CSA-Modeling assignments Multiview fig.6.57 , 6..61</p> <p>G2. CSA-Modeling assignments Sectioning 204-12,14 G2. CFA- Modeling assignments Assembly - Drill vise</p> <p>G1.-G3. All dimensioned drawing files were printed in landscape format and submitted for evaluation.</p>	<p>G. Drafting Concepts G1. Technical Drawing- Prentice Hall pages 149-198</p> <p> Dimensioning notes</p> <p>Machinery's Handbook 24th edition - Industrial Press Inc.</p>
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	<p>G2. Understand the meaning of sections and cutting plane lines. G2. Draw a sectional view, given a two view drawing. G3. Generate a complete assembly drawing, given multiple individual part drawings. G1-G3. Create detailed drawings utilizing computer-aided drafting software based on sketches generated. G3. Interpret reference data from available sources.</p>	<p>sections G2. I can illustrate in drawing the meaning of sections and cutting plane lines. G2. I can draw a sectional view, given a two view drawing. G3. I can draw a complete assembly drawing , given multiple individual part drawings. G1-G3. I can draw detailed drawings utilizing computer-aided drafting software based on sketches generated. G3.Ican interpret reference data from available sources.</p>		
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November 2019
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Content	Skills	Learning Targets	Assessment	Resources & Technology
<p>UEQ: •What are the basic concepts to drafting? G. Drafting Concepts (cont.)</p>	<p>G. Drafting Concepts</p>	<p>G. Drafting Concepts</p>	<p>G. Drafting Concepts</p>	<p>G. Drafting Concepts</p>

<p>G4. Threading and fasteners G5. Gears and Cams G6. Pattern development G7. Solid modeling</p> 	<p>G4-G7. Demonstrate the ability to spatially visualize 2D and 3D objects and sketch the appropriate views to pictorially communicate the object drawn. G4.-G7. Create detailed drawings utilizing computer-aided drafting software based on sketches generated. G4 Define and label the parts of a screw thread. G4. Identify various screw thread forms. G4. Draw detailed, schematic, and simplified threads in section and elevation. G5. Define the characteristics of a spur gear, worm gear, and bevel gear. G5. Define the principal spur gear terms. G5. Describe the relationship between a cam profile and a displacement diagram. G5. Draw a spur gear. G5. Draw a cam profile, given a displacement</p>	<p>G4-G7. I can demonstrate the ability to spatially visualize 2D and 3D objects and sketch the appropriate views to pictorially communicate the object drawn. G4.-G7. I can draw detailed drawings utilizing computer-aided drafting software based on sketches generated. G4 I can define and label the parts of a screw thread. G4.I can identify 5 various screw thread forms. G4. I can draw detailed, schematic, and simplified threads in section and elevation. G5. I can define the characteristics of a spur gear, worm gear, and bevel gear. G5. I can list 8 principal spur gear terms. G5. I can describe the relationship between a cam profile and a displacement diagram.</p>	<p>G4. CSA-Modeling assignments Handouts -problem 2.2 &2.8 G4. CSA-Modeling assignments Handouts - problems 4.1-4.5  Cams  Gear formulas G5.CSA-Modeling assignments</p> <p>G6.CSA- Modeling assignments</p> <p>G4.-G7. All dimensioned drawing files were printed in landscape format and submitted for evaluation.</p>	<p>G4. Technical Drawing-Prentice Hall pages 361-397  Dimensioning notes</p> <p>Threading handouts including tables</p> <p>G5. Technical Drawing-Prentice Hall pages 599-620 Gears and cams handout</p> <p>Machinery's Handbook 24th edition - Industrial Press Inc.</p> <p>G6. Technical Drawing-Prentice Hall pages 572-597</p>
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	<p>profile drawing. G6. Construct the development of prisms, pyramids, cylinders and cones. G6. Graphically solve for the intersection of solids.</p> <p>G4.-G5. Identify the purpose for these mechanical objects. G4.-G5. Interpret reference data from available sources. G6.Develop full-scale patterns of given sketch. G7 .Develop modeling skills with Autodesk Inventor. All assigned models required the creation of a drawing file for dimensioning object profile.</p>	<p>G5. I can draw a spur gear. G5.I can draw a cam profile, given a displacement profile drawing. G6. I can construct the development of prisms, pyramids, cylinders and cones. G6. I can graphically solve for the intersection of solids.</p> <p>G4.-G5. I can identify the purpose for these mechanical objects. G4.-G5. I can interpret reference data from available sources. G6. I can draw full-scale patterns of given sketch. G7 .I can develop modeling skills with Autodesk Inventor. All assigned models required the creation of a drawing file for dimensioning object profile.</p>		
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