



SIEMENS



Siemens Technik Akademie Berlin

Siemens Mechatronic Systems Certification Program

Siemens and Technical Education

Siemens AG

- World leader in Mechatronics and Automated Systems Technologies
- 100+ year tradition in Technical Education
- Support and training in Mechatronics for over 20 years

Siemens Technik Akademie Berlin

- State recognized & accredited technical college
- Sophisticated International Programs
- Innovative Training Approach
- *“Handlungskompetenz“*
- 10 years experience in Mechatronics education



Siemens Technik Akademie Berlin



Synergies of STA programs:
High internationality
and English as
language of instruction

Dual Studies
BACHELOR OF ENGINEERING
incl. Associate Engineer in Mechatronic Systems

 **IEDP¹⁾**

 **SMSCP²⁾**

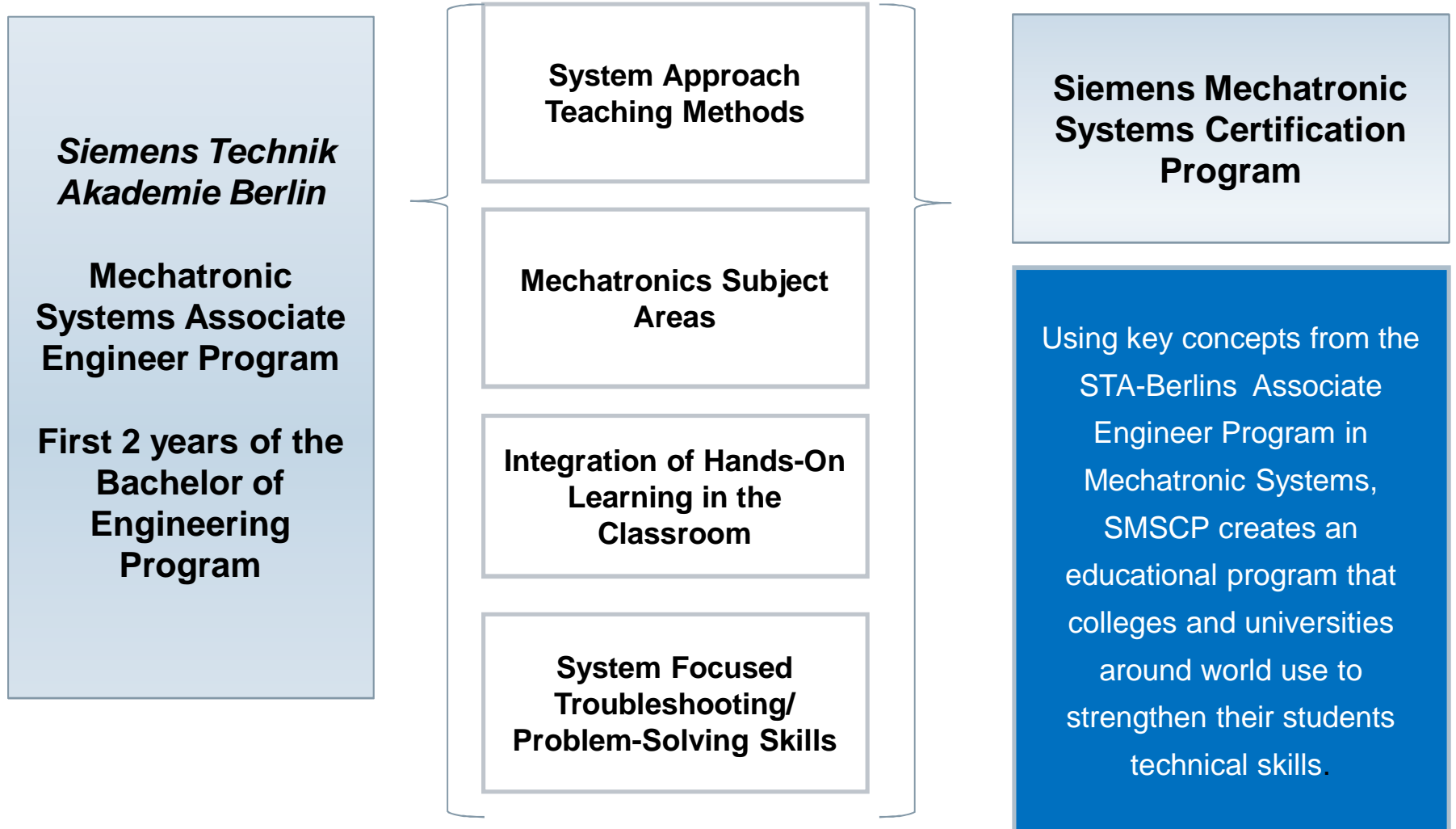
 **Smart Systems³⁾**

- 1) IEDP:
International Employee Development Program
- 2) SMSCP:
Siemens Mechatronic System Certification Program
- 3) Smart Systems:
IT driven Technologies, Applications and Competencies

System Approach & Handlungskompetenz

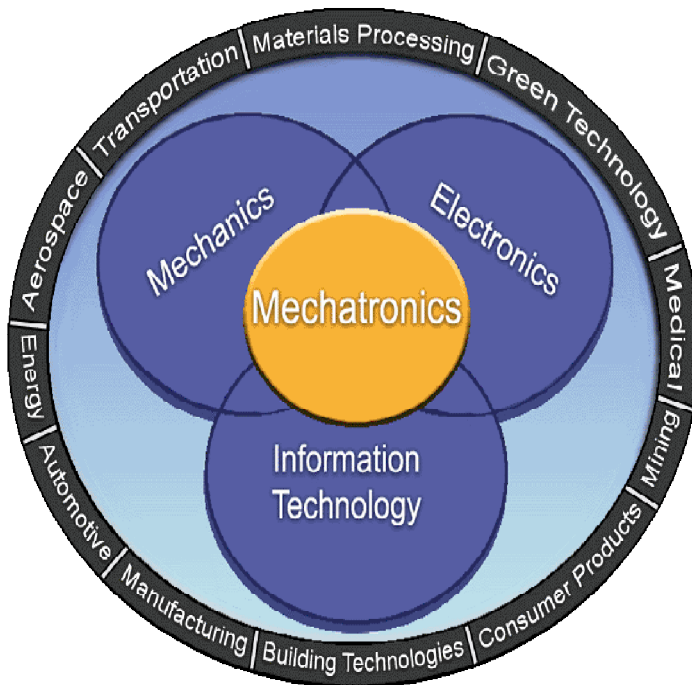
Siemens Mechatronic Systems Certification Program

Siemens Technik Akademie Berlin - SMSCP Connection



Mechatronics

Mechatronics is the synergistic integration of mechanics, electronics, control and systems theory, and computers into a complex, single system used within production and manufacturing, in order to improve and/or optimize its efficiency, productivity, and quality.

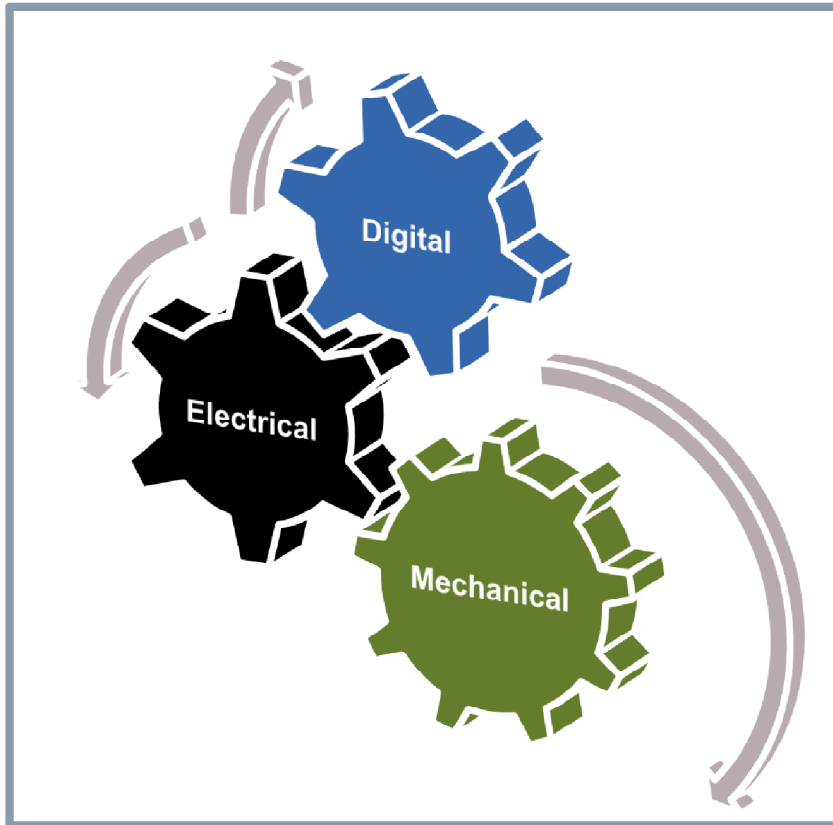


Mechatronics- Related Technical Fields

- Automation Technology
- Robotics Technology
- Industrial Maintenance
- Process and Controls
- Electro-Mechanical Technology

System Approach:

Holistic, Hands-On Mechatronic Education

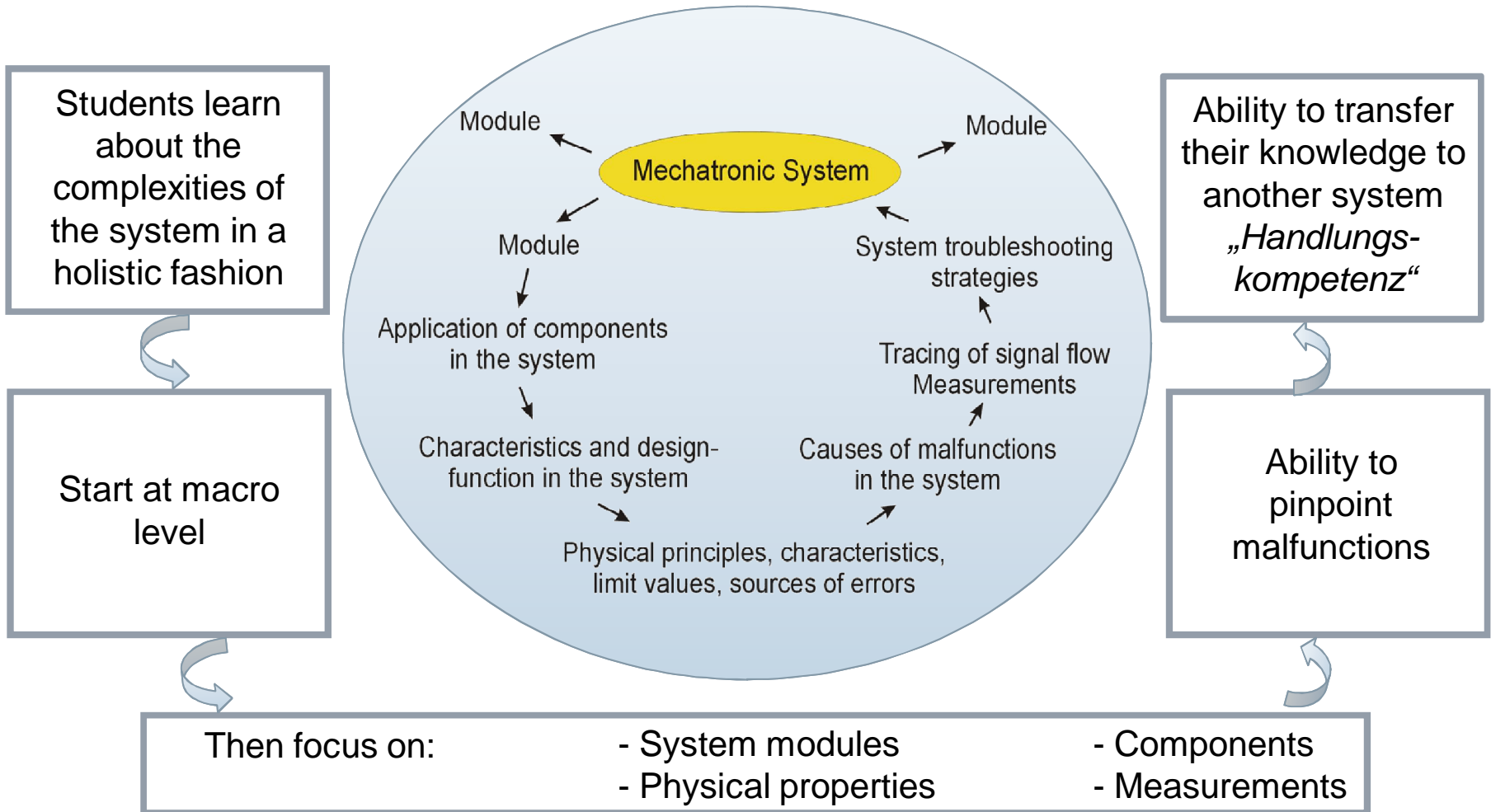


With its system focus and holistic learning model, System Approach stresses:

- The Mechatronic System is **always** the “starting point”
- Contextual, Hands-on learning of theoretical principles using a Mechatronic System
- Understanding of subsystems inter-relationships and how they drive system functions together
- Comprehensive Troubleshooting & Systems Analysis

System Approach:

Holistic, Hands-On Mechatronic Education



Why SMSCP?

Adaptable Expertise

- bringing together the core expertise of the STA-Berlin (mechatronics, automation technology and pedagogical methods), SMSCP offers a highly adaptable technical education program that can be easily implemented in a variety of education environments.

Well-Trained, Skilled Technical Workers

- With its emphasis on in- demand industrial skills, troubleshooting, and hands-on practical training, SMSCP helps to create knowledgeable technical workers than can work in a variety of production, technician, and engineering roles.

Education and Training Cost-Savings

- With SMSCP, companies and industries can receive qualified workers at a much lower cost by utilizing local and/or existing educational and training resources.

SMSCP Vision and Mission

Vision Statement

“The Siemens Mechatronic Systems Certification Program aims to be the world’s premier comprehensive skills qualification.”

The Mission of the SMSCP is:

- To establish the international industry standard comprehensive skills certification in mechatronic systems.
- To provide the STA Berlin’s pedagogical and technical expertise to partner schools around the world.
- To add value to our Partner School’s existing programs of study.
- To learn from our customers and partners in order to improve our knowledge and our offerings.
- To develop “Handlungskompetenz” in the world’s workforce.



Siemens Mechatronic Systems Certification Program

- International standard industry certification in mechatronic systems



- Comprehensive skills certification offered in three levels, not a product certification

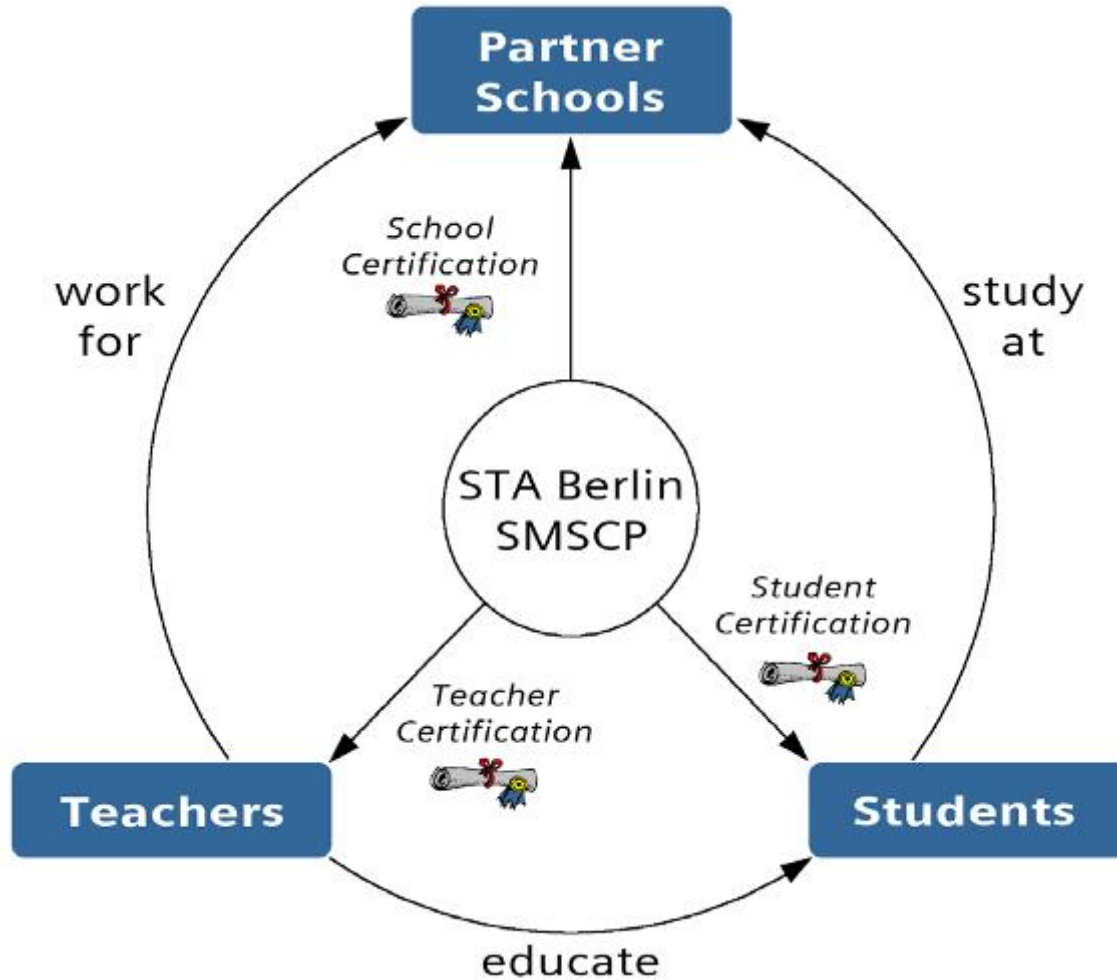
- Focus on system understanding, troubleshooting and problem solving skills

- Delivered together with partner schools/training centers

- Verified through certification examinations by SMSCP Headquarter - consistent standards of achievement worldwide

Result: → Well-grounded individuals who can adapt to new work situations quickly and appropriately = **Handlungskompetenz**

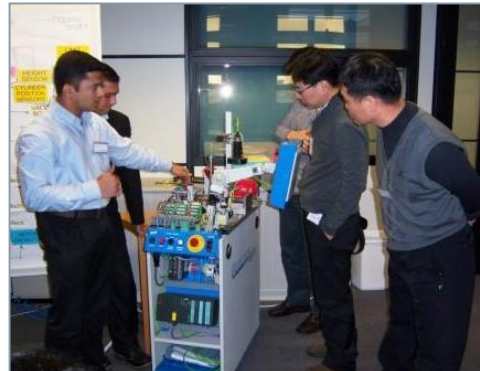
SMSCP Certification Process



1st Step: Instructor Certification

Goal:

Enable instructors from partner schools to implement and teach the SMSCP at their local school.



Content and Structure of the Instructor Certification Course:

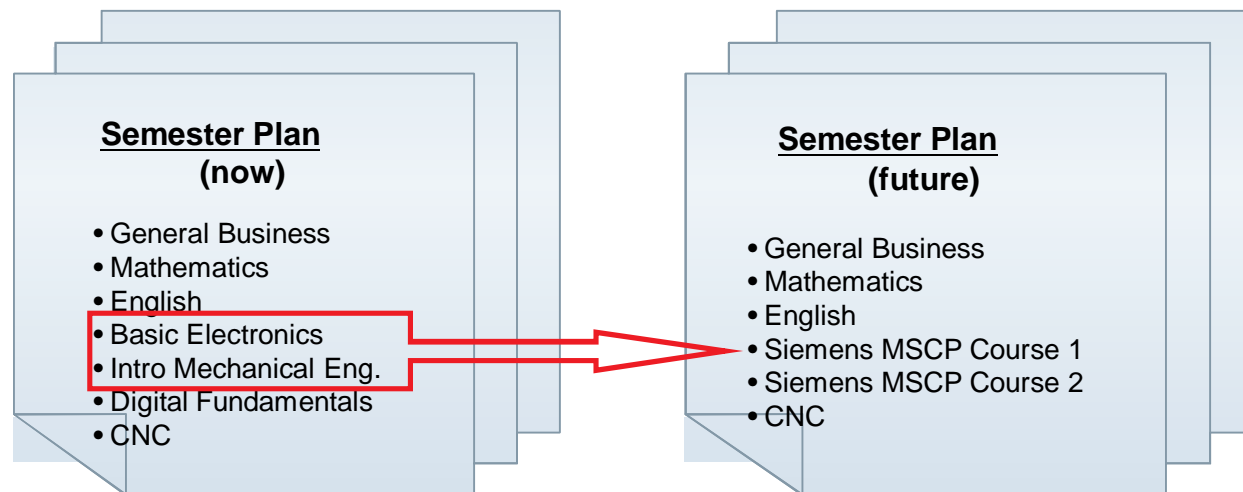
- System Approach teaching method
- Learning and practicing how to use the System Approach teaching method in the field of mechatronic
- Introduction to the content of the course-specific curriculum of the respective SMSCP Level
- Courses are 2-3 weeks long and normally held at Siemens Technik Akademie Berlin

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2nd step: Implementation at the Partner School

Implementation of the SMSCP at the partner schools

- Certified instructors and the respective administrators at the school implement the SMSCP at their institution.
- The Siemens Mechatronic Systems Certification Program is designed to complement and fit into existing programs of study, not replace them.
- Flexible implementation opportunities – as part of existing study programs, weekend – or evening courses

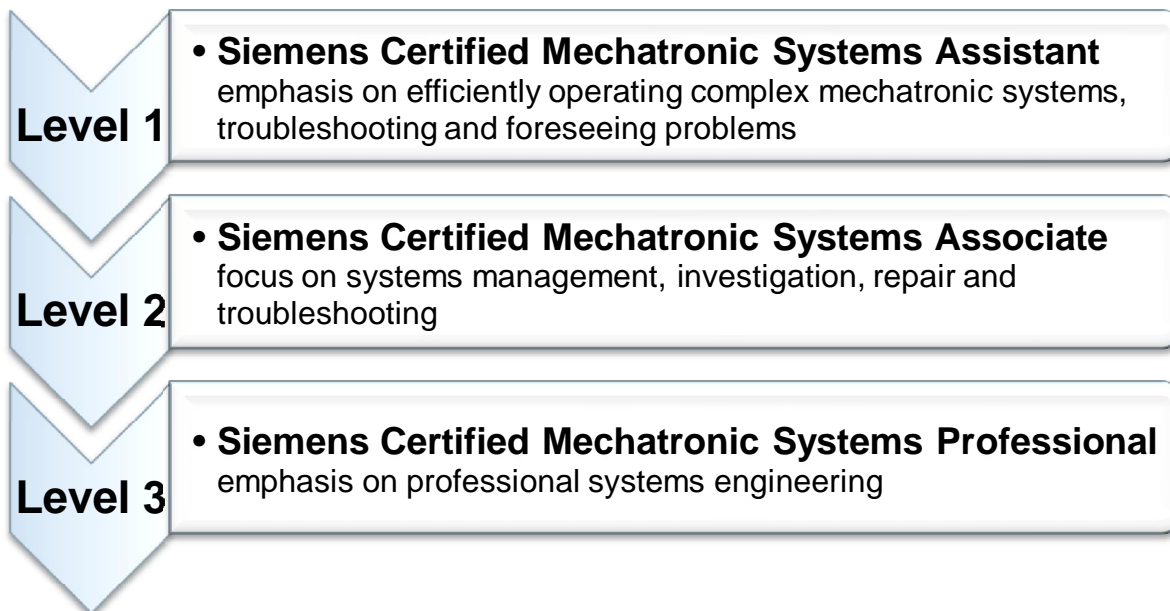


3rd Step: Certification of Students

Goal:

To prepare students well for the working environment and give them an extra advantage over the competition on the job market with the opportunity to receive **both** an industry certification **and** a school diploma.

Three levels of student certification that are built on job profiles:



SMSCP Competency Areas

Level I

Mechatronic Systems Assistant

- Electrical Components
- Mechanical Components and Electric Drives
- (Electro) Pneumatic and Hydraulic Circuits
- Digital Fundamentals and PLCs

Level II

Mechatronic Systems Associate

- Process Control Technologies
- Introduction to Totally Integrated Automation
- Automation Systems
- Motor control
- Mechanics and Machine Elements
- Manufacturing Processes

Level III

Mechatronic Systems Professional

- Requirements Engineering
- Project Management – Planning & Tracking
- Engineering
- Quality Assurance & Management
- Practical Applications
- Professional Engineering Project

Program Requirements

Entire program, including instruction must be in **English**

Must have a **Mechatronic Training System** on site

Instructors must be certified through the **SMSCP Instructor Certification Courses**

Schools must have a **written agreement with Siemens** on program implementation



Benefits for Students

- Opportunity to acquire a **world-class industry certification** in mechatronic systems without disrupting your normal studies
- **Extra advantage** over the competition on the job market
- The SMSCP is designed to **complement** and **fit** into existing programs of study, not replace them
- Students can receive **both** an industry certification **and** a school diploma
- Multiple implementation possibilities, for example: evening, weekend, skills retraining, accelerated, etc.



Benefits for Teachers

- Teachers are certified by Siemens as an **expert in the field of mechatronic education – SMSCP Certified Instructor**
- Certified Instructors have completed the Instructor Certification Program at the Siemens Technik Akademie Berlin
- Comprises the general teaching and learning approach course as well as the course-specific curriculum
- Recognized practitioner of “System Approach”



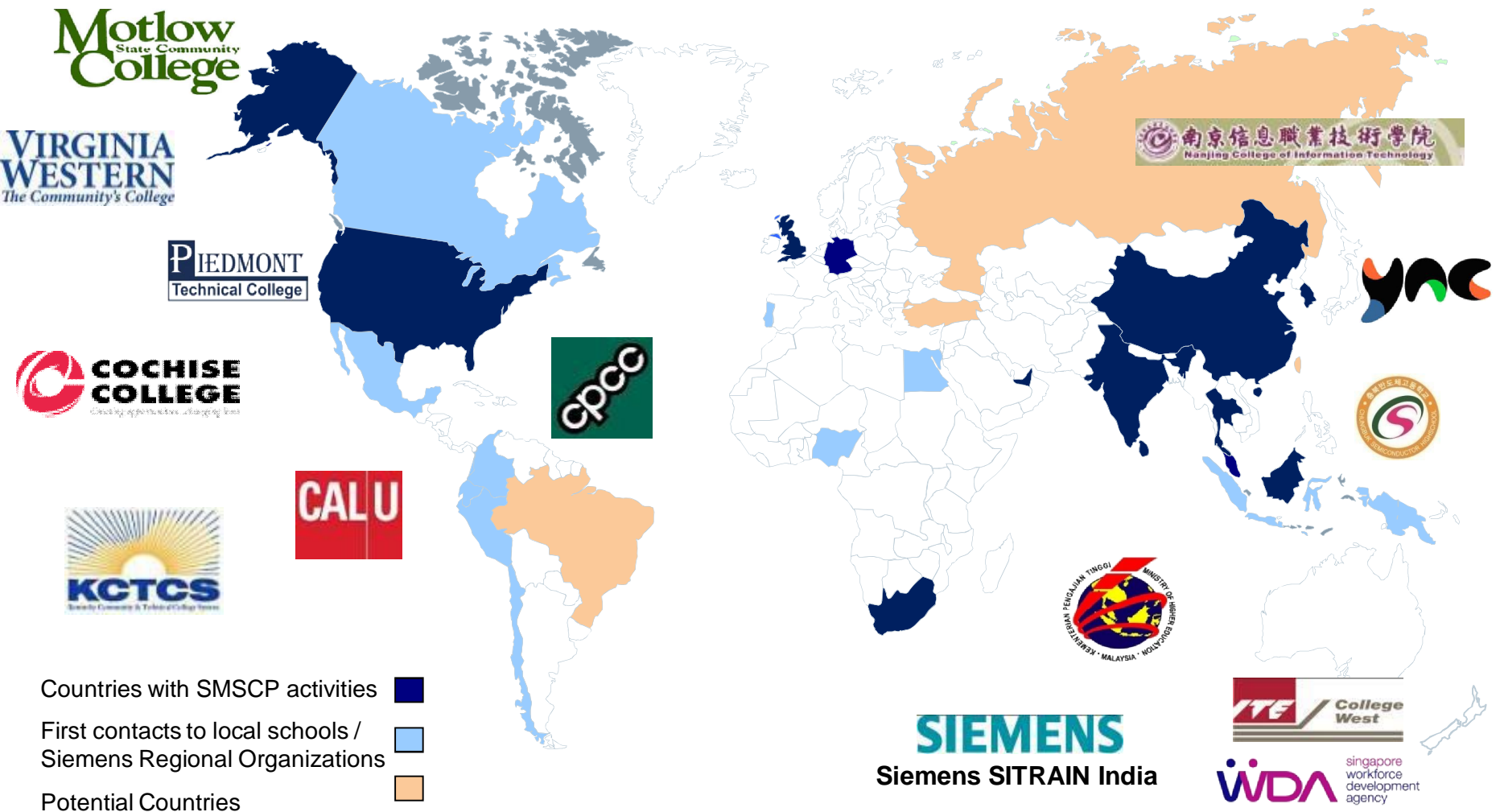
Benefits for Schools

- **Mark of distinction** as a certified Siemens education partner
- Recognition as a **provider of the SMSCP Exams**
- **Collaboration opportunities** with the Siemens Technik Akademie Berlin to advance and promote Mechatronic education on a local, national, and international level.
- Access to an **international network** of Mechatronic and advanced technology educators and industry partners.
- **Flexible implementation:** opportunity to deliver and implement the program in many ways – evening-, weekend-, part-time-, full-time-program



Global Partners

SMSCP is offered in 10 countries at 35 partner schools



- Countries with SMSCP activities
- First contacts to local schools / Siemens Regional Organizations
- Potential Countries

SIEMENS
Siemens SITRAIN India

ITE College West
WDA singapore workforce development agency

Support Materials

- Partner Schools have access to an extensive **library** of course support materials
- Course support material is distributed as a program benefit to our partners via **VCAT**, our E-Learning and communications platform
- Partner schools and teachers use course support materials to create and **deliver** Siemens Mechatronic Systems Certification Program **courses** locally
- Course exams are conducted via VCAT



Contact



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