

# A: Fundamentals Unit

Content Area: **Generic Content Area**  
Course(s): **Generic Course, Level 1 Engineering Drawing**  
Time Period: **Generic Time Period**  
Length: **3 weeks**  
Status: **Published**

## Unit Introduction

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In this Unit, students will learn/reinforce the necessary foundational knowledge/skills that is required as pre-requisite to study Advanced Architecture/Engineering Drawing....students will complete various basic drawings that may include Orthographic Views, Dimensioning, Pictorials, Geometric Construction, CAD, Mechanical Drawing...

## Standards

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9.3.12.AC.1	Use vocabulary, symbols and formulas common to architecture and construction.
9.3.12.AC.6	Read, interpret and use technical drawings, documents and specifications to plan a project.
9.3.12.AC-CST.2	Describe the approval procedures required for successful completion of a construction project.
9.3.12.AC-DES.6	Apply the techniques and skills of modern drafting, design, engineering and construction to projects.
9.3.12.AC-DES.8	Apply standards, applications and restrictions pertaining to the selection and use of construction materials, components and assemblies in the project design.
12.9.3.ST.6	Demonstrate technical skills needed in a chosen STEM field.
12.9.3.ST-ET.3	Apply processes and concepts for the use of technological tools in STEM.
12.9.3.ST-ET.5	Apply the knowledge learned in STEM to solve problems.
12.9.3.ST-SM.2	Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.

## Essential Questions

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1. Why should we reinforce/practice our basic knowledge/skills?
2. Why is it important to be able to talk about your work?
3. What effects of CAD on the way ideas are communicated the classroom and/or the work place?

## Content / Skills

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*Textbooks:*

**Basic Technical Drawing** - Spencer, Dygdon, Novak, 8th edition, 2004

**Engineering Drawing & Design** - D.A. Madsen, D.P. Madsen, 6th edition, 2017

**Architectural Drafting & Design** – A. Jefferis, D.A. Madsen, D.P. Madsen, 7th edition, 2017

*Skills: See Below*

• Layout	.
• Plotting Drawings to Scale	.
• math operations	.
• measurement	.
• mechanical drawing	.
• safety	.
• sketching	.
• teamwork	.
• using CAD	.
• visualization	.