



Practical Training at Leipzig University of Applied Sciences

University



Principal

Prof.
Gesine
Grande



7 Faculties:

- Architecture and Social Sciences
- Business Administration
- Civil Engineering
- Computer Science, Mathematics and Natural Sciences
- Electrical Engineering and Information Technology
- Mechanical and Energy Engineering
- Media

About 6000 students, 250 professors, 350 staff members



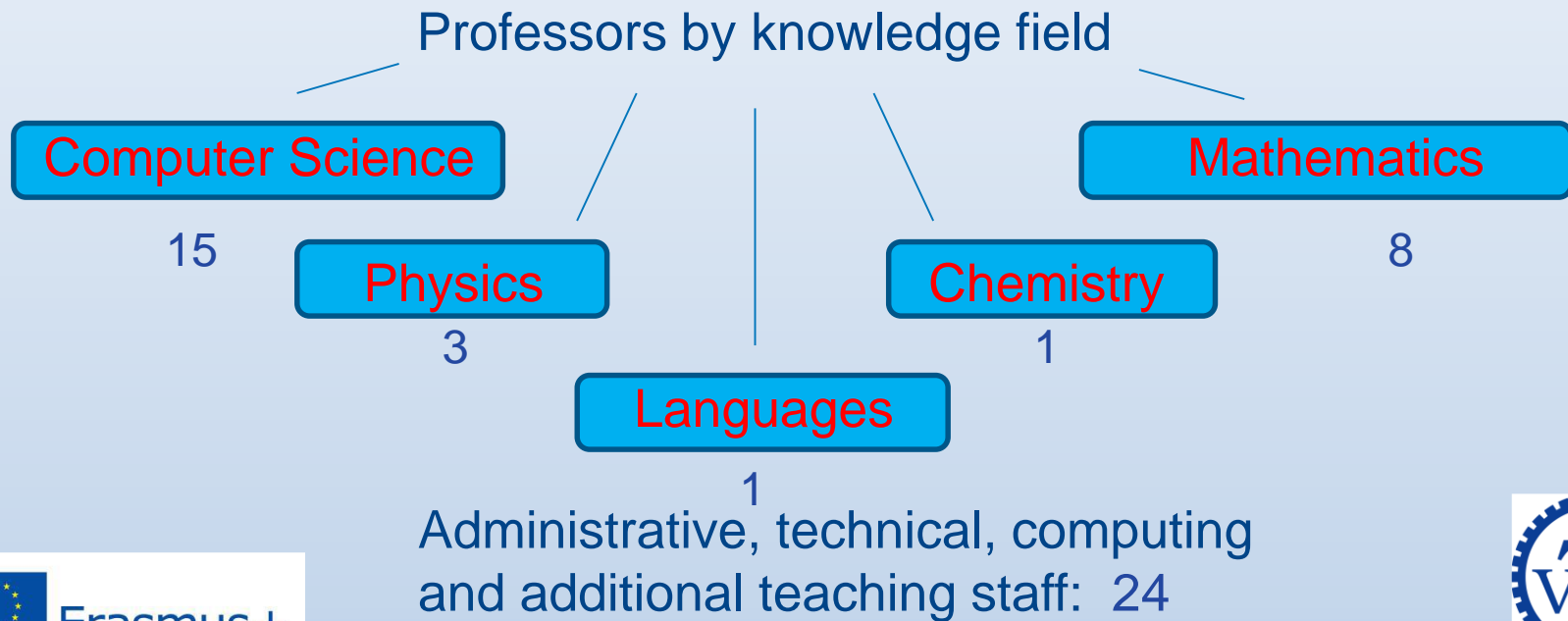
Faculty of Computer Science, Mathematics and Natural Sciences



Beneficial combination of *Computer Science, Mathematics and Natural Sciences*

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High potential for interdisciplinary teaching and research



Degree Programmes

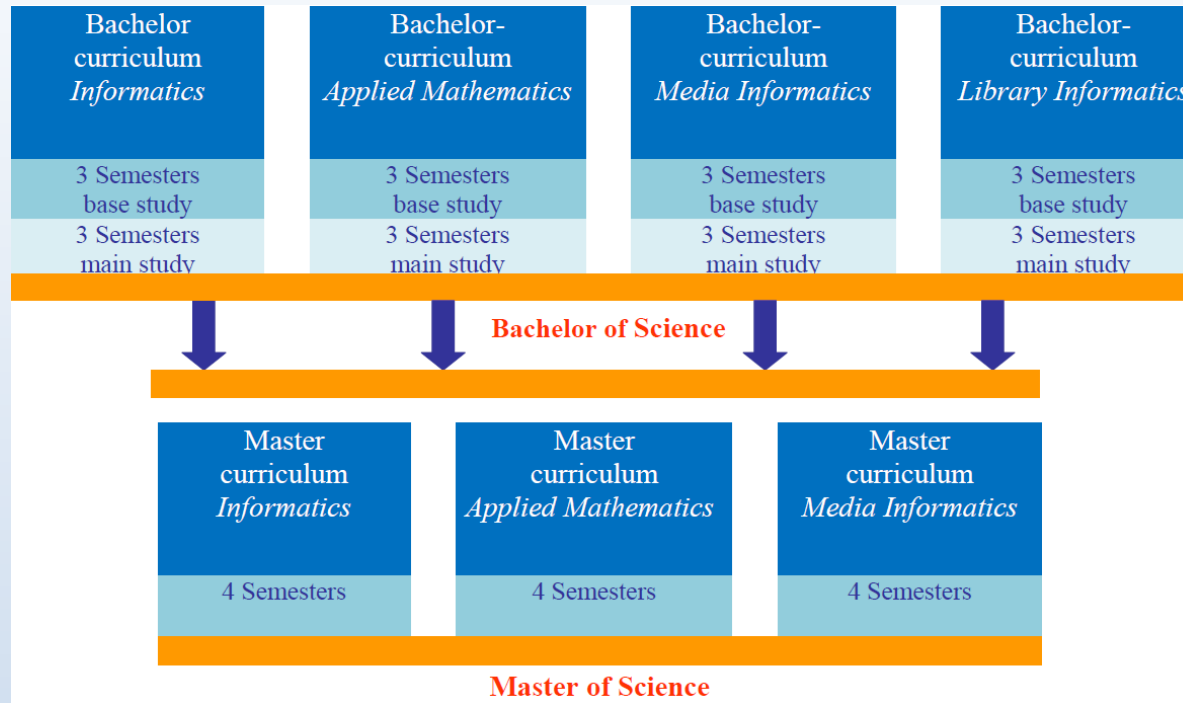
6 (5) degree programmes

- Applied Mathematics: 7 terms, 3.5 years
- Computer Science: 6 terms, 3 years
- Media Informatics: 6 terms, 3 years
- Applied Mathematics: 3 terms, 1.5 years
- Computer Science: 4 terms, 2 years
- Media Informatics: 4 terms, 2 years

At the moment: **about 500 students**

Curricula in F IMN

Principles of Curricula in HTWK Leipzig, example Media Informatics



- More than 30 curricula in HTWK Leipzig faculties
- All 7 curricula accredited by the agency ASIIN
- Bachelor / Master curricula now 6 / 4 Semesters
- ECTS credits (European Credit Transfer System) – 180 + 120

Media informatics – science topics

- Practically oriented, technical science
- combination of *practical*, *technical*, applied and *theoretical informatics*
- Background: creation, transfer, storage, change and presentation of *digital Media*
- Impart of competences for active organization of complex media oriented information converting processes in whole society

Base topics

- Hardware and software in modern computer architecture
- Development of software with different complexity based on *operating systems*, *computer networks* and data bases
- Base of digital media and specifics of creation, change and presentation of different media
- Development of multimedia applications
- Media rights, theory and marketing
- IT and media security
- Special applications: *Virtual Reality*, AV, e-Learning

Aim: Application of knowledge and study in science and economy



base:

- basic theoretical knowledge
- abilities for abstraction of real problems
- competences in modeling, modularization and algorithms
- abilities for independent thinking and working
- competences in professional communication and successful interdisciplinary team work
- sensibility for social questions and corresponding professional responsibility



Structure of study

- base study: 1. - 3. semester
- main study: 4. – 6 semester
- practical semester: 5. semester
- bachelor thesis: 6. semester

During study:

- practice
- practical excercises
- seminars, student seminar performance
- practical semester
- practical semester excercises

Possibilities for practical work:

- in partner firms
- in research projects of F IMN, e.g. assistant
- in projects of the region

Practical training for students



work fields of graduates

Essentially: enterprises and institutions of the students practical training

e.g., in case of media informatics:

- enterprises of media oriented software / hardware production and distribution (e.g. development of multimedia applications)
- enterprises of office and tele-communication und of e-commerce
- media enterprises, audio-/video studio
- counselling firms
- advertising agencies
- firms for material production in tele-learning, tele-teaching, computer based training



Applied project results in IMN projects

some examples for successful student practice,

e.g. F IMN projects

- **eLearning portal** (HTWK ~ 10 x)
BPS / LIPS / Content development / Tool development

- **Federal Ministry for Education and Research (BMBF)**
 - FH3 "ConSerVeLab"
 - EXIST-SEED "Interactive Panorama Video", "waem", "MoWi", IPbeeNet, AMMe, VRS ...

- **EU – FP6/7**
 - SME-cooperation "DeLLVAPS"
 - eLearning "IMELA", "ELMS"
 - SOKRATES "Minerva", "OPUS"

- **Industry projects**
 - High speed networks
 - "ePublishers"
 - "MITEGO3D"
 - "Smart Metering"

➤ **EU – Tempus Tacis**

“eMeReCU”, “JointLab”, “Intercollegia”, “EU-TraceFer”, “EduViSim”, “InterSCAN”, “itsofteam”, “UnlvEnt”, “STEP”

➤ **EU-ERASMUS PLUS**

“ModeHed”, “VTC”, “METHODS”, “INVENT”, “LPEB”

application of eServices

like:

eLibrary / eRepository, eLectures, video-conferencing, data base services

for support of

study,
further education,
introduction of eMethods,
study of (visually) impaired students
training teachers
help in organizing study and education processes

in order to solve current problems



VTC - Opportunities for intensive future cooperation between JO universities and HTWK



Vocational training center for undergraduate university students and teachers in Jordan

General objective:

- Create and establishing a vocational training center for universities in Jordan to transfer skills for graduate and undergraduate university student
- Solve economical, social, labour problems of graduates and includes it into the education system and technical training, it improves the phenomenon of vocational training and skills in Jordan universities.



Specific objectives:

- establishing a training center to train skills for graduate / undergraduate university students
- building a positive and productive relationship with EU-Universities in the academic and cultural fields
- transfer the EU-Experience in the areas of technical training and skills development
- establishing a national network specializing in vocational training in Jordan.
- provide the student with skills and experiences for labour markt

Impacts of the Project



- Improving the quality and relevance of higher education by:
 - Adjustment of the study curricula to the demands of the labour market demands by promoting input from business enterprises into the curricula
 - Strengthening of the cooperation with enterprises and regional authorities by development of courses aiming.
 - Use of ICT for training

- Strengthening quality through visits and cooperation with the EU by:
 - Providing the teachers and trainers with a different learning experience from the EU
 - Know–How at EU universities

- Linking higher education, research and business for excellence and regional development by:
 - Building up knowledge alliances with enterprises
 - Organization of educational activities within the companies
 - Placements or internships of students in companies



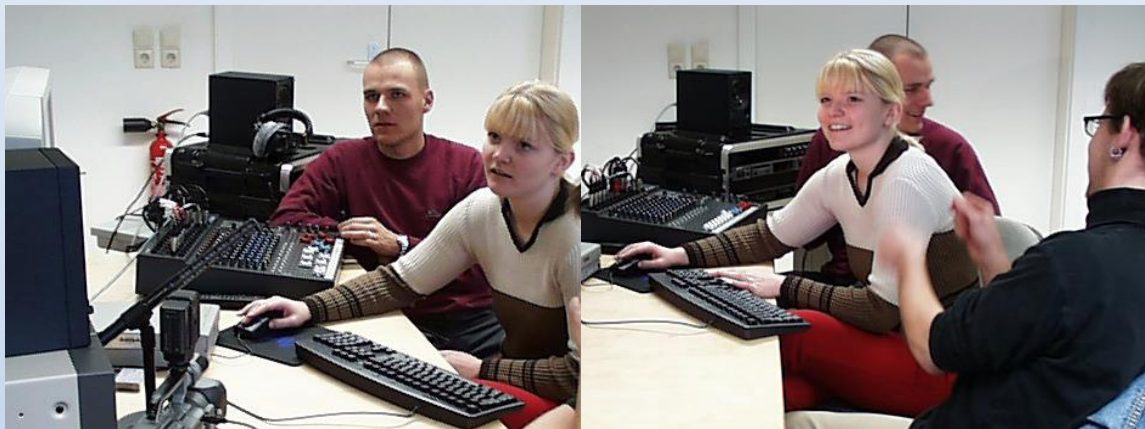
specific expected results of the activities:

- equipped VTC in Jordan universities,
- Web-site , data base of training skills,
- consultations with co-beneficiaries
- training of trainers and acquaintance with EU VTC,
- developed training modules and courses,
- consulting of entrepreneurs in Jordan Universities ,
- seminars and conferences,
- new common model of VTC

What are the used methods?



Media Center Video studio



Projects with modern video technique

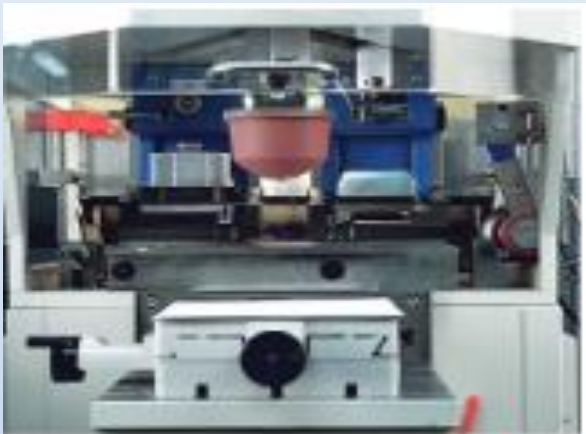
What are the used methods?



Spectrophotometer



Universal testing machine



Tampography-Pad Printing



Hot metal typesetting

What are the used methods?

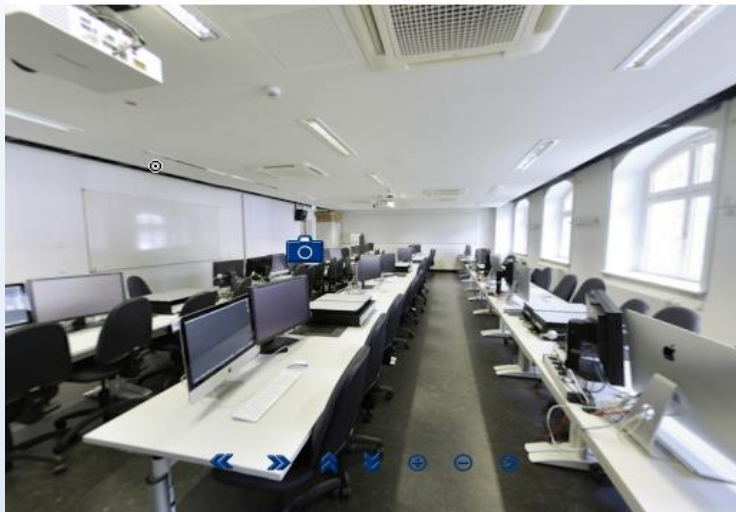
Printing room



Printing laboratory



What are the used methods?



Mac laboratory



PC laboratory

What are the used methods?



Packing Technology



Cabinet for development and construction

What are the used methods? Energie Technic



Laboratory electrical drive engineering



Universal testing machine Z400



What are the used methods? Energie Technic



Training: Thermal analysis of metals and anorganic substances



Stereomicroscop Leica M165C

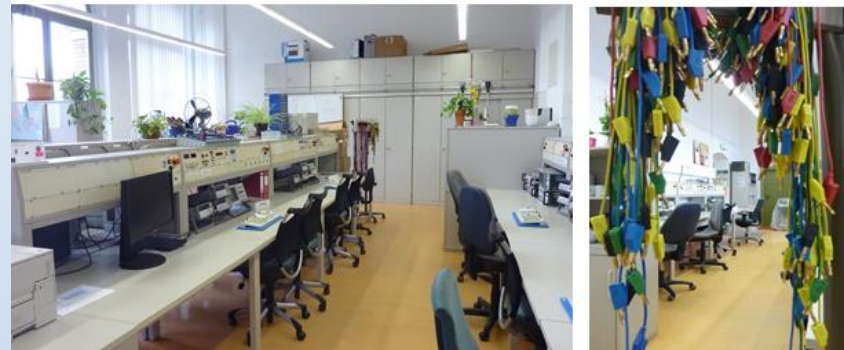


visTABLE – Hard- und Software for factory plan



3D-Scan-System

What are the used methods?



Laboratory for Medical technology

Laboratory electronics und circuit technology



Football robot of the F IMN HTWK Leipzig team

(using artificial intelligence, optical recognition, position determination

RoboCup 2016- <http://www.robocup2016.org/en/>

