

## Sample Agenda

### Siemens Mechatronic Systems Certification Program Instructor Certification Level 1

#### Day 1 Monday

#### 9:00 Welcome

*Administrative Announcements*

*Comments from Martin Stöckmann, Head of Siemens Professional Education Berlin*

*Ice Breaker*

#### 11:00 Tour of Siemens Professional Education Berlin

*Apprenticeship Program*

*Werner-von-Siemens Werkberufsschule*

*Siemens Technik Akademie Berlin*

#### 12:00 Lunch

#### 13:00 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*

*Implementation Possibilities/Examples*

#### 15:00 VCAT Training and Electronic Resource Management Seminar

## Day 2 Tuesday

### 09:00 Training Philosophies and Methods

*Teaching and learning close to the System*

*Teamwork*

*Moderation, Presentation and Documentation Skills*

*Feedback Rules*

### 10:30 System Approach

*What is a System? <sup>1</sup>*

*How to describe a System*

*What should an Operator know about "his" System?*

*Traditional Approach vs. System Approach*

*System, Subsystems, Components*

*Energy, (Mass) and Information Flows*

*Exercise: System Description (Block Diagrams) <sup>2</sup>*

### 12:00 Lunch

### 15:30 System Approach

*Instructor Presentation of the System Descriptions*

*Questions and Answers Session*

*Feedback from Instructors and Trainers*

1 Card Questionnaire and Clustering

2 Moderation Material and Pinboards

## Day 3 Wednesday

### 09:00 System Approach

*Preparation of the Introduction of the Mechatronic Training System, which is used/will be launched in the Instructors Colleges*

*Presentation / Q&A*

*Feedback<sup>3</sup>*

### 12:00 Lunch

### 13:00 System Approach

*Introduction of the Amatrol Mechatronic Training System*

*Discussion / Q&A*

### 14:00 Troubleshooting Strategies

*Example: Troubleshooting on a Mechanical System*

*Structure of an effective Troubleshooting Lesson based on the Amatrol Mechatronic Training System*

*Group Exercise Troubleshooting<sup>4</sup>*

*Presentation of Fault Finding Strategy<sup>4</sup>*

*Documentation*

*Q&A and Feedback*

**3** Video filmed Presentations

**4** Video Filmed

## Day 4 Thursday

### 09:00 Factory Tour

*Preparation: Questionnaire to Maintenance of a system*

*Mechatronic Systems in the Production Line*

*Collecting aspects and facts of the production and maintenance structure*

*Discussion about the Factory Tour, establishing the system idea<sup>5</sup>*

*Feedback*

### 12:00 Lunch

### 13:00 Sample Lesson Structure “System Approach”

*Trainer Input and Discussion:*

*“What should be delivered”*

*Example (Extraction)*

*Preparation of a Sample Lesson Structure based on the college system*

## Day 5 Friday

### 09:00 Sample Lesson Structure “System Approach”

*Teacher Presentations<sup>6</sup>*  
*Feedback based on Video*

### 11:00 Final Sample Lesson

*Introduction and Structure*  
*Team Building*  
*Content*  
*Start of Preparation*

### 12:00 Lunch

### 13:00 SMSCP Implementation Kick Off

*What does System Approach mean to you?*  
*What do you expect to reach with SMSCP?*  
*What kind of Problems or Topics need to be taken care in the 3 phases of implementing*  
*- Starting Phase*  
*- Running Phase*  
*- Maintaining Phase*

### 16:00 Close of Week 1

*Feedback of the Week*  
*Prospect for week 2*

## Day 6 Monday

### 09:00 Mechatronic Systems Assistant (Level 1)

*Introduction*

*Job Profile Reconciliations*

*Course Division and Contents*

*Course Objectives and Syllabuses*

*Examination Requirements*

### 11:30 Course 1 (Electrical Components)

*Trainer Input: Sample Lesson Structure*

*«Closing the Loop»*

*Trainer Presentation of a Sample Lesson Extraction*

*Discussion and Feedback*

### 12:00 Lunch

### 13:00 Course 1 (Electrical Components)

*Troubleshooting Strategies*

*Exercices*

*Feedback*

### 15:00 Implementation Workshop 1

*The Starting Phase*

## Day 7 Tuesday

### 09:00 Course 2 (Mechanical Components and Electrical Drives)

*Job Profile and Content (Short Term Repetition)*

*Trainer Input: Sample Lesson Structure*

*Trainer Presentation of a Troubleshooting idea*

*Discussion /Q&A*

### 11:00 Simulated Systems

*Diagnostic Kit Presentation*

*Q/A Discussion*

### 12:00 Lunch

### 13:00 Course 3 (Pneumatic and Hydraulic Control Circuits)

*Job Profile and Content (Short Term Repetition)*

*Troubleshooting on a Real System*

*Trainer Presentation of a Sample Lesson*

*Discussion*

*Feedback*

### 15:00 Final Sample Lesson

*Preparation*

## Day 8 Wednesday

### 09:00 Course 4 (Digital Fundamentals and PLC)

*Job Profile and Content (Short Term Repetition)*  
*Focus: Siemens PLC Hardware / Software*  
*PLC on a Mechatronic System*

### 12:00 Lunch

### 13:00 Test Questions

*Presentation*  
*Discussion*  
*Development*

### 15:00 Implementation Workshop 2

*Running the SMSCP*

## Day 9 Thursday

**09:00 Final Sample Lesson**

*Final Preparations*

**11:30 Final Sample Lessons**

*Team A in Class A<sup>7</sup>*

*Team B in the Audience*

**13:00 Lunch**

**13:30 Final Sample Lessons**

*Team B in Class B<sup>7</sup>*

*Team A in the Audience*

<sup>7</sup> Video Taped

## Day 10 Friday

**09:00**    **Final Sample Lesson**

*Feedback*

*Discussion*

**10:30**    **Implementation Workshop 3**

*Maintaining the SMSCP*

**12:00**    **Lunch**

**13:00**    **Implementation Workshop 3**

*Roadmap*

**15:00**    **Final Course Feedback**

**16:00**    **Closing Ceremony**