

Curriculum Design - Advanced Manufacturing Module

Essential Question 1: What is advanced manufacturing? What are the latest trends in the field?

Key Words: 3D printing, artificial intelligence, robotics, automation, augmented reality

Sample Assignments / Activities:

- Students conduct online research on the field to answer the question: “What is interesting to me and why?”
- As a class, watch short video on latest technology; for instance, dog robots and discuss
- Debate an ethical viewpoint - using robots as helpers

Essential Question 2: How can we make a connection between the field of advanced manufacturing and the local community?

Key Words: job description, hiring requirements, hiring trends, on-the-job training, hands on training, starting wage, entry- / mid- / senior level positions

Sample Assignments / Activities:

- Field trip to iRobot
- Research US trends on the website of the US Bureau of Labor and Statistics
- Develop a household budget with a starting wage in the field

Essential Question 3: Can I see myself working in the field of advanced manufacturing?

Key Words: soft vs hard skills, resume, job search, training, certification

Sample Assignments / Activities:

- Visit from NECC career counselor
- Visit from NECC advanced manufacturing program coordinator
- Resume workshop using action verbs

Essential Question:

Key Words:

Sample Assignments / Activities:



Northern Essex Community College: Bridge to College and Careers Program

	Academic Goals	Professional Goals	Language Goals
Performative Goals			
Cognitive Goals			
Metacognitive Goals			
Affective Goals			



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	Academic Goals	Professional Goals	Language Goals
Performative Goals	<p>SWBAT identify resources and services at a community college such as the library, the registrar, financial aid, and enrollment.</p> <p>SWBAT identify key words in scholarly articles by looking at abstracts and comparing key word lists to body of article (especially the discussion and results sections) by using Google Scholar/EBSCO Host.</p>	<p>SWBAT identify key words and phrases in job advertisements by looking for patterns and circling recurring content words (ex. read blueprints).</p> <p>Resources: Glassdoor.com, Indeed.com</p>	<p>SWBAT summarize the main points of part of a scholarly journal by using (and being able to define) key words.</p> <p>SWBAT select and use key words from job ads by writing a cover letter and a resume, and by participating in a mock job interview.</p>
Cognitive Goals	<p>SWBAT assess whether 3-D printing houses would be beneficial to a low-income community or a population affected by a natural disaster.</p>	<p>SWBAT compare the advantages and disadvantages of 3-D printing houses from the perspective of a construction company.</p>	<p>SWBAT effectively use contrast words by comparing advantages and disadvantages of 3-D printing low-income housing.</p>
Metacognitive Goals	<p>Students will be in a position to select the most effective reading strategies (skimming, scanning, skipping, etc.) to get information from a long scholarly article.</p>	<p>Students will be in a position to select the most effective reading strategies (for example, scanning) to get information from professional documents like emails, memos, proposals, and reports.</p>	<p>Students will be in a position to reflect on their awareness of reading strategies and understanding vocabulary from context.</p>
Affective Goals	<p>SWBAT confidently present information gathered by doing research and giving a short talk in front of their peers.</p>	<p>SWBAT present themselves with pride by giving a 60 second elevator pitch.</p>	<p>SWBAT feel good about highlighting relevant experience from their professional and academic lives by giving a 60 second elevator pitch.</p>