



The Development of multiform curriculum for Degree Programme in Information Technology

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Introduction

- Metropolia University of Applied Sciences
 - www.metropolia.fi/en
- Information Technology Degree Programme
 - Bachelor's Of Engineering programme
 - 450+ international students

Contents

- Introduction to multiform program in Information Technology
- Conducted studies on online learning in engineering education
- Empowering engineering education with online studies
- Examples of online learning used in multiform curriculum
- Conclusions

Program for multiform studies

- Full Bachelor of Engineering program
 - 240 ECTS, 4 years
- Contents of the curriculum follow the curriculum of full time program
- Targeted for students working daytime
- Implementation
 - 4-5 days per week, lectures at 17-21
- Extremely low success rate
 - 30 students to start annually => average 4 students to graduate
 - Total 55 ECTS per year percentage 31%

Studies conducted regarding online learning

- Several studies conducted during 2013-2016 regarding online learning and empowering learning environments [1,2,3]
- Based on the studies the following disadvantages of online learning were indicated:
 - The lose of motivation
 - Unfamiliar structure
 - Lack of social interaction and instructor
 - Exercises and feedback

Study and development of empowering learning portal

- Mr. Farhad Eftekhari completed his Bachelor's thesis on a topic of empowering learning portal [2]
- Goal was to address the disadvantages in online learning
- www.techclass.co

Empowering part-time studies with online learning

- Development launched on 2014 to improve part-time program
- **Solution:** Less contact learning, more blended online learning with social interaction
- Resulting implementation of the curriculum is a blended pedagogical approach
 - A combination of traditional learning and supervised online learning provided by 3rd party, e.g. University of Helsinki, Aalto University and other universities

MOOCs provided by University of Helsinki

- As a result of long academic research University of Helsinki launched a MOOC in Object-oriented Programming
- <http://mooc.fi/english.html>



Thank you for your attention.