# Unit 1: The 3D Printing Revolution

Syllabus

OVERVIEW & PURPOSE

This lesson briefly introduces 3D printing. Students should obtain a working knowledge of what 3D printing is, including the design process, additive manufacturing, and how 3D printing differs from traditional manufacturing. Students should learn a brief history of 3D printing, the role 3D printing plays today, and its incredible potential for the future. Finally, students will learn about the role 3D printing plays in the logistics industry and their need to become well acquainted with this technology to succeed in the 21st century.
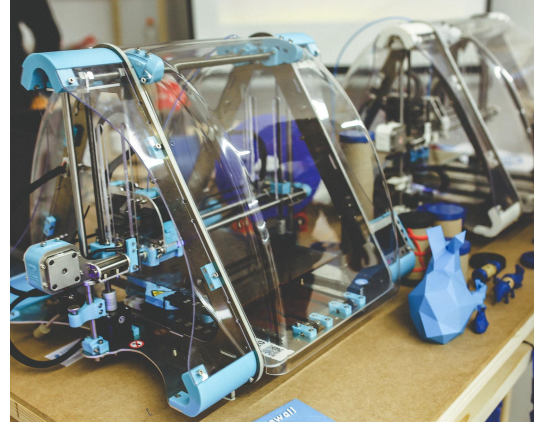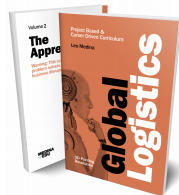

COURSE LEARNING OBJECTIVES

1. Understand the basic concepts of 3D printing and additive manufacturing.
2. Understand the potential that 3D printing has and the need to become well acquainted with it to succeed in the 21st-century industry of logistics.

MATERIALS NEEDED

-   Computer
-   Internet Access
-   Text Book

DESCRIPTION OF ACTIVITIES

For each module please expect the following activities:

-   Read through the lesson/session contents (including articles) and watch videos
-   Stimulating Discussion
-   Take a short quiz on the material presented
-   Complete a written assignment with open-ended responses
-   Local Store Scenario Project
-   Group Project Presentation

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FOUR WEEK LESSON OUTLINE

Week 1: Theory & Stimulating Discussion

- 1.1 3D Printing
- 1.2 The History of 3D Printing
- 1.3 3D Printing Today and Its Role in Logistics
- 1.4 3D Printing Potential and the Need to Become Acquainted with it

Week 2: Case Study Research, Data Mining & Research Essay

- Research and investigate questions 1 & 2
- Write Research essay
- Case Study 1: What is 3D Printing ?
- Case Study 2: Compare 3D printing and traditional manufacturing
- Case Study 3: What are some possible impacts of transitioning to 3D printing?

Week 3: Collaborative Project Idea, Creation & Development and Problem Solving

- Project 1: Local Store Scenario

Week 4: Project Presentations

- Group presentations before classmates