

Metal work/ Design Module

Content:

During the two weeks in school the students will develop a unique piece (for example a bowl)

Field trip to Italy on a workshop for founding a copper bar

Crafts based, experimental access to design processes and production possibilities

Four weeks of practical exercises in extern companies on real customer products

Duration:
6 weeks

Level:
Intermediate

Assessment:
skills demonstration with technical discussion

Participants:
2 European students + 4 German students

Responsible teachers:
Stefanie Heringer
Sabine Straub



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Modules:

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Electric Drives Engineering
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PLC
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Metal – Design – Mechatronics*

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Automation/ Electrical Engineering

Metal Construction



Cobots Module

Content:

Analyzing the basic functions of collaborative robots and safety issues

Understanding the program sequences of robots

Programming different tasks with increasing difficulties using the Universal Robots PolyScope software

Integration of several robots into one production unit

Interaction between the robots and human beings



Duration:

2 weeks at college

Level:

Advanced

Assessment:

paper & pencil test
skills demonstration with technical discussion

Participants:

8 European students + 8 German students

Responsible teachers:

Philipp Schott
Moritz Sedlmeier
Manfred Schauhuber



Electric Drives Engineering Module

Content:

Programming an asynchronous motor including frequency converter

Setting up a gate control with a star-delta start-up on a test stand

Optional the gate control with reversing contactor can be replaced by the produced PCB - printed circuit board (soldered at partner school **Technická akadémia** - Spišská Nová Ves/ Slovakia)

Discussing operating characteristics and characteristics of drives limits operation

Machine testing according to the European standard EN 60204 is explained and carried out

Duration:

2 weeks at college

Level:

Advanced

Assessment:

paper & pencil test,
skills demonstration with technical discussion

Participants:

6 European students + 6 German students

Responsible teachers:

BS MDM:

Hans Jürgen Daurer, Ralf Kluger

Technická akadémia:

Radoslav Hatala, Miloš Sokol (PCB - Manufacturing)



PLC Programming Module

Content:

Analyzing, programming and bringing an automatic system into service; controlled by Siemens S7300 CPU; programmed with TIA V13

Analyzing the automatic system: Sensors, actuators, PLC

Planning the process

Applying the hardware configuration

Programming with sequence chain - online monitoring of the process

Diagnosis and troubleshooting, bringing the automatic system into service

Duration:

1.5 weeks at college

1.5 weeks at company

Level:

Advanced

Assessment :

paper & pencil test,
skills demonstration with technical discussion

Participants:

8 European students + 8 German students

Responsible teachers:

Philipp Schott
Moritz Sedlmeier
Manfred Schauhuber

