

# CSEP – the Computer Science Exchange Program with EMU

and

## other programs at the Master level

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## CSEP Summary

- Strategy:  
bottom-up, based on personal contact & long friendship of faculty members
- Components:
  - Faculty exchange every 1-2 years
  - Double Master Program (DMP), both institutions awarding  
**Master of Science in Computer Science**
- Inspiration:
  - International experience for leadership candidates
  - „Proof of concept“ for own Master Program established in 1999
    - Excellent achievement, student grades 80% A
- Accreditation:
  - German program at HSKA is accredited from ASIIN since 2003, praise for CSEP
  - US program not accredited so far



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## History CSEP

- 1988 – 1998
  - Various informal contacts, visiting professor from HSKA at EMU
  - 1999 Visit of delegation to EMU, negotiation of Double Master Program (DMP)
- 2000
  - President of EMU visiting HSKA, signing of contract
  - Visiting Professors from HSKA at EMU and from EMU at HSKA
  - First student from HSKA in Double Master Program
- 2002
  - Visiting Professor from EMU at HSKA
  - 3 Students from EMU in summer program at HSKA
- 2005
  - Visiting Professor from HSKA at EMU
- 2006
  - Visiting Professor from EMU at HSKA
- Summary: 16 Students from HSKA at EMU, 4 Students from EMU at HSKA



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## Boundary conditions CSEP-DMP

- HSKA
  - 3 semester program, each w. 30 ECTS credits, amounting to 900 hours/semester of student workload
  - Admission policy set by faculty, not rigorously enforced
- EMU
  - 3 semester program, total of 33 credit hours
  - Admission policy set by faculty & school & college, rigorously enforced
- Translation 1 credit hour = 2-4 ECTS credits
- Lectures at partner institution are credited to 50%, thesis work more flexibly



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## Curriculum CSEP-DMP

### HSKA

- 3 semester program, each w. 30 ECTS credits
- Participants in DMP
  - 2 semesters at HSKA, collecting 60 ECTS\*
  - 2 terms at EMU, collecting 15 credit hours\*
    - Master Thesis

### Calculation at HSKA

60 ECTS

10 ECTS  
20 ECTS

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90 ECTS

### Calculation at EMU

15 c.h.

15 c.h.  
3 c.h.

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33 c.h.

### EMU

- 3 term program, total of 33 credit hours
- Participants in DMP
  - 2 terms at EMU, collecting 18 credit hours\*
  - 2 semesters at HSKA, collecting 24 ECTS\*
    - Master Thesis

36 ECTS

24 ECTS  
30 ECTS

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90 ECTS

18 c.h.

6 c.h.  
9 c.h.

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33 c.h.



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\* ... from catalog

## Language issues

- US program requires TOEFL/TWE
  - High cost of testing, rigid requirement set by school, college & faculty
  - Additional barrier for students with migration background
  - Clear experience:
    - Good TOEFL results may still lead to a badly written thesis (many examples known at EMU)
    - Bad TOEFL results => enforced enrollment in English language courses at EMU => may still result in badly written thesis
    - To summarize: No correlation between TOEFL/TWE and ability to pass computer science program – **IRRELEVANT** for field of study.
- German program requires German language certificate
  - Requirement set by faculty, may be waived easily
  - German program is partly taught in English language since 2005
  - Very high barrier for US students



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## Financial issues

- US program
  - Tuition & fees ca. 8.000 \$ for two terms (In-state)
  - „Financial statement“ required to show 19.000 \$ of liquid money – ridiculous from European viewpoint
  - Out of 14 students in DMP
    - 9 have been receiving a DAAD scholarship (roughly 15.000 \$)
    - 3 have been receiving a Baden-Wuerttemberg scholarship (6.000 \$)
    - 2 have been receiving a scholarship for gifted students by the German Friedrich Naumann Foundation (<http://www.fnst.org>)
- German program
  - No cost so far, will start with 500 €/semester in 2007
  - Out of 4 students
    - 3 did not receive any scholarship (short summer program)
    - 1 will receive a Baden-Wuerttemberg scholarship (4.000 €)
- Recent development:
  - Assembling „credit“ for tuition fees at EMU by US students going into other HSKA programs



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## Mobility issues

- Faculty mobility quite low on both sides
  - 1 out of 10 has international **teaching** experience
  - May be changing due to new culture of sabbaticals at German Universities of Applied Sciences
  - Higher demand for short programs, 4-6 weeks
- Faculty mobility **VERY MUCH** appreciated by students
- Student mobility quite high in Germany
  - 20 % of Master Program students are seeking international experience
  - Declining due to excellent job perspectives in computer science
- Student mobility extremely low in US
  - Almost no student in CS at EMU is seeking international experience



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## Job issues

- Interest in „pure“ computer sciences in decline (-60% in US, -30% in Europe)
- Interest in „Computer Science PLUS something“ is rising tremendously
  - HSKA program is called „Computer Science & Multimedia“, offers unique specialization beyond computer science
- Excellent job market for computer science graduates in Germany, **not a single alumnus** is known to be unemployed
- Improved salary situation due to „Bologna process“
  - No formal distinction between traditional universities' degrees and those from universities of applied sciences
  - No distinction in salaries
  - Additional salary potential due to international experience 15 %
- 20% of HSKA Computer Science Masters are currently seeking a doctoral degree



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## Internship issues

- 80% of students at HSKA write their Master Thesis as interns
  - Integrated requirement for EMU students coming to HSKA in DMP
  - **NO PROBLEM** in finding an internship inside Germany where only English language is needed
- Former large interest in foreign internships in the US has vanished:
  - Difficult procedure for host companies
  - Difficult to get visa for internships in the US
- Upcoming countries
  - Eastern Europe
  - Asia



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## Marketing issues

- Every Computer Science Master at HSKA knows about the program – part of introduction process
  - Interest declining due to rise in tuition & fees !
  - Interest declining due to job market situation.
  - Interest coupled to the availability of scholarships
- Advertisement at EMU difficult, needs personal contact of faculty members with international experience to students



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## Problems I

- Long discussion with admissions office at EMU have led to a well established procedure – no problems left over ☺
- Admissions office needed to develop a certain trust in coordinating officer on German side
- Rigid enforcement of TOEFL/TWE requirements inadequate
- Recent **new** problem:
  - EMU requires **worldwide** coverage of health insurance
  - German students in general have German coverage via their parents
    - Difficult to get statement from insurance company,
  - German students going to EMU generall buy a health care plan only valid **outside Germany**
- German administration under control by faculty – uneasiness about non-standard procedures can be quenched



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## Problems II

Biggest problem now: *Motivation*

- Other countries are a good substitute for US in gaining international experience
  - At much lower cost
  - With less bureaucratic effortE.g. Canada (U of New Brunswick, others coming up), New Zealand, Hungary
- US procedures do not **REALLY** convey the feeling that foreign visitors are welcome
  - SEVIS fee and procedure
  - Visa application procedure



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## Other programs at Master Level

- International Management
  - Mandatory foreign semester
  - Dual Degree Program with Institut Supérieure du Commerce, Paris
- Geomatics
  - Dalian University, China
  - Szeged University, Hungary
- Sensor Systems Technology
  - KTH Stockholm, Sweden
  - McGill University, Canada



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