



Aalto University
Media Factory

Digital_Fabrication_Studio.00

Introduction to the course

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Aalto University
Media Factory

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
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Digital Fabrication Studio @ GitHub

The screenshot shows the GitHub web interface for the organization 'DigitalFabricationStudio'. At the top, the GitHub logo is on the left, followed by a search bar and navigation links: 'Explore', 'Gist', 'Blog', and 'Help'. On the right of the header, the user 'openp2pdesign' is logged in, with icons for repository, settings, and notifications. Below the header, a dropdown menu shows 'DigitalFabricationStudio' with a downward arrow. To the right of this is a 'News Feed' link. Below these are four tabs: 'News Feed' (selected), 'Pull Requests', 'Issues', and 'Teams'. The main content area displays a list of recent pushes to the 'DigitalFabricationStudio/Slides' repository. Each entry includes a commit hash, a description of the changes, and the time since the push. On the right side of the main content area, there is a 'Repositories (1)' section with a 'New Repository' button and a search bar. Below the search bar, it shows 'All Repositories' with tabs for 'Public', 'Private', 'Sources', and 'Forks'. The only repository listed is 'DigitalFabricationStudio/Slides'.

github Search... Explore Gist Blog Help openp2pdesign

DigitalFabricationStudio News Feed

News Feed Pull Requests Issues Teams

openp2pdesign pushed to master at DigitalFabricationStudio/Slides 18 hours ago
1557f72 Removing the Git notes

openp2pdesign pushed to master at DigitalFabricationStudio/Slides 20 hours ago
0ae8eb3 Updating the intro slides

openp2pdesign pushed to master at DigitalFabricationStudio/Slides 3 days ago
46522a7 Separating CNC Milling from Molding and Casting

openp2pdesign pushed to master at DigitalFabricationStudio/Slides 3 days ago
64402ae Starting to work on the Introduction slides

openp2pdesign pushed to master at DigitalFabricationStudio/Slides 3 days ago
eedc2f Creating a structure for the course v.0.2

Repositories (1) New Repository

Find a repository...

All Repositories Public Private Sources Forks

DigitalFabricationStudio/Slides

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 and manufacturing the object.
 - * A final presentation (Pdf/PowerPoint/...) 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 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!
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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 have **collaborated** or helped each other!
 - * **Always document and publish on GitHub**, it is where I will see if you have worked or not.
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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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