



CERN BootCamp

Multidisciplinary Master Studies

30.11.2020



Joint course by 4 institutions from Helsinki Finland + CERN Ideasquare

- Laurea University of Applied Sciences
- Metropolia University of Applied Sciences
- Haaga-Helia University of Applied Sciences
- University of Helsinki/Helsinki Institute of Physics HIP



**SHARING
THE PASSION
FOR DOING**



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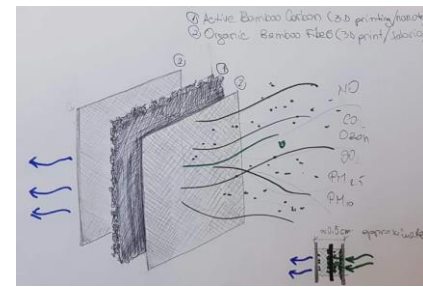
- Joint course by 4 institutions from Helsinki + CERN Ideasquare
- Master's level course, 10 ECTS
- 20-25 master's students
 - Studying alongside full-time job (age around 25-45)
- Multidisciplinary
 - Students: business, health and well being, engineering, information systems, ..
- The focus of the studies is to solve societal challenges and address sustainable development goals by applying service design methods to have a genuinely people centered, empathetic approach.
 - A holistic approach to all aspects of service innovation and development is adopted



- Students learn to



- apply service design approach and basic tools to design sustainable innovations
 - recognize opportunities to solve societal problems with innovations and understand their impact
 - act as a developer in open innovation networks and environments
 - conceptualize and commercialize services
- CERN BootCamp challenges students especially to try out their skills in creativity, complex problem solving and cognitive flexibility.





- The organizing team
 - 12 persons
 - Laurea (coordinator)
 - 2 instructors (responsible leaders)
 - 1 coordinator
 - Metropolia, Haaga-Helia, University of Helsinki HIP
 - 3 instructors
 - CERN Ideasquare
 - 5 mentors

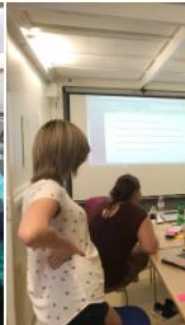


Table #. The main activities of instructors and students in CERN Bootcamp learning concept (Ojasalo and Kaartti, 2020)

Instructors' journey	<ul style="list-style-type: none"> • Kick off for annual planning • Analysis of latest student feedback • Identification of changes in concept • Annual timetable planning 	<ul style="list-style-type: none"> • Resources requirements mapping • Allocation of responsibilities • Budgeting • Planning funding structure 	<ul style="list-style-type: none"> • Acquiring and securing funding 	<ul style="list-style-type: none"> • Marketing course to potential students • Preliminary travel & accommodation arrangements 		<ul style="list-style-type: none"> • Opening the call for applications to students 	<ul style="list-style-type: none"> • Selecting the potential candidates for entrance exam 	<ul style="list-style-type: none"> • Entrance exam to selected students • Making final selection of students 	<ul style="list-style-type: none"> • Arranging 2-days kick off days to students in Finland • Supervision of student groups 	<ul style="list-style-type: none"> • Supervision of <u>students</u> groups • Final arrangements for travel & accommodation 	<ul style="list-style-type: none"> • Arranging the learning camp in CERN Switzerland • Final evaluation of students in Finland • Collecting of student feedback 	
	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Students' journey				<ul style="list-style-type: none"> • Student is informed about the becoming learning camp 		<ul style="list-style-type: none"> • Students applies to learning camp 	<ul style="list-style-type: none"> • Student is informed about acceptance to entrance exam (or rejection) 	<ul style="list-style-type: none"> • Student participate in entrance exam • Student is informed about acceptance to the learning camp 	<ul style="list-style-type: none"> • Individual pre-assignment on service design methods • Participation to kick-off days • Formation of student groups • Goal setting and planning for the problem solving in groups 	<ul style="list-style-type: none"> • Intensive group work • Theoretical knowledge base about the problem • Expert interviews in Finland • Preparing for expert interviews in Switzerland 	<ul style="list-style-type: none"> • Participation to learning camp in CERN Switzerland • Finishing up the final report of the group in Finland • Individual learning diary • Giving student feedback 	

- Key learnings



- Successful concept
- No plans to change the master concept
- Continuous finetuning
- IT GIVES MUCH, IT TAKES MUCH

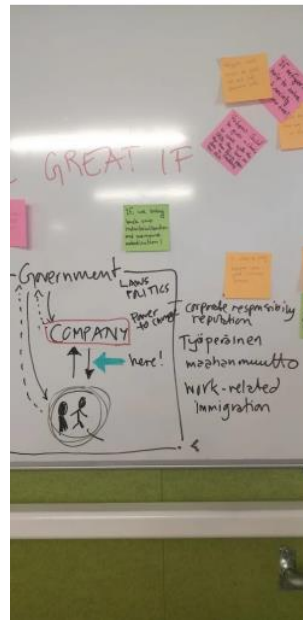
- Key challenges

- No major challenges
- Lots of minor challenges with practicalities and their coordination – but that's normal

- What academic research (if any) you have done or are planning to do around the course

- We are interested in joint research with other universities dealing with co-creation, sustainable development issues, collaborative innovation, pedagogy, etc.
- Publications

- Ojasalo, Jukka and Virpi Kaartti (2019), "Intensive Multidisciplinary Learning Concept in Higher Education: Case CERN Bootcamp," in AICBMM-AICSSE 2019 December (Cambridge) Conference Proceedings, Academic International Conference on Social Sciences and Education, 2-4 December 2019, Cambridge, UK, pp. 20-29.



Impact on students

- Immediate impact
 - Student feedback
- Long-term / second order impact



Student feedback

- Excellent overall student experience, 4.48/5.00
- The content and implementation, 4.00- 4.91/5.00
- The objectives, addressing real life problems related to UN's sustainable development goals, were perceived particularly meaningful (rating 4.73/5.00).
- The student experience of the speed and schedule very good in the current case (rating 4.45/5.00).
- The students were particularly satisfied with external experts during the process (rating 4.73/5.00)
- Feedback concerning the guiding of tutors was very good (4.00/5.00)
- The practical travel and accommodation arrangements, received most criticism from students (rating 3.50/5.00)



Talke Katri • 1st
Chief Accountant at Energico Oy
4h • Edited

Back home. It's over, done but not yet dusted. I will carry the memory of this week of inspiration with me forever. Feeling a little sad and empty, luckily I still have some writing to do to carry me over.

This intensive week of researching and innovation showed me my future path. Now I know what I do best and what I love; I am at my best when working with a group of professionals solving wicked problems. I love it, I want more of it.



5



Suvi Aalto • 2nd
Content Manager, Alma Talent
1h • Edited

Spent an amazing, inspiring and intense week at Cern Bootcamp in Geneva. Great things happen when people of different backgrounds and cultures come together to innovate! Thank you IdeaSquare and Cern and the several universities that made this possible. I'm feeling very grateful. #CernBootcamp #servicedesign #innovation #teamwork #sprint



Quotations from student feedback

"Great concept!"

"Very good concept and I should recommend you to continue with this next year."

"I wish to thank all the teachers, you did a great job! I learnt a lot during the whole course, and appreciate that I was accepted to it. I hope you'll continue with this kind of course implementation. THANK YOU!"

"The workload was massive, but doable, so no complaints about that. It was great to see that we were able to push ourselves to work on such a tight schedule."

"Nothing negative. You were all very helpful and lend expertise without being intrusive to the group's process."

CERN Bootcamp blog:

<https://cernbootcamp.wordpress.com/>

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