

# CNC/CAD Project

Content Area: **21st Century Life & Careers**  
Course(s): **Generic Course, Level 1 Engineering Drawing**  
Time Period: **Marking Period 2**  
Length: **3 Weeks**  
Status: **Published**

## Unit Introduction

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## Standards

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| 9.3.12.AC.6               | Read, interpret and use technical drawings, documents and specifications to plan a project.  |
| 9.3.12.AC-CST.9           | Safely use and maintain appropriate tools, machinery, equipment and resources to accomplish construction project goals.  |
| ARCH.9-12.9.4.12.B.(1).1  | Demonstrate communication skills and strategies that are used to work effectively with potential clients and others.   |
| ARCH.9-12.9.4.12.B.(1).9  | Develop technical drawings drafted by hand and computer-generated plans to design structures.  |
| ARCH.9-12.9.4.12.B.(1).10 | Demonstrate understanding of principles, conventions, standards, applications, and restrictions pertaining to the manufacture and use of construction materials, components, and assemblies, and incorporate this understanding into project design. |
| ARCH.9-12.9.4.12.B.13     | Apply active listening skills to obtain and clarify information.   |
| ARCH.9-12.9.4.12.B.61     | Demonstrate skills related to seeking and applying for employment in a desired job.  |
| ARCH.9-12.9.4.12.B.74     | Read, interpret, and use technical drawings, documents, and specifications to plan a project.  |
| STEM.9-12.9.4.12.O.(1).9  | Employ concepts and processes for the application of technology to engineering.  |
| STEM.9-12.9.4.12.O.2      | Demonstrate mathematics knowledge and skills required to pursue the full range of postsecondary education and career opportunities.  |
| STEM.9-12.9.4.12.O.30     | Employ computer operations applications to manage tasks.   |
| STEM.9-12.9.4.12.O.48     | Employ teamwork skills to achieve collective goals and use team members' talents effectively.  |
| STEM.9-12.9.4.12.O.51     | Employ mentoring skills to assist others.  |
| STEM.9-12.9.4.12.O.58     | Maintain a career portfolio to document knowledge, skills, and experience in a career field.   |

## Essential Questions

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1. How is computer numeric control technology be used...?
2. What impacts have CNC devices had in the manufacturing world?

## **Content / Skills**

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*Students will produce a CAD plan for a project and produce a cut out on the CNC Plasma cutter.*

*Textbooks:*

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

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

*Skills: See Below*

- Layout
- math operations
- measurement
- Plotting Drawings to Scale
- safety
- teamwork
- using CAD