



**DAIHEN INC.**  
**ADVANCED WELDING & ROBOTIC SYSTEMS**  
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## FD Weld Basic Course Syllabus

- A. 1. Course Title: FD Weld Basics Course  
2. Course Number: Weld Basics  
3. Class hours: One Day Class 9:00 AM to 12:00 PM, 1 PM to 4:30 PM
- B. 1. Prerequisites: FD Basic Programming
- C. The *FD Weld Basics Course* is designed for Daihen customers who have completed the FD Basic Programming class and wish to develop a deeper understanding of robotic arc welding application.
- D. 1. Textbooks: Arc Welding Guide
- E. 1. Other Required Materials: None
- F. 1. Course Objectives  
The student shall be able to perform the following after completion of the course:
- Basic programming overview.
  - Initial set-up of welding system (robot side installation).
  - Arc Characteristic design and assignment.
  - Basic robotic arc welding fundamentals.
  - Pulse vs. Short arc welding (definitions & applications).
  - Multi-type weld system set-up (aluminum, steel and, etc.).
  - Robotic arc application troubleshooting (cycle time, arc generation faults, trouble shooting of consumable equipment, and common weld system problems).
- G. Course outline  
Class introduction, Basic programming overview, weld file creation, initial setup of weld system. Basic robotic arc welding fundamentals, weld process descriptions, lab. Overview of standardized programming, Importance of torch and workpiece angles, weld application trouble shooting, lab, and final exam.
- H. Other Requirements and Notes
1. Smoking is only permitted outside the building within the designated smoking area. Please use proper receptacles for ashes and cigarette butts. Smoking is not permitted indoors.
  2. Class participation and completion of all exercises is recommended.
  3. All safety rules must be followed at all times.

- a. Eye protection must be worn at all times while working in or walking through the lab or manufacturing areas.
    - i. Safety glasses are available at all entrances to the lab or manufacturing area and should be returned after use.
  - b. Leather, closed toe shoes must be worn at all times. Sandals or open toed shoes will not be permitted.
4. Lunch break will be 1 hour each day. Normal lunch hours will be from 12:00 PM – 1:00 PM. Students are responsible for lunch.
  5. Students are expected to be on time. Students who miss more than ½ day of instruction may be removed from the class at the discretion of DAIHEN, Inc. Management and asked to return to their normal workplace.
  6. Please arrive no earlier than 15 minutes before class
  7. Proper attire is required at all times. Please do not wear clothing bearing slogans or sayings that could be offensive to others.