



Republic of the Philippines
DEPARTMENT OF EDUCATION



K to 12 BASIC EDUCATION CURRICULUM

TECHNOLOGY AND LIVELIHOOD EDUCATION

CURRICULUM GUIDE

**Exploratory Course on
MECHANICAL DRAFTING**

K to 12 TECHNOLOGY AND LIVELIHOOD EDUCATION

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

Curriculum Guide for the Exploratory Course

For you to get a complete picture of the complete TLE exploratory course on Mechanical Drafting, you are hereby provided with the Curriculum Guide on Mechanical Drafting.

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"> • Drafting Materials and Tools, its uses/function • Proper manipulation of drafting materials tools and drawing instruments 	<ol style="list-style-type: none"> 1. Drafting materials, Tools and Drawing instruments are identified as per job requirements. 2. Materials and drawing tools are classified according to their uses. 	<p>LO1. Identify drafting materials and tools/drawing instruments applicable to a specific job.</p>	<ol style="list-style-type: none"> 1. Compiling sample pictures of the different tools and drawing materials and classifying them. 2. Demonstrating the proper manipulation of drawing instruments. 	<ul style="list-style-type: none"> • Performance test • Written test 	<p>6 hours</p>
<ul style="list-style-type: none"> • Procedures in receiving and storing tools and materials • Different requisition forms and procedures 	<ol style="list-style-type: none"> 1. Materials and tools are received and inspected based on the specified quantity as requisition. 2. Tools and materials are checked for damages and manufacturing defects 	<p>LO2. Request, receive, inspect and store drafting materials and tools.</p>	<ol style="list-style-type: none"> 1. Preparing list of drafting materials and tools per job requirement 2. Filling-up different forms such as requisition slip, borrower's slip, etc. 3. Labeling tools and materials and storing/safekeeping them properly. 4. Testing the functionality of delivered tools and materials. 	<ul style="list-style-type: none"> • Performance test • Written test 	<p>3 hours</p>

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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 Importance of Measuring Tools 	<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 	<ul style="list-style-type: none"> Self-paced learning activities Guided demonstration (performance based) 	6 hours
<ul style="list-style-type: none"> Clean and store measuring tools 	<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 	<ul style="list-style-type: none"> Performance test 	2 hours
<ul style="list-style-type: none"> Conversion of fraction to decimal and decimal to fraction Rounding off decimal 	<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 measurement 	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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<ul style="list-style-type: none"> • Trade Mathematics and Measurement • Two system of measurements • Conversion of units of linear measurement. 	<ol style="list-style-type: none"> 1. English and metric measurements identified. 2. 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
LESSON 3: INTERPRETING WORKING PLANS AND SKETCHES					
<ul style="list-style-type: none"> • Alphabet of lines • Line Sketching • Theories and principles of orthographic projections • Orthographic Projections • Pictorial drawing • More on Oblique Drawing • Scaling • Rules in Dimensioning • Preparation of Working Plans • 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. 	LO1. Identify assembly and detailed drawing.	<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 	13 hours

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LESSON 4: APPLYING SAFETY PRACTICES					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> Occupational safety standards and enterprise safety policies. Practicing Proper Procedures in using drafting tools, materials and instrument Keeping Workplace Clean and organized following 5S Accident Prevention Signs and Symbols Hazards in the workplace Types of workplace hazards and examples 	<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. Identifying hazardous area</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 	<p>4 hours</p>
<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 	<p>2 hours</p>
					<p>40 hours</p>

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“By three methods we may learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest.”

- Confucius