

K to 12 TECHNOLOGY AND LIVELIHOOD EDUCATION

**INDUSTRIAL ARTS - MECHANICAL DRAFTING
(Exploratory)**

Content Standard	Performance Standard	Learning Competencies	Projects/Activities	Assessment	Duration
LESSON 1: PREPARING DRAFTING MATERIALS AND TOOLS/DRAWING INSTRUMENTS					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> Types and uses of drafting materials and tools/drawing instruments Description of drafting materials tools and drawing instruments 	<ol style="list-style-type: none"> Tools/Drawing instruments and drafting materials are identified per job requirements. Materials and drawing tools are classified according to their uses. 	<p>LO1. Identify materials and tools/ drawing instruments applicable to a specific job.</p>	<ol style="list-style-type: none"> Compiling sample pictures of the different tools and drawing materials and classifying them. Demonstrating the proper manipulation of drawing instruments. Multimedia presentation. 	<ul style="list-style-type: none"> Performance test Written test Checklist 	6 hours
<ul style="list-style-type: none"> Different requisition forms and procedures Proper handling of tools and materials Procedures in receiving tools and materials 	<ol style="list-style-type: none"> Materials and tools are received and inspected based on the specified quantity as requisition. Tools and materials are checked for damages and manufacturing defects Instruments are handled with appropriate safety devices. 	<p>LO2. Request, receive, inspect and store drafting materials and tools.</p>	<ol style="list-style-type: none"> Preparing list of drafting materials and tools per job requirement Filling-up different forms such as requisition slip, borrower's slip, etc. Labeling tools and materials and storing/safekeeping them properly. Testing the functionality of delivered tools and materials. 	<ul style="list-style-type: none"> Performance test Written test Checklist 	3 hours

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LESSON 2: PERFORMING BASIC MENSURATION AND CALCULATION					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> Different measuring instruments and their application 	<ol style="list-style-type: none"> Measuring instruments are selected and used according to the level of accuracy required. Measurements taken are accurate to the finest gradation of the selected measuring instrument. Measuring techniques used are correct and appropriate to the instrument used. 	LO1. Select and use measuring instruments.	<ol style="list-style-type: none"> Identifying the different measuring instruments Observing proper use of measuring instruments Multimedia presentation 	<ul style="list-style-type: none"> Self-paced learning activities Guided demonstration (performance based) 	6 hours
<ul style="list-style-type: none"> Cleaning and storing procedure for measuring instruments 	<ol style="list-style-type: none"> Measuring instruments are cleaned in accordance with established standards. Measuring instruments are stored in accordance with established standards. 	LO2. Clean and store measuring instruments.	<ol style="list-style-type: none"> Storing/safe keeping measuring tools properly Multimedia presentation 	<ul style="list-style-type: none"> Performance test 	2 hours
<ul style="list-style-type: none"> Conversion of fraction to decimal or decimal to fraction 	<ol style="list-style-type: none"> Conversion results of fraction to decimal are accurate up to 2 decimal places. Conversion results of decimal to fraction are accurate to the nearest standard 	LO3. Convert fraction to decimal and vice versa	<ol style="list-style-type: none"> Solving problems and exercises correctly in: <ol style="list-style-type: none"> converting fraction to decimal or decimal to fraction 	<ul style="list-style-type: none"> Written test 	2 hours

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	measurement				
<ul style="list-style-type: none"> • Conversion of units of linear measurement. • Sample problems in conversion 	<ol style="list-style-type: none"> 3. English and metric measurements identified. 4. Conversion of English to metric system or metric to English system is performed according to standard procedure. 	LO4. Convert English to metric measurement system and vice versa	<ol style="list-style-type: none"> 1. Solving problems and exercises correctly. 2. Converting units of linear measurement. 3. Converting decimal to fraction 	<ul style="list-style-type: none"> • Written test 	2 hours

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LESSON 3: INTERPRETING WORKING PLANS AND SKETCHES					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> • Theories and principles of orthographic and pictorial drawing • Orthographic drawing and pictorial drawing • Assembly and detailed drawing 	<ol style="list-style-type: none"> 1. Orthographic and pictorial drawings are interpreted according to drawing standards. 2. Assembly and detailed drawings are interpreted according to drawing standards. 	<p>LO1. Identify assembly and detailed drawing.</p>	<ol style="list-style-type: none"> 1. Practicing line sketching 2. Sketching sample detail and assembly drawings 3. Observing drawing standards 4. Sketching orthographic views and pictorial views 5. Preparing a working plan 6. Identifying proper line applications 	<ul style="list-style-type: none"> • Written test • Performance test 	<p>13 hours</p>

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LESSON 4: APPLYING SAFETY PRACTICES					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> Hazards to be avoided in the workplace Occupational safety standards and enterprise safety policies. 	<ol style="list-style-type: none"> Hazards are identified correctly in accordance with OHS procedures. Safety signs and symbols are identified and adhered to in accordance with workplace safety procedures. 	<p>LO1. Identify hazardous area/s in the workplace</p>	<ol style="list-style-type: none"> Observing safety work habits in the work place Multimedia presentation 	<ul style="list-style-type: none"> Written test Performance test 	4 hours
<ul style="list-style-type: none"> Personal protective equipment (PPE) for different drafting operations 	<ol style="list-style-type: none"> Personal protective clothing/equipment (PPE) identified per job requirements. Proper wearing of PPE is properly observed in accordance with workplace safety policies. 	<p>LO2. Use personal protective clothing and devices</p>	<ol style="list-style-type: none"> Familiarizing oneself with the different types and uses of personal protective equipment (PPE) Multimedia presentation 	<ul style="list-style-type: none"> Written test Actual demonstration 	2 hours
					40 hours