

**Course Description****AMT0045 | Tools, Materials, and Process 2 | 1.33 credits**

In this course, the student will learn the principles of corrosion and how to control it are studied and applied. This course provides experience in detecting, identifying, removal, and treatment of the various types of corrosion found on ferrous and non-ferrous metals. In addition, the student will learn about various forms of truss-types and how beams, struts, and bars resist deformation by applied loads.

**Course Competencies:**

**Competency 1:** The student will learn the basic types of corrosion recognition by:

1. Identifying the cause of corrosion
2. Identifying and examining the types of corrosion
3. Comparing and contrasting the effects of corrosion
4. Analyzing dissimilar material corrosion

**Competency 2:** The student will learn the treatment and preventative methods by:

1. Demonstrating corrosion prevention methods:
  - a. Chemical cleaning
  - b. Anodizing
  - c. Chromic acid inhibitor
  - d. Sodium dichromate solution
  - e. Prime and paint touchup
2. Identifying material handling in manufacturing:
  - a. Use of personal protective equipment
  - b. Review of relevant specifications and application procedures
  - c. Application of corrosion preventative compounds
  - d. Post application inspection
3. Identifying and adhering to proper waste disposal procedures in accordance with the applicable governing agencies

**Learning Outcomes:**

- Communicate effectively using listening, speaking, reading, and writing skills
- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information