Aalto University
Media Factory

Digital_Fabrication_Studio.00
Introduction to the course

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About Massimo...

1. MSc in Industrial Design, Politecnico di Milano (Milan,Italy)
2. Doctoral Candidate at Media Lab, School of Art, Design and Architecture (Helsinki, Finland)
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, ...)
6. Experience in Industrial Design, Service Design, Interior Design, Web Design (more coming soon)

* **Linkedin:** http://fi.linkedin.com/in/massimomenichinelli
* **My website:** http://www.openp2pdesign.org
* **Twitter:** https://twitter.com/openp2pdesign

25438 Digital Fabrication Studio #01

02nd May 2013 9:00 - 12:00: **Digital Fabrication and FabLabs**: the current ecosystem and its possibilities.
02nd May 2013 13:00 - 16:00: **Media, business, platforms**: their role in the digital fabrication ecosystem

03rd May 2013 9:00 - 10:30: **Information** management for a digitally fabricated project.
03rd May 2013 10:30 – 12:00: **Intellectual property and Open Design** for a digitally fabricated project.

03rd May 2013 13:00 - 16:00: **Version control systems practice**: versioning a personal profile.

25438 Digital Fabrication Studio #02

06th May 2013 9:00 - 12:00: **Laser cutting**: technology, processes and design techniques.
Homework: Design and fabricate a laser cut box or interlocking object.

08th May 2013 9:00 - 12:00: **3D Scanning:** technology, processes and design techniques.
Homework: Develop and refine a 3D scan of yourself.

09th May 2013 9:00 - 12:00: **CNC Milling:** technology, processes and design techniques.
Homework: Mill your previous 3D scan.

25438 Digital Fabrication Studio #03

10th May 2013 9:00 - 12:00: **Molding and casting**: possibilities, processes and design techniques.
Homework: Create a mold and a final object out of it.

13th May 2013 9:00 - 12:00: **3D Printing**: technology, processes and design techniques.
Homework: Design or modify a small object and print it in 3D.

Please note: Each Tuesday the lab is open for people outside the University (not you then).

25438 Digital Fabrication Studio #04

15th May 2013 9:00 - 12:00: **Project development**: ideas
Homework: Final project development.

16th May 2013 9:00 - 12:00: **Project development:** prototyping
Homework: Final project development.

17th May 2013 9:00 - 12:00: **Project development:** Final version
Homework: Final project development.

20th May 2013 9:00 - 12:00: **Project development:** Final version
Homework: Final project development.

22nd May 2013 9:00 - 12:00: **Project development: Final version**
Homework: **Final project development.**

25438 Digital Fabrication Studio #04

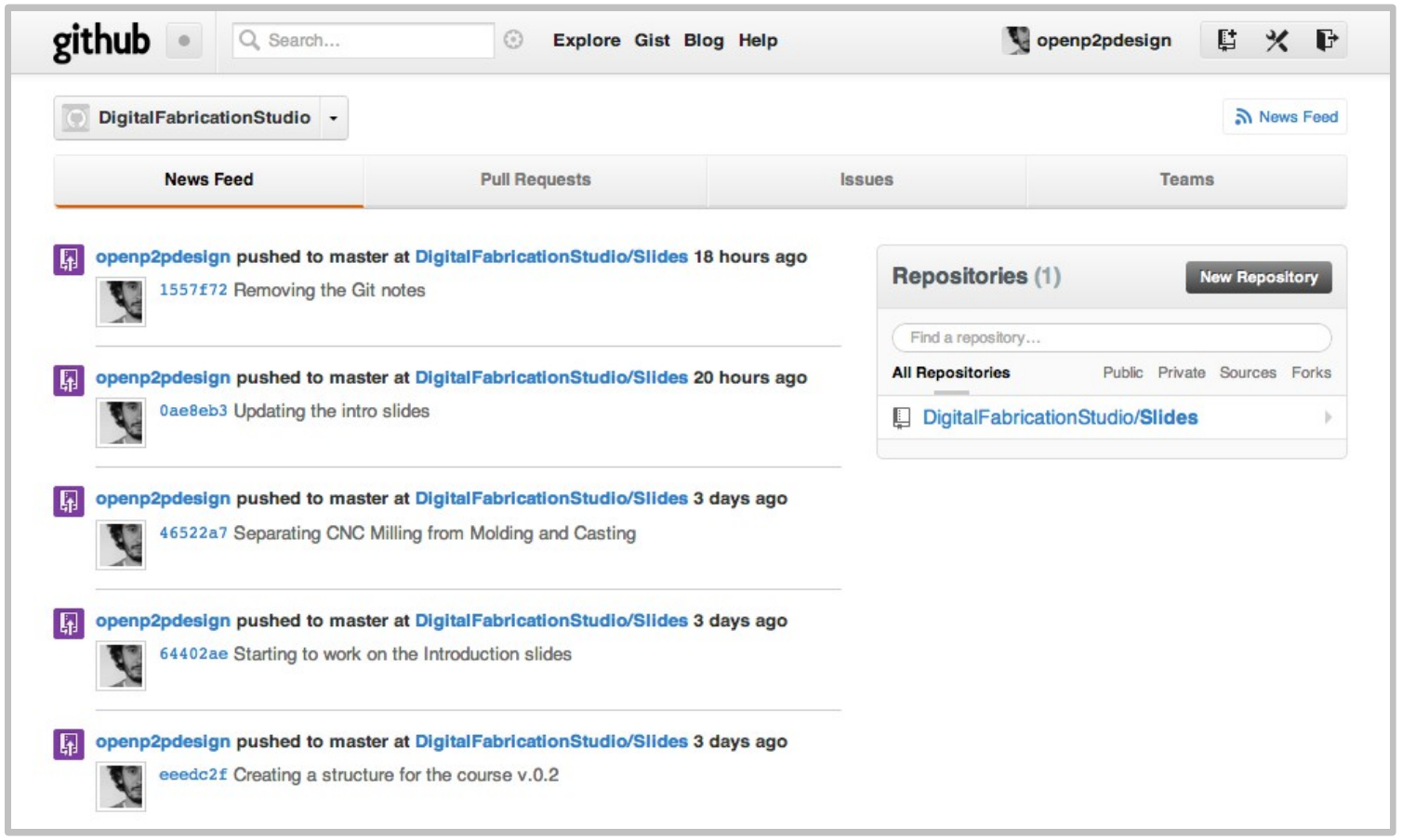
23rd May 2013 9:00 - 12:00: **Project development**: final version
Homework: Final project development.

13:00: **Final presentation**

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

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.

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- A final project for understanding and managing the design process and tools.
- A physical object.
- A digital documentation of the process of designing and manufacturing the object.
- A final presentation (Pdf/PowerPoint/...) of your project and its development.

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)

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 completed on time
* **fail early, fail often**: we are all prototyping (your projects, this course, this lab...)
* **explore**: a 100% original project is not required (does it exist?), learn from others and just don't reinvent the wheel
* 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!

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 have **collaborated** or helped each other!
* **Always document and publish on GitHub**, it is where I will see if you have worked or not.

Licensing your work

- We are going to use **GitHub for Open Source projects**, so everything will be accessible to everybody.
- So publish / share only what you think anybody else can have access to. **Do not share what you want to keep private / secret** (or if 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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