

# MET-2941: ADDITIVE MANUFACTURING INTERNSHIP

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## Cuyahoga Community College

**Viewing: MET-2941 : Additive Manufacturing Internship**

**Board of Trustees:**

2014-06-19

**Academic Term:**

Fall 2019

**Subject Code**

MET - Mech Eng/Manuf Ind Eng Tech

**Course Number:**

2941

**Title:**

Additive Manufacturing Internship

**Catalog Description:**

Explore career interest in additive manufacturing careers while applying knowledge and skills learned in the classroom in a work environment. Internship experience will provide practical, hands-on job training in additive manufacturing providing students with an opportunity to gain experience and build professional networks. May be repeated for up to 4 credits total. Requirement for each credit hour is 180 hours of approved work.

**Credit Hour(s):**

1-4

**Other Hour(s):**

180-720

**Other Hour Details:**

12 hours per week of internship/field experience per credit (total of 180 hours per credit hour)

## Requisites

**Prerequisite and Corequisite**

MET 1250 Introduction to Additive Manufacturing, and MET 1230 Drawing & AutoCAD, and MET 2601 3D Solid Modeling, or concurrent enrollment; and MET 2151 3D Digital Design & Printing, or concurrent enrollment; or departmental approval.

## Outcomes

**Course Outcome(s):**

Practice the craft of Additive Manufacturing.

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

**Objective(s):**

1. Maintain and submit a descriptive narrative report of the internship experience.
2. Discuss the role of the professional in the field of manufacturing

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**Course Outcome(s):**

Recognize the associated responsibilities of a position in an Additive Manufacturing environment.

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

**Objective(s):**

1. Recognize the importance of punctuality.
2. Adhere to proper dress code in the manufacturing facility.

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**Course Outcome(s):**

Demonstrate AM skills obtained in the field by writing a technical report.

**Essential Learning Outcome Mapping:**

Written Communication: Demonstrate effective written communication for an intended audience that follows genre/disciplinary conventions that reflect clarity, organization, and editing skills.

**Objective(s):**

1. Describe skill(s) obtained during internship other than what was obtained at school.

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**Methods of Evaluation:**

1. Proper documentation of internship work time.
2. Written narrative report summarizing the internship experience, which will include daily entries relating to new terminology encountered, new experiences, and activities/processes observed, roles, and responsibilities of the position.
3. All forms completed and submitted as required.
4. Research on relevant topics
5. Oral presentation
6. Assignments

**Course Content Outline:**

1. Job preparation
  - a. Locate site of internship.
  - b. Demonstrate preparedness to engage in productive participation in manufacturing operations.
  - c. Dress appropriately
  - d. Acknowledge the use of job-specific terminology
2. Performance
  - a. Behave in a professional manner
  - b. Introduce yourself in a professional manner.
  - c. Demonstrate professionalism during your work experience.
  - d. Maintain time-keeping work records.

**Resources**

Gibson, Rosen, Stucker. *Additive Manufacturing Technologies, Rapid Prototyping to Direct Digital Manufacturing*. 1st. Springer Science + Business Media, LLC, 2010.

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Anderson, L. and Bolt, S. *Professionalism: Skills for Workplace Success*. 4th ed. Pearson, 2016.

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