IoT for entrepreneurs
Introduction to the course

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NOTE

⚠️ **for emlyon students**: this document does not substitute for the syllabus posted on Brightspace. Please go and read the syllabus.

1. Instructor and office hours

The designer and instructor of this course is Clement Levallois, Associate Professor at em **lyon business school**

Office hours:

- **emlyon students**: Fridays morning after the course at the emlyon campus at Saint Etienne and by appointment (levallois@em-lyon.com)
- **other participants**: get in touch via Twitter: @seinecle

2. Who is this course for?

This course is aimed at management students / entrepreneurs / citizens curious about the Internet of Things in a business perspective. No pre-requisite is needed.

A knowledge of coding (in any programming language) would help you understand the part where we will code the object. If you don't know how to code, then copy pasting is ok in this course.

3. Learning objectives

When finishing this course, you will have learnt to:

- create a connected object with a board and a screen, with soldering, able to connect to WiFi.
- write a program to connect to the Internet via WiFi and retrieve an air pollution measure in the location you choose.
- transfer the code to the object: get the object to work.
- understand the business stakes of connected objects, beyond this small object: B2B, B2C, design

and security aspects.

4. Material and budget

We will use components to build the object.

emlyon students: these components are provided to you directly so you can skip this section.

At the time of writing, components cost less than 40$ and are sold online by http://www.adafruit.com in the US. For further details, check the lesson "Where to buy components".

We will also need a soldering equipment:

emlyon business school students: you can visit the Makers Labs on our campuses for soldering (have you visited their website?).

Ask the MakersLab manager to use the soldering stations under their supervision.

A soldering station can be bought online (see the lesson "Where to buy components").

Or better, you can find a Makers Lab near you and ask for their help! Check here for a list of Makerslab worldwide.

Finally, you will need a micro usb cable to plug your object to your computer. You probably have one already if you have an Android smartphone. Shapes and formats for micro USB keep changing. Here we need the classic format (so, not reversible) like this one.

5. Evaluation of the course

The evaluation is in two steps:

- a video where you show your object, which should be working. You explain in this video the key difficulty you faced.

- a video where you discuss a connected object on the market (no need to buy it!). You explain 1) the function it performs, 2) the business model behind it, and 3) secuirty issues raised by the object.

Grading is as follows:

			Assignment 1 *				
	grade is on on 0 to 20 scale (French grading system)	video not uploaded	video uploaded, object not working, explanations showing you did not do your best effort	video uploaded, object not working, explanations showing you understand why and you did your best effort	video uploaded, object working, bad explanations on how you got it to work	video uploaded, object working, good explanations on how you made it	video uploaded, new features added to the object, great explanations
Assignment 2 **	video not uploaded	0	4	6	7	8	10
	video uploaded, comments are weak on all 3 dimensions	4	6	7	8	10	12
	video uploaded, comments are good on 1 dimension	6	7	8	10	12	13
	video uploaded, comments are good on 2 dimensions	7	8	10	12	13	15
	video uploaded, comments are good on 3 dimensions	8	10	12	13	15	18
	video uploaded, comments are outstanding on 3 dimensions (outstanding means you demonstrate some level of expertise)	10	12	13	15	18	20
	* Assignement 1: video showing your connected object, working (powered up with a display on the screen), and with your comments.						
	** Assignment 2: video showing a connected object on the market, with your comments on 3 dimensions: the technical, business and security aspects of the object						
	Note for assignment 2: you don't have to buy the object.						

Each video should last about 3 minutes and **less than 5 minutes in any case**. The videos should be uploaded online (on Youtube, Vimeo, DailyMotion...).

- **emlyon students only**: send me the links to the video on the dropbox of brightspace.

- **other participants**: you can send me the links to the videos at levallois@em-lyon.com and I'll be happy to evaluate them.

Don't send me video files as I will not open them!

6. Essential readings and to go further

Access this board on Pinterest for a collection of documents on the Internet of things from a business point of view.

You should read these documents to get a broader view on the subject.

If you look for a very complete, in-depth reference on IoT for entrepreneurs I warmly recommend:

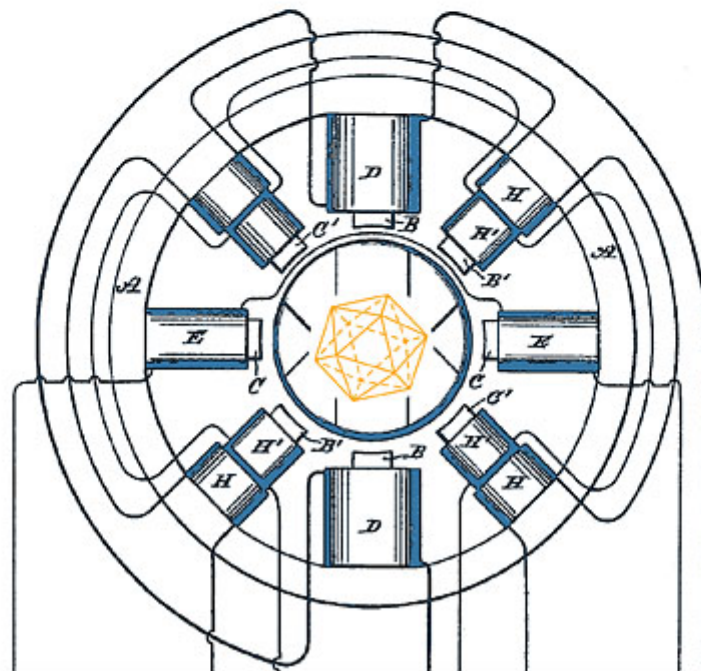*Figure 1. Entreprise IoT*

This book is available online here.

emlyon students have access to this book freely through the online library here.

The end

Find references for this lesson, and other lessons, here.

This course is made by Clement Levallois.

Discover my other courses in data / tech for business: http://www.clementlevallois.net

Or get in touch via Twitter: @seinecle