

## Array Maintenance Syllabus

**Time:** 8 hours

**Maximum Class Size:** 12

**Prerequisites:** None

**Course Description:** The Array Maintenance class is part of the Facility Systems & Maintenance Worker Program. In this course, the participant will learn to identify the common maintenance tasks for arrays and module inspection, shading control, debris removal, and array mount inspection. A portion of the day will be spent with hands-on inspection and cleaning of modules and arrays. The participant will also become familiar with the proper completion of a Maintenance Task Report and Monthly Inspection Report. These skills will allow the participant to acquire the skills necessary to become a valued member of a facility maintenance team.

### Goals/Objectives/Student Learning Outcomes:

- Identify all required PPE for scope of work
- Identify and describe maintenance tasks for arrays
- Describe the function of maintenance plans and maintenance logs
- Describe the steps involved in troubleshooting PV systems
- Visually inspect a photovoltaics (P.V.) system for problems
- Recognize potential problems in a P.V. system
- Fill out a Monthly Inspection Report
- Perform routine scheduled maintenance on a P.V. system
- Fill out a Maintenance Task Report
- Test a P.V. module and array output

### Standards

OSHA 29 CFR:

- Subpart C: 1926.20, 21, 23, 25 General Safety & Health Provisions
- Subpart D: 1926.50-51 Occupational Health & Environmental Control
- Subpart E: 1926.95 & 1926.100 Personal Protective Equipment
- Subpart H: 1926.254 Materials Handling
- Subpart K: 1926.416, 1926.417, 1926.404 (b)(4) Electrical

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### Classroom Rules and Procedures

- All classes begin at 6:30 am and end at 3:00 pm
- Upon entering classroom, all participants must sign in and be seated by 6:30 am
- Class will consist of a combination of lecture, video, demonstration, coached group exercises, individual exercises and assessment.
- Students are required to report to class ready to work and maintain the provided PPE

### Textbooks/Readings/Materials

- Photovoltaics Systems text book (Chapter 14)
- Unirac IOM Handout
- Monthly Inspection Report
- Maintenance Task Report
- Maintenance Plan sheet
- *Green Jobs* Handout

### Tools/Equipment/Other Materials

- Module Cleaning Kit
- Torque Gauge/wrenches
- Voltmeters
- IGM 3 x 3 x 20 PDF
- Tool Box (Array Maintenance)

### Personal Protective Equipment

- 12 pairs of gloves
- 12 pairs of Safety Glasses
- 20 pairs of Ear plugs
- 12 hard hats

### Course Requirements

In order to receive credit for the course, participants must:

- Be present for full eight hours
- Participate in all classroom exercises

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- Pass a written exam
- Pass a hands-on exam

### Course Policies

- Participants must be on-time and ready to work.
- Participants must return from breaks on-time.
- Participants must participate in each exercise and assignment
- Participants who are on “light duty” are not allowed to take this course due to the physically demanding requirements.

### Assessment and Grading

Participants will be assessed on the following:

- All written exams must be passed with a score of 80% or above.
- All hands-on exercises are graded on performance and participation. They are pass/fail and must be passed with a score of 80% or above.

### Safety

Failure to maintain and use PPE may result in dismissal from the course.