

Siemens Technik Akademie Berlin Siemens Mechatronic Systems Certification Program Level 2 Instructor Certification Event Sample Agenda Instructor Edition

Day One

- 9:00 Welcome
- **Administrative Announcements**
- 9:30 Comments from Host
- 9:45 Ice Breaker
- **Instructor Certification Participants**
 - **Faculty and Staff**
- 10:45 Break
- 11:00 Facility Tour
- 12:30 Lunch
- 13:30 IT Resources for Participants/Computer Policy and Security
- 13:45 Siemens Mechatronic Systems Certification Program (SMSCP) Overview
- **Levels**
 - **Job Profiles**
 - **Relationship of Course Objectives to Job Profiles**
 - **Role of Instructor Certification in SMSCP**
 - **Role of Course Support Materials**
 - **Feedback/Summary**
- 15:00 Break
- 15:15 System Approach: Overview

Day Two

- 9:00 Application of System Approach in Mechatronic Systems Education: Elements of the Course
- **System Approach Module Breakdown Diagram**
 - **Mechatronic Systems: Common Components**
 - **System Function Descriptions: Energy, Mass and Information Flow (In Groups: TIA Room and Bottle Filling Line)**
 - **Exercise (Based on TIA System, Modules 1-5)**
 - **Presentations**
 - **Discussion**
- 10:30 Break
- 10:45 Mechatronic Systems Teaching
- **Totally Integrated Automation (TIA) System/Gear Sorting Line/Bottle Filling Line**
 - **Modules and Subsystems**
 - **System Approach Presentation**
 - **Traditional Approach vs. System Approach, or: “We already do that!”**
- 12:15 Lunch
- 13:00 Group Exercise Presentations and Discussion
- 14:00 Break
- 14:15 Overview of Simulated Systems
- **Diagnostic Kit**
- 16:00 Group Work Diagnostic Kit

Day Three

09:00 System Approach Teaching Examples

09:00-10:00 Course X

- **Presentation of Course Support Materials**
- **Exam Questions**

11:00-12:00 Course Y

- **Presentation of Course Support Materials**
- **Exam Questions**

10:00-11:00 Course Z

- **Presentation of Course Support Materials**
- **Exam Questions**

12:00 Lunch

13:00 Teaching Example Discussion

- **Connection to SMSCP Concept**
- **Connection to Job Profile**
- **Exam Questions**

15:00 Sample Lesson Structure Organization Overview

16:00 VCAT Training and Electronic Resource Management Seminar

- **Followed by VCAT-based Feedback**

Day Four

- 9:00 Factory Tour
- 12:00 Lunch
- 13:00 Overview of Simulated Systems 2
 - **MechaSIM**
 - **SIMIT**
 - **PSpice**
 - **LabView**
- 15:00 Preparing Sample Lesson Structure

Day Five

- 8:30 Troubleshooting Strategies
- 9:30 Finish Sample Lesson Preparation
- 10:30 System Approach Sample Lesson Unit Presentations
- 13:00 Lunch
- 14:00 SMSCP Implementation Discussion and Program Feedback
- 16:00 Wrap up of the first week

Day Six

9:00 Introduction: Elements of Level 2, Course 1

- **Content Overview**
- **Course Objectives and Syllabus**
- **Overview of Examination Content**
- **Job Profile Reconciliation**

Lesson Development

- **Create Sample Lesson**

10:30 Break

10:45 Share and Present Sample Lessons

12:15 Lunch

13:15 Create/Share/Present Test Questions

14:15 Troubleshooting on a Real System

14:45 Break

15:00 Finish Troubleshooting + Feedback

Day Seven

09:00 Content Overview/Sample Lesson Discussion: Level 2 Course 2

10:30 Break

10:45 Content Overview/Sample Lesson Discussion: Level 2 Course 2 (continued)

12:15 Lunch

13:15 Content Overview/Sample Lesson Discussion: Level 2 Course 2 (continued)

- **Content Overview**
- **Course Objectives and Syllabus**
- **Overview of Examination Content**
- **Job Profile Reconciliation**

Lesson Development

- **Create Sample Lesson**

14:45 Break

15:00 Test Question Discussion

16:00 Wrap-up/Questions

Day Eight

9:00 Introduction: Elements of Level 2, Course 3

- **Content Overview**
- **Course Objectives and Syllabus**
- **Overview of Examination Content**
- **Job Profile Reconciliation**

Lesson Development

- **Create Sample Lesson**

10:30 Break

10:45 Share and Present Sample Lessons

12:15 Lunch

13:15 Create/Share/Present Test Questions

14:15 Troubleshooting on a Real System

14:45 Break

15:00 Finish Troubleshooting + Feedback

Day Nine

9:00 Introduction: Elements of Level 2, Course 4

- **Content Overview**
- **Course Objectives and Syllabus**
- **Overview of Examination Content**
- **Job Profile Reconciliation**

Lesson Development

- **Create Sample Lesson**

10:30 Break

10:45 Share and Present Sample Lessons

12:15 Lunch

13:15 Create/Share/Present Test Questions

14:15 Break

14:30 Finish Troubleshooting + Feedback

Day Ten

- 9:00 VCAT (Training + Review + Next steps with e-learning applications)
- 10:30 Break
- 10:45 VCAT continued
- 12:15 Lunch
- 13:15 Group Work: Prepare Sample Lesson Units
- 14:45 Break
- 15:00 Group Work: Prepare Sample Lesson Units

Day Eleven

- 9:00 Level 2 Sample Lesson Unit Preparation (continued)
- 12:15 Lunch
- 13:15 Present Sample Lesson Unit: Group 1
- 14:00 Break
- 14:15 Present Sample Lesson Unit: Group 2
- 15:00 Present Sample Lesson Unit: Group 3
- 15:45 Break
- 16:00 Present Sample Lesson Unit: Group 4
- 16:45 Feedback Discussion at end of 1st set of presentations

Day Twelve

9:00 Introduction: Elements of Level 2, Course 5

- **Content Overview**
- **Course Objectives and Syllabus**
- **Overview of Examination Content**
- **Job Profile Reconciliation**

Lesson Development

- **Create Sample Lesson**

10:30 Break

10:45 Share and Present Sample Lessons

12:15 Lunch

13:15 Create/Share/Present Test Questions

14:15 Troubleshooting on a Real System

14:45 Break

15:00 Finish Troubleshooting + Feedback

Day Thirteen

- 9:00 Introduction: Elements of Level 2, Course 6
- **Content Overview**
 - **Course Objectives and Syllabus**
 - **Overview of Examination Content**
 - **Job Profile Reconciliation**
- 10:30 Break
- 10:45 Continued introduction of Project Model idea
- 12:15 Lunch
- 13:15 Group Discussion of Project Model and how it can be transferred/applied to the teachers' local situation
- 14:30 Break
- 14:45 Group work: Development of strategies for implementation of Project Model—Assignment: Create a 10-minute “sales” presentation for industry outreach

Day Fourteen

9:00 Introduction: Elements of Level 2, Course 6

10:00 Factory Simulation Example 1

10:45 Break

11:00 Factory Simulation Example 2

12:00 Lunch

13:00 Factory Simulation Example 3

15:00 Break

15:15 Factory Simulation Example 4

Day Fifteen

- 9:00 Group 1 Presentation—Project Model
- 9:30 Group 2 Presentation—Project Model
- 10:00 Group 3 Presentation—Project Model
- 10:30 Break
- 10:45 Project Model Work Discussion/Feedback
- 11:30 Group 1 Presentation—Process Management Model
- 12:00 Group 2 Presentation—Process Management Model
- 12:30 Group 3 Presentation—Process Management Model
- 13:00 Lunch
- 14:00 Process Management Model Discussion/Feedback
- 14:45 Break
- 15:00 Feedback and wrap-up for 3rd and final week