

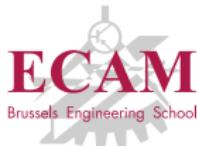
# Transforming a University Course into a Two-public Sustainable MOOC

**Sébastien Combéfis<sup>1</sup>** Corentin Vande Kerckhove<sup>2</sup>  
**Peter Van Roy<sup>2</sup>**

<sup>1</sup>École Centrale des Arts et Métiers, Belgium (ECAM)

<sup>2</sup>Université catholique de Louvain, Belgium (UCL)

September 18, 2015



[HybridEd 2015, Toledo, Spain]



This work is licensed under a Creative Commons Attribution – NonCommercial – NoDerivatives 4.0 International License.

# Context

- **Mature** traditional course (*LFSAB1402 : Informatique 2, 5 ECTS*)

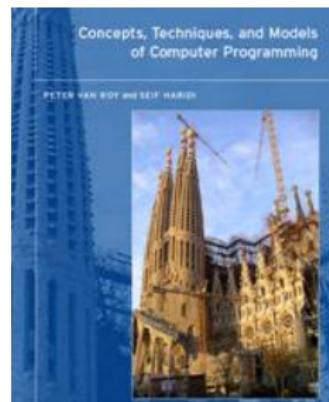
*2nd year university programming course for engineering students*

- Taught since **2005**

*A lot of available material:  
exercises, textbook in EN and FR...*

- **Transformation** into MOOC

*Gradually with three steps*



(MIT Press)

# Motivations

- **Transforming the course into a MOOC**
  - 1 Reaching **two publics** with (almost) same effort and resources
  - 2 Opening possibility for **interactions** between the two publics
  - 3 Offering **new means of education** to local students

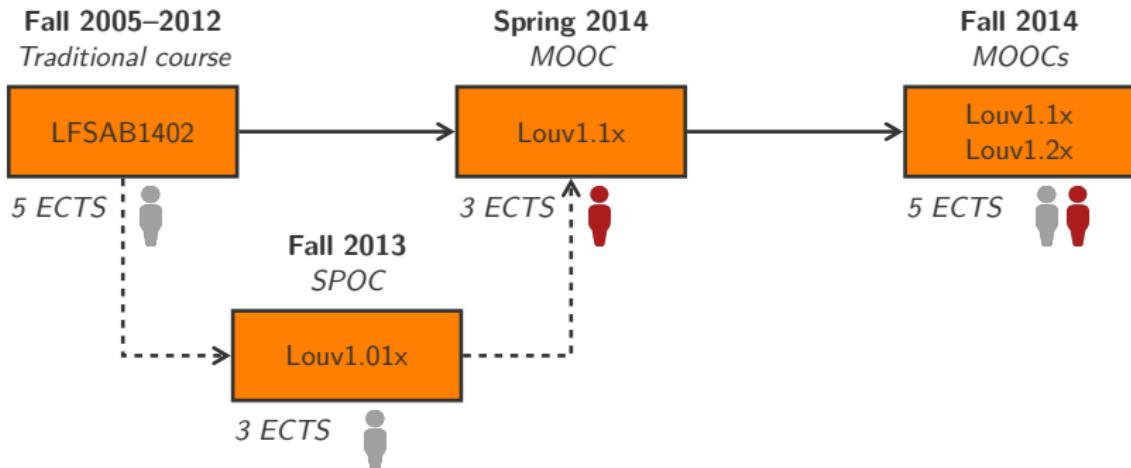
- **Migration spread over three academic semesters**

*Cope with limited human resources and  
allow staff to gain experience with MOOC creation*

# Three-step Transformation

- **Gradual transformation** of the traditional course to a MOOC

*Dedicated to on-site  and worldwide  learners*



# Two publics

- On-site learners

*Required to follow the MOOC with a +2/-2 incentive*

- Worldwide learners

- Students
- Professionnals

- Different motivations and requirements for both publics

*Need to keep some specific activities for on-site students*

# Sustainability

- **Initial cost** to launch the project was large
  - Extra charge for the professor to make videos
  - Extra research assistant to create coding exercises grader
  - Extra MOOC assistant to animate the MOOC when running
- Only **1/2 MOOC assistant** needed for Fall 2014 edition

*To update exercises and animate the MOOC while running*
- **No more additional** MOOC assistant for Fall 2015 edition

*Only one additional student monitor*

# Evolution of the on-site course

	Fall 2012	Fall 2013	Fall 2014
On-site	Lecture: 2h/week Lab session: 2h/week Project Midterm+final exam	Lecture: 2h/week Lab session: 2h/week Project Midterm+final exam	<b>Lecture: 1h/week</b> Lab session: 2h/week Project Midterm+final exam
On-line	None	1 SPOC 13 lessons/ <b>10 weeks</b> 8h37 videos Midterm+final exam	2 MOOCs 6 lessons/ <b>7 weeks</b> + 6 lessons/ <b>6 weeks</b> 5h20 + 5h01 videos Two final exams
Resources	1 professor 4 teaching assistants 11 student monitors	1 professor 4 teaching assistants 11 student monitors <b>1 MOOC assistant</b>	1 professor 4 teaching assistants 11 student monitors <b>1/2 MOOC assistant</b>

- 12 student monitors and no MOOC assistant for Fall 2015

# Conclusion

- Hybrid approach to make the MOOC sustainable

*The MOOC serves on-site students and is opened worldwide*

- Very satisfactory experience for the course transformation

- On-site course will stay a MOOC for the foreseeable future
- Only one extra student monitor as additional resources
- About 30 verified certificates generated

"In our view, one possible **sustainable evolution** of MOOCs is the **permanent transformation** of selected university courses into **two-public courses**."



Sébastien Combéfis & Peter Van Roy, 2015.

# Credits

- Pictures of books from Amazon.
- thekua, May 7, 2013, <https://openclipart.org/detail/177854/person-icon>.
- Robert S. Donovan, May 7, 2009, <https://www.flickr.com/photos/booleansplit/3510951967>.