

Hello, I'm Alton Rice, Drafting and Design Instructor at Northwest-Shoals Community College. I would like to welcome you into DDT 117 Manufacturing Processes.

Throughout history, people have changed the size, shape, and look of materials to better fit their needs. In so doing, people have had to manufacture products. Manufacturing is the process by which materials are converted into products in the most efficient manner. Some of the processes used in manufacturing have been available for years, others are relatively new. Many of the traditional processes still in use have undergone change over the years.

More than the average person might realize, drafters and designers are creative pillars of modern society. While a painter focuses his creative energy towards expressing himself on a canvas, a manufacturing designer supplies her creative efforts towards the creation of things, processes, and technology. If you think about it, we rely on the vision and genius of our society's drafters and designers every single time we turn on the television, drive a car, check our email, do laundry, or take showers. Basically, the technical drawings produced by drafters and designers have a part in almost everything we do.

Engineering designers have the task of improving manufacturing processes to be better, faster, and cheaper. The success of those designers has a direct correlation to the advancement of technology and the widespread availability of innovation, making this facet of design essential. A professional in this field analyzes productivity and seeks ways to maximize production while minimizing cost. Drafting and design careers in manufacturing present challenging and rewarding opportunities that never fail to engage intellectual curiosity and push the edge of innovative thinking.

Increasingly, the options and methods for studying drafting and design have expanded from manual drafting, the use of pencil and paper, to computer aided design drafting or CADD and now to include distance learning. The development of this online course, the first in the drafting and design curriculum at Northwest-Shoals will hopefully enable more students to obtain a quality education without having to relocate to a physical campus. In the future, other online courses in the Drafting and Design program will open the doors to many prospective design engineers, as well as professional drafters and designers hoping to advance their careers with distance education.

This course, DDT 117 - Manufacturing Processes, provides an introductory survey of the manufacturing processes and materials most commonly used by today's industries. Areas of instruction include the principles and methodology of material selection, the interrelationships between the properties of those materials, machine tools and the tooling used in a variety of processes in manufacturing. Emphasis is directed to solids and will include material characteristics, castings, forging, die assemblies, manufacturing terminology and function.

This is an overview course in nature, meaning that there will not be a large amount of detail on any specific topic. Instead, the principles behind the processes will be discussed with the intent of giving you, the student, the opportunity to have a general working knowledge of a broad range of manufacturing processes.

As a student in the Northwest-Shoals Drafting and Design curriculum, you will develop an appreciation for modern manufacturing processes, their capabilities and limitations, and the materials to which they apply. I look forward to assisting you in enhancing your education.