Technology is perhaps the most important driver of innovation and disruption – two forces that we see changing all industries, turning startups into global giants, and in some cases leaving former giants gasping struggling to change.

Often thought of as “only for techies”, understanding and applying technology to do things in new and better ways is part of every professional’s job - whether you work in business, law, government, or even the arts and humanities.

This course involves not only learning about current and emerging technologies but also how these might apply to innovating and solving problems in your chosen profession or career path.

We will introduce you to a range of technologies, including: IoT, Blockchain, Mobile, Wearables, Artificial Intelligence, VR and Big Data. This is not a coding or tech development course! You will learn that rather than being “scary”, the essential concepts of these technologies can be learned and digested quickly – and you will be introduced to a range of relevant real-world examples of how these technologies are being used. You will have the change to engage in hands-on innovation methods, to work with your classmates in thinking about how these technologies might be applied to your chosen area of professional activity.

Upon the completion of this course, participants should:

Become aware of a key set of new and emerging technologies and how these can be used for innovation
Understand the value that these technologies have for driving innovation
Learn how to design innovative products and services in your chosen profession using these technologies
Facilitate communication of these innovations through a common innovation language
This course organized around presentation of concepts, active discussions, surveys and class participation. Class participation is mandatory. Your voice is indispensable. It is important that you come to class prepared in order to enrich it. The first part of each class will be an active introduction to a set of technologies, and in the second part will give you a change to engage in an innovation session with your teammates to think about these technologies might apply to your professional domain.

This course focuses on the practical nature of technology disruption and its impact in businesses worldwide. In this regard 60% of the final grade for the course will be awarded to the innovation deliverables to be handed by groups. The course is structured in double sessions per technology, in the first session we will review the theoretical aspects of each technology and during the second session we will conduct a innovation workshop by groups to design domain focused implementations for each technology reviewed. Additionally 40% of the grade will be awarded based on the quality of your class contributions.

<table>
<thead>
<tr>
<th>Teaching methodology</th>
<th>Weighting</th>
<th>Estimated time a student should dedicate to prepare for and participate in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>30.0 %</td>
<td>45 hours</td>
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<tr>
<td>Discussions</td>
<td>6.67 %</td>
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<td>Exercises</td>
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<td>Group work</td>
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<tr>
<td>Other individual studying</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>100.0 %</td>
<td>150 hours</td>
</tr>
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</table>

15th November 2018
PROGRAM

SESSIONS 1 - 4
The digital domain
T.N.: Uber Business Model
T.N.: Facebook business model
In this session, we will introduce the course and we will review the current technologies employed in a modern company like Uber or Facebook. Additionally we will review the different innovative business models enabled by the web and app technologies.

SESSIONS 5 - 8
Blockchain
T.N.: Goldman - Blockchain
T.N.: Bitcoin and blockchain
These three technologies are changing the way financial transactions are carried out the way contracts are written and enforced, the way asset ownership is guaranteed, and how these technologies are disrupting the traditional concept of registries, notaries and financial services.

SESSIONS 9 - 12
Big Data, IoT, Mobile and Wearables
T.N.: Internet of things
T.N.: Wereables
Data and information is no longer produced and processed in desktop or laptop computers as more and more devices become smart and connected.

SESSIONS 13 - 16
Drones
Drones may be consider one of the technologies that can change the visible part of our lifes. How we move and how we transport objects may change in the next decade and so all our economy could restructure at some point.

SESSIONS 17 - 20
Artificial Intelligence
T.N.: Elon about AI
T.N.: Tedx about AI
Artificial Intelligence is a new way of creating a competitive advantage through machine learning while automating tasks traditionally performed by humans. In these sessions, we will review the artificial intelligence taxonomy and how there are employed in your industry.

SESSIONS 21 - 24
Rocket Science

15th November 2018
Some of the most powerful men in the world and aiming to conquer the space again in the next decade. We will get through how this technology has evolve in the last 5 years and what that means.

**SESSIONS 25 - 28**

Virtual reality & augmented reality

*T.N.: Facebook VR*

*T.N.: The best VR/AR apps*

Virtual and augmented reality is changing the way we interact with other people and applications. A wide array of industries is being disrupted from travel to training and medical treatments or gaming. These new types of technology-enabled realities can be profitable and we will explore the ecosystem being built around them and the different players in the industry.

**SESSION 29**

Special discussion

**SESSION 30**

Special discussion
Evaluation Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Percentage</th>
<th>Comments</th>
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</thead>
<tbody>
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<td>Workgroups</td>
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<tr>
<td>Final Exam</td>
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</tr>
<tr>
<td>Final Exam</td>
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</tr>
</tbody>
</table>

Professor Bio

Professor: **Pablo Ventura Aranguren**

E-mail: pventura@faculty.ie.edu

**Pablo Ventura Aranguren**

Pablo Ventura is the Investments Director of K Fund, a Venture Capital Fund based in Madrid. Pablo has spent most of his career in the Venture Capital Sector. Over the last 8 years, he has worked indirectly with over 4,000 high potential start-ups and directly with over 500. Pablo has also brokered more than 50 investments in 30 start-ups. Also, he has made a few personal investments as a business angel in seed companies.

Industrial Engineer (ICAI and UPM). MBA from IESE Business School.

Other Information

Code of Conduct in Class

1. **Be on time**: Students arriving more than 5 minutes late will be marked as “Absent”.

   Only students that notify in advance in writing that they will be late for a specific session may be granted an exception (at the discretion of the professor).

2. **If applicable, bring your name card and strictly follow the seating chart**. It helps faculty members and fellow students learn your names.

3. **Do not leave the room during the lecture**: Students are not allowed to leave the room during lectures. If a student leaves the room during lectures, he/she will not be allowed to re-enter and, therefore, will be marked as “Absent”.

   Only students that notify that they have a special reason to leave the session early will be granted an exception (at the discretion of the professor).

4. **Do not engage in side conversation**. As a sign of respect toward the person presenting the lecture (the teacher as well as fellow students), side conversations are not allowed. If you have a question, raise your hand and ask it. If you do not want to ask it during the lecture, feel free to approach your teacher after class.

   If a student is disrupting the flow of the lecture, he/she will be asked to leave the classroom and, consequently, will be marked as “Absent”.

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5. **Use your laptop for course-related purposes only.** The use of laptops during lectures must be authorized by the professor. The use of Social Media or accessing any type of content not related to the lecture is penalized. The student will be asked to leave the room and, consequently, will be marked as “Absent”.

6. **No cellular phones:** IE University implements a “Phone-free Classroom” policy and, therefore, the use of phones, tablets, etc. is forbidden inside the classroom. Failing to abide by this rule entails expulsion from the room and will be counted as one absence.

7. **Escalation policy: 1/3/5.** Items 4, 5, and 6 above entail expulsion from the classroom and the consequent marking of the student as “Absent.” IE University implements an “escalation policy”: The first time a student is asked to leave the room for disciplinary reasons (as per items 4, 5, and 6 above), the student will incur one absence, the second time it will count as three absences, and from the third time onward, any expulsion from the classroom due to disciplinary issues will entail 5 absences.