



**Course Overview:** Planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities.

# Maintenance, Installation, and Repair

**Career Goal (O\*NET Code): Industrial Engineering Technician** ( 17-3026 ), Maintenance Repairer (49-9042), Electrical and Electronic Repairer including Commercial and Industrial Equipment (49-2094), Electrician (47-2111), Medical Equipment Technician (49-9062).

**Student Name:**\_\_\_\_\_

**Grade:** \_\_\_\_\_

**School:** \_\_\_\_\_

| SUGGESTED COURSEWORK |                  |   |   | EXTENDED LEARNING EXPERIENCES   |   |   |   |
|----------------------|------------------|---|---|---|---|---|---|
| Middle School        | 8th              | HS Courses:   |   |   | <b>Curricular Experiences:</b><br><a href="#">SkillsUSA</a><br><a href="#">Technology Student Association</a><br><br><b>Career Learning Experiences:</b><br>Apprenticeship<br>Career Preparation<br>Internship<br>Job Shadowing                         | <b>Extracurricular Experiences:</b><br>Language Immersion Programs<br>School Newspaper<br>Science Olympiad<br>Student Government<br>UIL Academic Competitions<br>Yearbook<br><br><b>Service Learning Experiences:</b><br>Boy Scouts of America<br>Campus Service Organizations<br>Community Service Volunteer<br>Girl Scouts of the USA<br>Habitat for Humanity<br>Peer Mentoring / Peer Tutoring |   |
|                      | 9th              | Core Courses:   | English I<br>Algebra I<br>Biology   | World Geography<br>Physical Education<br>Languages other than English I |   |   | Professional Communications                 |
|                      |                  | Career-Related Electives:   | Principles of Manufacturing   |   |   |   |   |
|                      | 10th             | Core Courses:   | English II<br>Geometry<br>Chemistry                                       | World History<br>Languages other than English II                        |   |   |   |
|                      |                  | Career-Related Electives:   | Introduction to Metal Working   |   |   |   |   |
|                      | 11th             | Core Courses:   | English III<br>Algebra II<br>Physics                                      | United States History   |   |   |   |
|                      |                  | Career-Related Electives:   | Advanced Welding or Advanced Technology and Manufacturing Academy         |   |   |   |   |
|                      | 12th             | Core Courses:   | English IV<br>Precalculus<br>Engineering design and Problem Solving       | Government/Economics<br>Fine Arts                                       |   |   |   |
|                      |                  | Career-Related Electives:   | Advanced Precision Metal Manufacturing or Academy or Career Preparation I |   |   |   |   |
|                      |                  |   |   |   |   |   | COLLEGE CREDIT OPPORTUNITIES -- High School |
|                      |                  |   |   |   | Students should take Advanced Placement (AP), International Baccalaureate (IB), dual credit, Advanced Technical Credit (ATC), or locally articulated courses (Tech Prep), if possible. List those courses that count for college credit on your campus. |   |   |
| On-the-Job Training  |                  | Maintenance Assistant      Shop Helper      Drafting Assistant  |   |   |   |   |   |
|                      |                  | NOTE: These experiences may be started and/or completed as part of the high school experience.  |   |   |   |   |   |
|                      | Certificates     | NCCER Core Safety/Welder/Ironworker      AWS Entry Level Welder Drafting      OSHA CareerSafe   |   |   | Career Options:<br>Assembler      Machine Operator  |   |   |
|                      |                  |   |   |   | NOTE: Students may earn all or part of these certificates as part of the high school experience.  |   |   |
| Associate Degrees    |                  | <a href="#">Industrial Equipment Maintenance and Repairers</a> <a href="#">Industrial Production Welder</a> <a href="#">Mechanical Engineering-Related Technologies</a> |   |   | Career Options:<br>Pattern and Mold Maker      Sheet Metal Worker<br>Production Associate   |   |   |
|                      | Bachelor Degrees | Technology Management      Design Technology      Industrial Technology   |   |   | Career Options:<br>Calibration Technician      Electromechanical Technician   |   |   |
|                      | Graduate Degrees | Engineering Technology      Design Technology      Industrial Safety  |   |   | Career Options:<br>Plant Manager      Industrial Engineer   |   |   |

Students may select other elective courses for personal enrichment purposes.

This plan of study serves as a guide, along with other career planning materials, for pursuing a career path and is based on the most recent information as of 2009. All plans meet high school graduation requirements as well as college entrance requirements.