



Betreuungsgesellschaft für Modellprojekte mbH
Coordination of European projects in vocational training

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Vitalis – host organisation for Erasmus KA1 projects

VITALIS, as host organisation, receives participants from all European countries. Over the last 25 years we gained experiences from more than 1000 projects we realised in different fields of profession.

We develop model projects in the framework of Erasmus and ESF, also in cooperation with small and medium-sized enterprises in the region Leipzig and Halle.

We support the mobility of the participants in the European Community and the communication between people from all over Europe.

Our project proposal for your stay in Germany:

Title: AutoCAD/3D printing

Duration: 2 weeks

Learning outcomes common to all professions:

- Health and safety at work - observes health and safety rules and SOPs
- Professionally oriented foreign language - improved ability to use a foreign language (English/German) in the execution of tasks and the ability to formulate short and comprehensible statements to communicate in the workplace
- Personal and social competences - develops a culturally and ethically sound approach to working with others in a company, increased creativity and consistency in their actions, copes with stress, responsibility and assigned tasks
- Organisation of work in small teams - increased ability to communicate and work collaboratively with colleagues, organise work in a team

Learning outcomes in the field of AutoCAD/3D Printing:

The student learns/knows:

- The structure of a AutoCAD system
- The function of the AutoCAD software
- Handling of the operating system
- Basic setting of system parameters
- The basics of drawing in a AutoCAD program
- How to draw Complex 2D objects

General tasks

The student develops their understanding of:

- Dimensioning and designing specified or self-produced plans and drawings with the aid of CAD systems to suit production requirements
- Developing detailed designs (according to functional and material aspects)
- Finding selected or specified solutions in the form of individual part drawings
- Carrying out construction-related calculations
- Dimensioning and marking construction drawings (enter technical data, e.g. dimensional tolerances, surface finishes, equipment markings)
- Constructing a 2D model
- Configuring and exploring 3D workspace

Examples of possible placements:

- Workshops at Gut Wehlitz / Projekt Korrekt e.V.

All the above and below mentioned modules can be seen as examples. It's possible that we have to modify or adapt them due to the abilities of the participants or the capacities of the host company. The tasks and the activities vary and depend on the practical and the linguistic skills of the beneficiaries and on the needs and business volume of the companies.

Detailed training program - AutoCAD/ 3D Printing

1 st week Monday - Friday	<p>Program for Monday: Introduction to the workplace</p> <ul style="list-style-type: none">- Introduction to the placement company and the daily working time- Information about the structure of the company- Getting to know the fields of working- Introduction to occupational health and safety- Introduction to the daily work activities, needed materials and tools <p>Tuesday Introduction</p> <ul style="list-style-type: none">- Introduction to CAD software- What are CAD programs and which ones are most often used- What are the advantages and disadvantages of each CAD software <p>Wednesday Starting design (Part design):</p> <ul style="list-style-type: none">- Basic modeling- Sketching a rectangle and adding dimension- Extruding solids (making first part) <p>Thursday Creating models using the following tools</p> <ul style="list-style-type: none">- The cycle tool- Ellipses and rectangles- Trim tool- Mirroring sketch entities- Mirroring features- Cutting material- Hole Wizard- Fillets and Chamfers <p>Friday</p> <ul style="list-style-type: none">- Creating parts and new body- Revolved Boss/Base- Adding text- Adding appearances to the part- Revolved cuts and resolving cut errors
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<p>2nd week Monday - Friday</p>	<p>Program for Monday:</p> <ul style="list-style-type: none"> - Basics of three-dimensional printing - What is a 3D printer? Basics of operation and construction - Getting to know the tools to build a 3D printer model <p>Tuesday</p> <ul style="list-style-type: none"> - Three-dimensional printer design, construction and function of individual components - Information on printing methods and possible materials to use - Getting to know the stages of creating a 3D printout - from designing a selected element to creating a ready to print file <p>Wednesday</p> <ul style="list-style-type: none"> - Cabling of the device - getting acquainted with the structure and execution of the cabling - Wiring installation - Factory settings - get acquainted with the built-in settings, get acquainted with the individual functions - 3D printing - production of selected objects
	<p>Thursday</p> <ul style="list-style-type: none"> - Test printing, adjustment of ideal settings - 3D printing - production of selected objects - Reproduction of individual printer components - practical exercises <p>Friday</p> <ul style="list-style-type: none"> - Creating files for printing - Printing fragments of selected elements - Mechanical manual processing of printed items - Carrying out quality tests of a 3D printer, checking the functioning of various applications - Summary of skills acquired and termination of apprenticeships