

**APPENDIX VII  
SENIOR INSTRUMENT MECHANIC  
TRAINING PLAN**

**1. PURPOSE:**

The Senior Instrument Mechanic (SIM) Training Program is designed to provide specialized training to selected instrument mechanics (IMs) enabling them to perform advanced electronics, computer, and specialized system maintenance tasks safely and efficiently. The SIM performs the role of lead technician in system troubleshooting and complex instrumentation maintenance activities.

The SIM program is administered by the Local Joint Training Subcommittee (LJTS) at each station. The LJTS will communicate appropriate issues with the Joint Training Subcommittee (JTS) as required by the Joint Training Plan (JTP) and this appendix.

**2. DURATION:**

\*The SIM program is conducted by each station and consists of approximately 500 hours divided into modules of directed self-study, classroom, laboratory, and on-the- job-training (OJT), as outlined in **(Attachment A)**.

**3. SELECTION CRITERIA:**

The LJTS selects participants for the SIM program from qualified journeyman IM's. Selection of eligible journeymen to enter the SIM Program will be made per the General Agreement.

**4. STUDENT EXPECTATIONS:**

A minimum of 80% on all exams will be required for satisfactory completion of the SIM program.

**4.1 General:**

Unsatisfactory progress of a student in the SIM program will be documented through a series of notifications termed "notices" (**VERBAL**), "advisories" and "bulletins" (**WRITTEN**).**(see Attachment B page 1 and 2 respectively)**.

Should a student's progress become less than satisfactory, the instructor will formally "notify" the student of the deficiency. An "advisory" will be issued by the LJTS documenting the necessary actions for continuance in the program. If these actions are not incorporated within the designated time period, the student will be removed from the training program.

\*FPG will provide a training handbook with detailed curriculum and TRN-17 will contain TVAN curriculum.

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instrument mechanics removed from the training program will be returned to their original plant position.

instrument mechanics who have been removed from the SIM program are eligible for reentry after a period of one (1) year.

**4.2 Corrective Measures:**

4.2.1 If a student scores less than the required 80% on an examination, the instructor will issue a verbal “notice”. The LJTS will issue a written “advisory”, stating that the failed exam must be re-taken within approximately 40 hours and passed for continuation in the training program. A score of less than 80% on any re-examination will result in the LJTS issuing a “bulletin”, recommending to the JTS that the student be removed from the program.

4.2.2 The LJTS will issue an “advisory” for a student whose professional attitude and/or behavior are not satisfactory. The “advisory” will outline actions necessary for continuation in the training program. Should a student’s attitude and /or behavior continue at a less than satisfactory level, the LJTS will issue a “bulletin” recommending to the JTS that the student be removed from the program. The JTS may choose to consider any mitigating circumstances.

**5. TASK QUALIFICATION:**

The SIM program is designed to provide the essential knowledge items necessary for a student to obtain computer related tasks at each station. Being a SIM is a required prerequisite for numerous tasks. Mock-ups, labs, and/or OJT will be incorporated into the program to provide hands on training.

**6. CLASSROOM:**

SIM program classroom training will be conducted during normal work hours.

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**7. SELF-STUDY:**

TVA will provide training time during normal work hours whenever possible. However, some assignments may require completion outside working hours. Self-study may be assigned for a variety of reasons including those which are a fixed part of the program, workbook exercises to complement classroom materials, or supporting materials to supplement task qualification. Self-study assignments to help a student overcome an evaluated weakness may be assigned by the LJTS and will vary from student to student.

Completion of self-study modules will be evaluated by the instructor. Satisfactory completion of self-study assignments must be accomplished before advancement. TVA supplied Computer Based Training (CBT) modules will also be utilized to support classroom training, OJT, and station systems training. CBT modules may be stand alone or used with existing training materials as determined the LJTS.

CBT modules may incorporate hands-on exercises and/or examinations, to ensure student comprehension. Time will be given and computers furnished as necessary to complete the assigned CBT modules.

**8. WORK EXPERIENCE:**

Students gain experience by spending time in activities required for the SIM classification. Students will be assigned various activities involving mock-ups and actual station equipment under the direction of the LJTS.

**9. COMPREHENSIVE EXAMINATIONS:**

Comprehensive exams are basic to SIM program. Comprehensive written exams are required to measure understanding of various objectives. Training objectives will be provided to the student prior to instruction.

Examinations are conducted at the end of each module of training and other times when necessary. A score of 80 percent or greater on all written exams is required.

**10. PROGRESS REVIEWS:**

The LJTS will review individual training records periodically, and provide individual training records to the JTS as specified in the JTP.

**11. PROMOTION:**

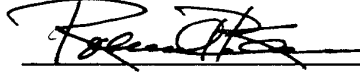
Upon satisfactory completion of all SIM training requirements and serving for a period of not less than (1) year in the journeyman classification, the trainee is eligible for promotion to Senior Instrument Mechanic.

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**12. APPROVALS:**

This appendix to the Joint Training Plan for Senior Instrument Mechanic training is accepted and approved as indicated below by signatures of the members of the Central Committee. This appendix may be reevaluated annually and at the request of either party.

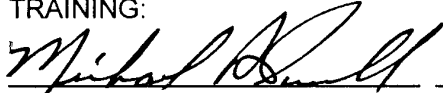
LABOR:


  
\_\_\_\_\_  
International Brotherhood of Electrical Workers      Date 5/23/02

MANAGEMENT:

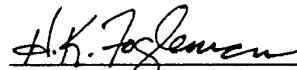
  
\_\_\_\_\_  
Executive Vice President      Date 5/24/02  
Fossil Power Group

TRAINING:

  
\_\_\_\_\_  
Sr. Manager      Date 5/24/02  
COO Technical Training

  
\_\_\_\_\_  
Executive Vice President      Date 6/11/02  
TVAN

HUMAN RESOURCES:

  
\_\_\_\_\_  
Sr. Manager      Date 6/11/02  
Operations Support

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**(Attachment A page 1 of 1)**

**SENIOR INSTRUMENT MECHANIC TRAINING PROGRAM COURSE OUTLINE**

**Module 1-Electronics Review - (»80 hours)**

This module will contain subject matter such as; DC and AC electronics and semiconductor devices. These courses are designed as a refresher for basic electronic principles and knowledge which will be required for satisfactory completion of the SIM training program.

**Module 2-Digital/Microprocessors/Programmable Logic Controllers (PLC's)- (»120 hours)**

This module will contain subject matter such as; Digital components, microprocessors, digital control and recording devices, microcomputers, and PLC's. Hands on exercises and troubleshooting techniques which support the subject matter will be incorporated. Information provided in this module will ensure students have a basic understanding of microprocessor based control and recording equipment.

**Module 3-Personal Computers Configuration / Troubleshooting - (»40 hours)**

This module will contain subject matter such as; Monitors, printers, PC cases and power supplies, basic mother board layouts, processors, memory, memory storage devices, drives, various expansion components (example: video, sound, network, communication cards), input/output interface connections. The basic BIOS of PCs will be included. Module 3 will incorporate hands on exercises and troubleshooting techniques which support the subject matter. Information provided in this module will ensure students have a basic understanding of PC's and their BIOS functions to support the interface of digital control and recording to personal computers.

**Module 4-Computer Operating Systems - (»80 hours)**

This module will contain subject matter covering the use and installation of various operating systems to support process control equipment. Included will be, DOS, Microsoft Windows Based Software, UNIX, and/or LINUX, as well as others. Hands on exercises for installing and troubleshooting the operating systems will be incorporated. Module 4 will provide students with a basic understanding of the installation and operation of the operating system used to interface instrumentation to various control and monitoring software programs.

**Module 5-Networks, Data Communication, and Distributed Control Systems - (»180hours)**

This module will contain subject matter such as; distributed control systems, data communications, network structures, network protocols, network hardware (example: hubs, routers, bridges, modems), and network cabling (example: fiber, thin net, thick net, twisted pairs, RJ45, serial, and parallel cables). Exercises for building and troubleshooting control systems networks will be incorporated. Module 5 will provide students the skills necessary to build and troubleshoot networks and network components associated with distributed control and monitoring systems.

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(Attachment B Page 1 of 2)**

**TRAINING PROGRAM “ADVISORY”**

**Advisory Number:** (Year-Plant Abbreviation-Number) Example: 02-BFN-001

**Date:**

**Advisory of the Local Joint Subcommittee for :** (Name of Plant)

**Advisory Description:**

**The Local Joint Training Subcommittee affirms the above by their signatures:**

\_\_\_\_\_  
Plant Management Representative                      Date

\_\_\_\_\_  
Plant IBEW Representative                      Date

\_\_\_\_\_  
\*COO Technical Training Representative                      Date

\_\_\_\_\_  
Site HR Representative                      Date

\*A training program manager is the appointed COO Technical Training Representative for the LJTS at a nuclear site.

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(Attachment B Page 2 of 2)

**TRAINING PROGRAM “BULLETIN”**

**Bulletin Number: (Year-Plant Abbreviation-Number) Example: 02-BFN-001**

**Bulletin of the Local Joint Subcommittee for: (Name of Plant)**

**Bulletin Action:**

**The Local Joint Training Subcommittee affirms the above by their signatures:**

\_\_\_\_\_  
Plant Management Representative                      Date

\_\_\_\_\_  
Plant IBEW Representative                      Date

\_\_\_\_\_  
\*COO Technical Training Representative                      Date

\_\_\_\_\_  
Site HR Representative                      Date

**The Joint Training Subcommittee approves as witnessed by the signatures below:**

\_\_\_\_\_  
Manager, COO Technical Training                      Date

\_\_\_\_\_  
IBEW Representative                      Date

\_\_\_\_\_  
Executive Vice President                      Date

\_\_\_\_\_  
Sr. Mgr. HR Operations                      Date

\*A training program manager is the appointed COO Technical Training Representative for the LJTS at a nuclear site.