



Aalto University
Media Factory

Digital_Fabrication_Studio.00

Introduction to the course

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<http://www.slideshare.net/openp2pdesign>



About Massimo...

1. MSc in Industrial Design, Politecnico di Milano (Milan, Italy)
2. Doctoral Candidate at Media Lab Helsinki (Department of Media)
3. FabAcademy guru! (FabBootCamp 2012 @ FabLab Barcelona)
4. FabAcademy guru! (FabAcademy2012 @ FabLab Amsterdam)
5. Many years of workshops & lectures (Italy, Spain, Finland, Germany, South Korea, Singapore, Mexico, Colombia,...)
6. Experience in Industrial Design, Service Design, Interior Design, Web Design...
7. Worked at the development of 3+ FabLabs (Aalto FabLab, Muse FabLab, OpenDot...)

* **Linkedin:** <http://fi.linkedin.com/in/massimomenichinelli>

* **My website:** <http://www.openp2pdesign.org>

* **Twitter:** <https://twitter.com/openp2pdesign>

25438 Digital Fabrication Studio

Slides, dates, news:

<https://noppa.aalto.fi/noppa/kurssi/25438/esite>

Questions:

massimo.menichinelli@aalto.fi

25438 Digital Fabrication Studio #01

22nd April 2014 9:00 - 12:00: Digital Fabrication and FabLabs current ecosystem and its possibilities.

22nd April 2014 13:00 - 16:00: Media, business, platforms their role in the digital fabrication ecosystem

23rd April 2014 9:00 - 10:30: Information management for a digitally fabricate project.

23rd April 2014 13:00 - 16:00: Version control systems: Git+GitHub

24th April 2014 10:30 - 12:00: Intellectual property and Open Design digitally fabricated project.

24th April 2014 13:00 - 16:00: Version control systems: Git+GitHub

25438 Digital Fabrication Studio #02

25th April 2014 9:00 - 12:00: Laser cutting: technology, processes and design techniques.

Homework: Design and fabricate a laser cut box or interlocking object.

28th April 2014 9:00 - 12:00: 3D Scanning: technology, processes and design techniques.

Homework: Develop and refine a 3D scan of yourself.

29th April 2014 9:00 - 12:00: CNC Milling: technology, processes and design techniques.

Homework: Mill your previous 3D scan.

25438 Digital Fabrication Studio #03

30th April 2014 9:00 - 12:00 **Molding and casting** possibilities, processes and design techniques.

Homework: Create a mold and a final object out of it.

02nd May 2014 9:00 - 12:30 **3D Printing** technology, processes and design techniques.

Homework: Design or modify a small object and print it in 3D.

25438 Digital Fabrication Studio #04

5th May 2014 Project development concept

6th May 2014 Project development concept

7th May 2014 9:00 - 12:00 Project revision concept

8th May 2014 9:00 - 12:00 Project development project + prototype

9th May 2014 9:00 - 12:00 Project development project + prototype

= I will follow your project online + remote presentation for revision

25438 Digital Fabrication Studio #05

12th May 2014 9:00 - 12:00 Project revision project + prototype

13th May 2014 Project development prototyping

14th May 2014 Project development Final version

15th May 2014 Project development Final version

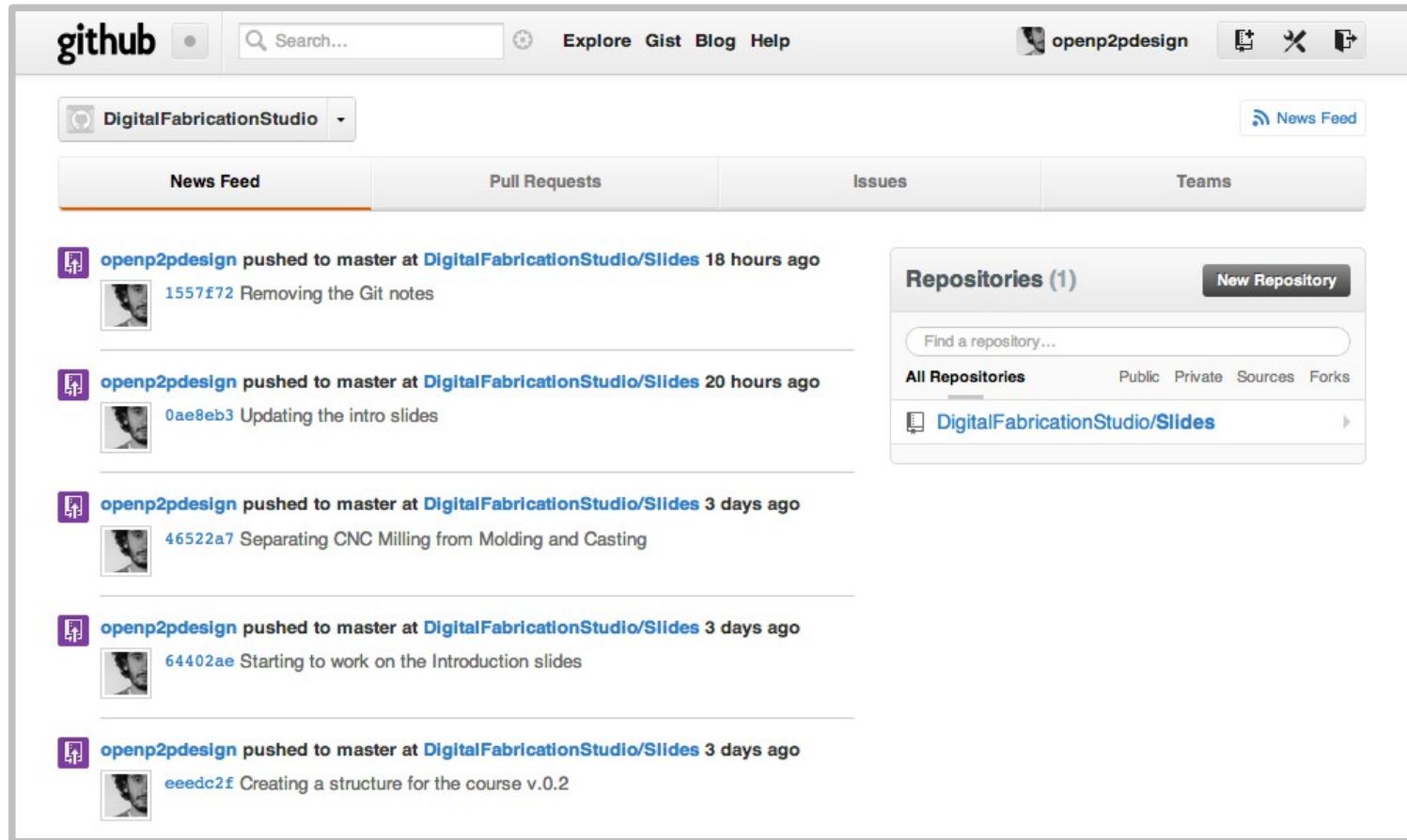
16th May 2014 Final project development + presentation

= I will follow your project online + remote presentation for revision

Recommended bibliography

- * Gershenfeld, N. (2000). *When Things Start to Think*. Holt Paperbacks.
 - * Gershenfeld, N. (2005). *FAB: The Coming Revolution on Your Desktop--From Personal Computers to Personal Fabrication*. Basic Books.
 - * Hudson, J. (2011). *Process 2nd Edition: 50 Product Designs from Concept to Manufacture (2nd ed.)*. Laurence King Publishers.
 - * Sterling, B. (2005). *Shaping Things (1st ed.)*. The MIT Press.
 - * Thompson, R. (2011). *Prototyping and low-volume production*. London: Thames & Hudson.
 - * Thwaites, T. (2011). *The Toaster Project: Or a Heroic Attempt to Build a Simple Electric Appliance from Scratch*. Princeton Architectural Press.
 - * Reas, C., & McWilliams, C. (2010). *Form+Code in Design, Art, and Architecture (1st ed.)*. Princeton Architectural Press
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Digital Fabrication Studio @ GitHub



Where you will find the slides, all the material, and where you will work and document your project!

Source: <https://github.com/organizations/DigitalFabricationStudio>

Assignments for this course

- * Small exercises for practicing with the technologies.



- * A final project for understanding and managing the design process and tools.
 - * A physical object.
 - * A digital documentation of the process of designing an manufacturing the object on GitHub / BitBucket
 - * A final presentation (Pdf.) of your project and its development.
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Evaluation of this course

- * Your final project (quality, complexity/time needed)
 - * The quality of the physical object.
 - * The quality digital documentation of the process of designing and manufacturing the object.
 - * The quality of the presentation of your final project.
 - * Your collaboration with everybody in this course (me and you)
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Suggestions for this course

- * Think about **a simple project** it doesn't have to save the world, just make you learn digital fabrication and it has to be complete in time
 - * **fail early, fail often** we are all prototyping (your projects, the course, this lab...)
 - * you can **use the lab** even outside of the course hours
 - * **you decide** how much time to spend for testing and how much time for developing the project; I will help you, don't worry!
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Suggestions for this course

- * **explore** a 100% original project is not required (does it exist? learn from others and just don't reinvent the wheel)
 - * **but be careful with intellectual property** Only use resources you can work and redistribute freely. Ask for help
 - * I will evaluate the project but especially if you have learnt the process, the tools and if you **collaborated** or helped each other!
 - * **Always document and publish on GitHub**, it is where I will see if you have worked or not. It is mandatory for passing the course
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Licensing your work

- * We are going to use **GitHub for Open Source projects**, so everything will be accessible to everybody. If it's an issue, you will use BitBucket.
 - * So publish / share only what you think anybody else can access to **Do not share what you want to keep private** (or if it's a secret you don't have rights to)
 - * You can choose **a specific Creative Commons license** for your project and exercises.
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Thank you!!

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