Challenge@PoliTo

Innovative Teaching Model
Is Teaching Enough?!
Entrepreneurship focus in new didactic methods demonstrated to have a strong impact on:

- Economic growth
- Better employability skills development
- Entrepreneurship willing and Innovation capability

Empirically, real projects and multi-skilled teams are needed to empower the effects
Contamination Lab Innovation Kitchen

A place where students can experience and put in practice competences learned in classroom in an informal environment which promote a creative and collaborative spirit.
Contamination Lab Innovation Kitchen

different knowledge’s and experiences to exploit the strength of interdisciplinarity

learning by doing approach allowing students to learn&try, prototyping with a wide tech library while technically supported

challenge—based approach with idea creation and problem solving working on real projects provided by Companies

an informal place where students can relax, share their ideas and receive specific mentoring
The Cross-Contamination Model

- Sustainability and Innovation culture
- Entrepreneurship education
- Multidisciplinary approach: complement the knowledge and focus expertise
- Collaborate and tackle bigger industry challenges
- Close the gap amongst Industry and University
What students learn:

- Manage different approaches within the team
- Self evaluation of the work progress
- Deadline management
- Efficient use of the hardware available
- Market research & Business modelling
Challenge @ PoliTo – Structure

Where: CLIK Lab
Duration: 14 weeks
Student Effort: 200 hours $\rightarrow$ 8 CFU
Student n°: 30 (5 team of 6 people)

Actors Involved:
- Professors
- Company
- Mentors
- CLIK Staff

Informal Kitchen
Pitch Stage
Coworking Space
Challenge @ PoliTo - Timeline

Kick Off & Team Building

2 Days
Challenge @ PoliTo - Timeline

Kick Off & Team Building

Two days in which we will present the Challenge, build the Teams and give some topic insight to make everybody up to speed and ready to start working.

The Agenda is structured to present all the actors involved in the Challenge, an informal team building session and some frontal lessons on specific arguments.
Idea Creation

Kick Off & Team Building

Idea Creation

2 Days — 2 Weeks

Challenge @ PoliTo - Timeline
Two weeks in which students will elaborate on the topic, dig into the problem and the current state of the art. Generate new ideas and select possible technologies to use for development & prototyping.

Mentors will assist students once a week in order to guide them on the principal tasks.
Challenge @ PoliTo - Timeline

Kick Off & Team Building

Idea Creation

Idea Presentation

2 Days — 2 Weeks — 1 Day
Challenge @ PoliTo - Timeline

Kick Off & Team Building

Idea Creation

Idea Presentation

One day in which students will present their problem statement and the idea created.

2 Days — 2 Weeks — 1 Day
Challenge @ PoliTo - Timeline

Kick Off & Team Building

Idea Creation

Idea Presentation

Development & Prototyping

2 Days — 2 Weeks — 1 Day ———————————— 11 Weeks
11 weeks in which students will develop their idea and prototype it with focus on feasibility and sustainability.

Mentors will assist students once a week in order to guide them on the principal tasks.
Challenge @ PoliTo - Timeline

Kick Off & Team Building

Idea Creation

Idea Presentation

Development & Prototyping

Final Presentation

Idea Presentation & Prototype Demo

2 Days — 2 Weeks — 1 Day — 11 Weeks — 1 Day
Challenging @ PoliTo - Timeline

- Kick Off & Team Building
- Idea Creation
- Idea Presentation
- Development & Prototyping
- Final Presentation

- 2 Days
- 2 Weeks
- 1 Day
- 11 Weeks
- 1 Day

3 months period
Challenge @ PoliTo - Company Involvement

Kick Off & Team Building

Idea Creation

Idea Presentation

Development & Prototyping

Final Presentation

Idea Presentation & Prototype Demo

- Kick Off & Team Building: 2 Days
- Idea Creation: 2 Weeks
- Idea Presentation: 1 Day
- Development & Prototyping: 11 Weeks
- Final Presentation: 1 Day

Company presence is expected during presentation days

Is up to the Company to decide the involvement during the development phase
What’s the effort?

Students: 6,000 h

Mentor: 180 h

Lecturer: 50 h

Company: 30 h

During the 14 weeks, 30 students will work 200h each, supported by mentors selected appropriately for the Challenge.

Lecturer will overview all the work with monthly updates and overall supervision.

In the 30 hours, besides presentation days, we consider an average effort of 3 hours a month. It is up to the Company to decide the amount of hours to spend in support of students based on goals and expected results.
Challenge
Insight
MORDENTE

LA FORZA CHE DATE ALL’ELOQUIO
TENSIONE MUSCOLARE

Molto legato ad articolazione e
Intelligibilità

Video-Audio
Team Building
Prototyping
Informal space
VISION

We see a world in which technology can help us identifying and finding every object, decreasing human error

RFID on each item

AR in the warehouse

Pitching
Outcome

Prototyping

Blogging

Social Media Traffic
<table>
<thead>
<tr>
<th>CHALLENGES ENDED</th>
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<tr>
<td>Reverse Logistics - reverse logistics from stores to Adidas</td>
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<td>Agritech - smart solutions for agriculture</td>
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<td>TheCutter - design new machineries and processes</td>
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<td>Smart Tower - new way to use the Terna’s Smart Towers</td>
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<tr>
<td>e-Mobility - solutions to reduce “range anxiety” on electric vehicles</td>
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<tr>
<td>PeopleFlowing - analysis and management of pedestrians in critical spaces</td>
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<td>CLEAR - separation of microplastics from water</td>
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<td>PerformANCE - real time monitoring of a construction site</td>
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<th>PEOPLE INVOLVED</th>
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<td>250 Student, more than 20 Master’s degree programmes</td>
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<td>10 Lecturers, 50 Mentors</td>
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“With the Challenge I had a paradigm of what it is to work in an innovative company. I have improved the skills in team building and in the management and cooperation of a team with heterogeneous skills.”

“It is a window that simulates the way we will work in the future. We did small what startups and companies do big and better”

“An experience that shows how fundamental are relationships with other people and networking”
Feedbacks from students on Challenge@PoliTo

1. It is one of the best experience at Politecnico!

2. Good for networking;

3. I think that is a great opportunity to grow as a person and as a team member, an opportunity to learn by doing and to face the real world outside university;

4. It has been a stimulating experience that taught me a lot of skills that are going to enrich my experience and provide me tools to better approach the “work world”;

5. I think these experiences are the best connections the university can build between students and working/entrepreneurial world, not comparable with exams;

6. Yes because it’s a value added to the theoretical exams that everyone does at university;

7. It is a perfect place to sharpen personal and professional skills;

8. It is the best way to practice with different technologies, to learn all the different aspects of a project, from the theory behind to the business plan;

9. The Challenge@PoliTo gives the possibility to understand how to work in a team with different backgrounds, how to manage the time to achieve the deadlines and the importance of the communication between the team members and the mentors. It makes you understand that if you have an idea you can implement it from zero and do it.
Thanks!