



# Educative assets for Industry 4.0

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Educational offerings for continuous education focusing on topics related to the Fourth Industrial Revolution

## Virtual Factory

A set of innovative lessons on core topics/main components of the Industry 4.0, including modules, hands-on-experiment projects, and creative challenges targeted at students enrolled in higher education bachelors/master degrees and aimed at preparing the future young innovators with the skills requested by the market.

## Joint post graduation

A ground-breaking post-graduation course built-on creative strategies (such as design thinking, lean start-up and project-based learning) applied to industry 4.0, targeted at industry workers and PHD students interested in putting into practice pilot projects to accelerate their company's digital innovation/transformation. Applying design thinking to Industry 4.0 and using a project-based approach, with practical pilot projects, this post-graduation course is aimed at developing key competencies of workers interested in having an active role in their company's digital innovation / transformation processes.

## Short courses

The courses are 2 credits each and they comprise 3 full days of work at Aalto Design Factory plus approx. 24 hours of independent work.

## Lessons

Innovative online hub where users can discuss and share experiences related to current and emerging topics for Education / Industry 4.0, find the project outcomes, find educational materials and online learning tools, and access simulation environments to complete practice assignments linked to Industry 4.0.

# 3 short courses on topics related to Industry 4.0

from Jan-March 2020 – 2 credits each



For Msc. degree students, companies/professionals.

• 24 contact hours plus another 24 non-contact hours (assignments)

## Course 1

*Ethical product development*

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### *Design Brief*

Jan 13, 9:00-16:00, at ADF Studio

### *Prototyping hackathon*

Jan 22, 9:00-16:00, at ADF Studio

### *Final presentations*

Jan 31, 9:00-16:00, at ADF Stage

Challenge by Consair

<https://consair.fi/>

**24 working hours**



## Course 2

*User-centered product development*

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### *Design Brief*

Feb 10, 9:00-16:00, at ADF Studio

### *Prototyping hackathon*

Feb 19, 9:00-16:00, at ADF Studio

### *Final presentations*

Feb 28, 9:00-16:00, at ADF Stage

Challenge by Protorhino

<http://www.protorhino.com/>

**24 working hours**



## Course 3

*Sustainable product development*

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### *Design Brief*

Mar 9, 9:00-16:00, at ADF Studio

### *Prototyping hackathon*

Mar 18, 9:00-16:00, at ADF Studio

### *Final presentations*

Mar 26, 9:00-16:00, at ADF Puuhamaa

Challenge by Start North

<https://startnorth.com/>

**24 working hours**



# **Course 4:** *Specialization in Industry 4.0*

– 30 credits

## **5 International, interdisciplinary teams**

*An online international course (30 ECTS) on Industry 4.0 digital innovation and transformation that brings together students and professionals to solve a real-life challenge related to Industry 4.0.*

### **Where:**

*Online + Aalto Design Factory, Finland.*

### **When:**

*From 21 Sep 2020 to 26 Feb 2021.  
Courses take place every weekday from 10:30-12:30.*

### **Selection Criteria:**

*Minimum Bachelor's degree on the fields of Business, Engineering or Design. Professional experience is a plus.*

### **How to apply:**

*Send your CV and motivation letter in English to [marcela.acosta@aalto.fi](mailto:marcela.acosta@aalto.fi) by 30 June 2020*

# Course 4:

## Specialization in Industry 4.0

Course weekly schedule from sep to feb.

**Mon**

**Project  
Work**

10:30 - 12:30

**Tues**

**Soft skills  
training**

10:30 - 12:30

**Wed**

**Industry  
4.0 module**

10:30 - 12:30

**Thurs**

**Industry  
4.0 module**

10:30 - 12:30

**Frid**

**Industry  
4.0 module**

10:30 - 12:30

There will be online classes every weekday from 10:30-12:30 with the other participating students from Poland and Portugal. Typically, Monday and Tuesdays will be for project work and soft skills development, and the rest of the week will cover the modules related to Industry 4.0 topics.

### 1. Project (5 ECTS)

*Learning objective: Basics of product development processes and project working*  
*Content: Product development project*

### 2. Soft and T-skills (5 ECTS)

*Learning objective: Applying transferrable and disciplinary skills to accelerate digital innovation and transformation*  
*Content: Neuroscience and human development, self-awareness, interpersonal relationships, organizational efficiency, sustainability, ethics and moral development*

### INDUSTRY 4.0 MODULES

#### 3. Shifting to I4.0

*Change Management and IT Driven Industry 4.0 (5 ECTS)*  
*Learning objective: Basics of change management and IT driven Industry 4.0*  
*Content: Introduction to Industry 4.0, cyber physical systems, internet of things, data analysis, cyber security*

#### 4. Co-Creation, New Business Models (5 ECTS)

*Learning objective: Basics of co-creation, new business models*  
*Content: Innovation of business models using co-creation*

#### 5. Intelligent Information and Decision Support Systems (5 ECTS)

*Learning objective: Basics of intelligent information and decision support systems*  
*Content: Enterprise architecture, applications and modelling, systems interoperability*

#### 6. Sustainability Enablers (5 ECTS)

*Learning objective: Sustainable ways of accelerating digital innovation and transformation*  
*Content: Physical internet, additive production, circular economy*