

Developing competencies and linking students with industry in a company-like learning environment

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Telecommunications and e-business

www.turkuamk.fi

About TUAS

- 9500 students
- One of the largest universities of applied sciences in Finland
 - 7 fields of study and 37 degree programmes
 - 10 degree programmes leading to Master's
- The unit of telecommunications and e-business
 - Aims to educate international experts and future entrepreneurs in the field of ICT
 - Active learning and relevance to working life
 - Students are encouraged to work with industry in the region and take part in projects and practise enterprises

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Field of telecommunication and e-business

- Degree programmes
 - Electronics
 - Library and information services
 - *Information Technology (Finnish+English)*
 - Business
 - *Business Information Technology*
 - Technological Competence Management

Company-like learning environment - ESCfi

- ESCfi (Education Support Centre Finland)
- Company-like learning environment
 - Operates like a company
 - Students run the operation
 - Different roles
 - Customers, management board
- Students from mainly two degree programmes; from Finnish and international degree programmes in Information Technology

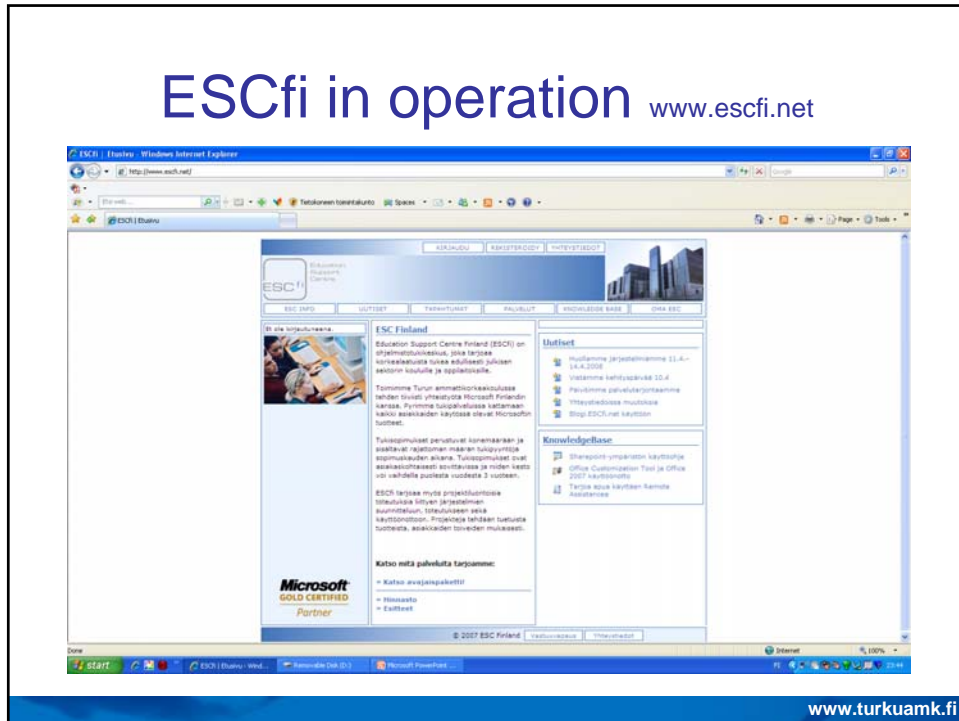
About ESCfi

- Experiences and student opinions
 - Working in a company-like working environment has become the backbone of their competence development
 - Students have been able to achieve such experience and competences that would not have been otherwise possible

ESCfi in operation

- Provides software support and project implementation and design
- Students run the operation independently; different roles from technical specialist to marketing, team leading
- Teacher's role is to mentor and guide; take part in planning of the operation, financing, recruiting etc.

ESCfi in operation www.escfi.net



ESCfi in operation

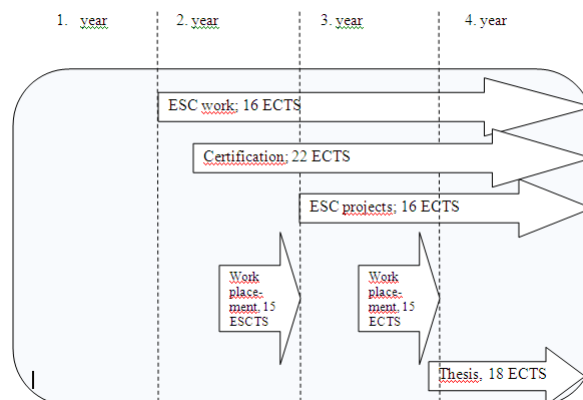
- Student's responsibilities
 - Customer work
 - Cooperation with other organizations and companies
 - Organizing and resourcing the work and projects
 - Project management
 - Operational reporting, documentation
 - Learning

ESCfi roles

- Team leader
 - Organizing the work, resourcing, leading the team, following-up projects, marketing, making new customer contacts
 - Offers, contracts, budgeting
- Technical specialist (senior / junior)
 - Solving problems, taking part in projects (project management in some cases), customer contacts, documentation, cost evaluation, bidding
- Marketing
 - Customer retention and satisfaction
 - Marketing material, billing

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ESCfi as part of studies



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ESCfi learning modules

- ESC work
 - First phase of working in ESCfi
 - Support centre customer work
 - Problem-solving and trouble-shooting
 - Phone / email
 - Objectives
 - Achieve technical knowledge about supported products
 - Achieve customer work experience
 - Achieve team work experience

ESCfi learning modules

- ESC certification
 - Making certifications and exams
 - Part of quality assurance of the service
 - Mainly Microsoft certifications at the moment
 - Also Cisco certifications
 - IPMA project certification
 - Highly motivating; valued by employers after graduation

ESCfi learning modules

- ESC projects
 - Project size and topics vary a lot
 - Topics interrelate to other subjects
 - Students take part in projects after they have achieved basic knowledge of products and operation
 - Design and implementation projects
 - Feasibility studies

ESCfi learning modules

- Work placement
 - Fulltime work for 10 weeks
 - 2. and 3. year students
- Thesis
 - ESCfi development projects
 - Topics and assignments from customers and partners

ESCfi learning process

- Introduction period
 - Tutor assigned to all new students
 - Tutor helps to get started
 - Documentation, processes, routines, organization, systems and products
- Meetings (team, development, management)
- Appraisal interviews (1-2 times / semester)
 - Learning objectives, amount of working hours, certification schedule, taking part in projects, tasks and responsibilities, follow-up of last period

ESCfi learning process

- Learning plans
 - For every two weeks period
 - Learning objectives; different tasks and projects, amount of hours
- Learning diaries
 - Reporting the plan
 - Accomplishments and self-evaluation of learning
 - Evaluation of their operation in respect to other students and customers
 - Changes and problems reported also

ESCfi learning process

- Introduction period is the most difficult and creates anxiety in some students
- Most previous courses are teacher-led lectures or laboratory assignments
- In ESCfi the responsibility of learning and setting learning objectives is left to the student
- Independency, initiative, communication skills are required

Learning in practise

- Students work from 5 to 30 hours / weeks
- Work placement 40 h / week
- Support centre is open from 9 to 15
 - Team leader organizes so that somebody is always present / available by phone
 - No fixed working hours
 - Students work when they have free in their schedule

Competence development

- Students perceive that *they have achieved such experience and competences by working in ESCfi that would not have otherwise been possible*
 - Most importantly strong technical experience and knowledge including hands-on experience of solving real problems
 - Best practices from specialist in ESCfi network

Competence development

- More important competences
 - Social skills; customer work, team work, presentation, negotiation, project work, project management, team leading
- Other competences
 - Financial skills; budgeting, cost surveillance
 - Multicultural competences; both Finnish and international students involved
 - Business; learn the laws of IT sector

Linking students with industry and working life

- Active working
- Seminars, conferences and fairs
 - Students are encouraged to attain new contacts
 - In the beginning students go as pairs
- Customer contacts and projects
 - Satisfied customer is a valuable contact and reference
- Thesis
- Linked too early and too well?

Conclusion

- Best learning experience
 - Students have had to do all the work and solve all the problems themselves; “*teacher has not saved us*”
- Students see themselves as privileged
 - They can start their “career” early during their studies

Conclusion

- Feedback from companies and partners
 - Very satisfied with recruitments and service
 - They can rely on the student's experience and competences in a way that is very supportive
- Other company-like learning environments
 - Network Support Centre Finland
 - More different contexts planned