Course form to fill in 2026

Course title:

ARTIFICIAL INTELLIGENCE & SUSTAINABLE DIGITAL TRANSFORMATION

Staff responsible for the course:

Jean-Baptiste LION PINSON

Lecturers:

Manuel LESAICHERRE - Pierre MOUSSALLY

1) COURSE PRESENTATION

Aims:

Draw up a list of competencies and/or skills that the student should have acquired or improved at the end of the course.
You must fill in the field under the format "the student should be able to…" using action verbs such as define, realise, control… (This description should not take more than ten lines)

Subject and objectives:

- During this week, students will have the opportunity to answer the following question: "How Artificial Intelligence fosters sustainability?".
- The combination of Artificial Intelligence and Sustainability is a unique opportunity to develop critical thinking and learn how to face the new challenges of today's global world.
- This digital transformation must be thought out:
  - in compliance with legislation and from an eco-responsible perspective, while incorporating the latest relevant technological developments,
  - imagining positive use cases, to meet the challenges of sustainable development,
  - by creating new forms of value.
- AI can provide answers to the challenges of sustainable transformation.

Complementary objectives:

- Work on case studies and practical projects.
- Develop a culture of sustainable digital innovation, by showing concrete applications of the impacts of digital in the professional world.
- Understand:
  - the different levels of the impact of sustainable digital,
  - how to create projects with a positive impact.
- Become ambassadors for responsible digital transformation.

Prerequisites:

You must not write courses' codes or names but identify the preliminary skills as the knowledge or the know-how needed to efficiently follow this course.
Write it out in terms of knowledge and methodologies required to follow this course (this would help students from direct entry to position themselves). (This description should not take more than five lines)

- Be able to understand the basics of CSR and sustainability.
- Be able to imagine concrete, sustainable use cases.

Course contents:

Here, an abstract of the course can be given or the different chapters of the course can be simply written down.
(The description should not take more than ten lines)

- Part 1: know how to develop innovative projects.
  - 1.1 - Understanding innovation and what makes it valuable.
  - 1.2 - How to define your value proposition
  - 1.3 - What are the conditions, methods and skills needed to innovate (design thinking, open innovation, collective intelligence)?
  - 1.4 - A focus on agile methods.

- Part 2: sustainable digital innovation.
  - 2.1 - Understanding the challenges of digital responsibility
  - 2.2 - Understanding the 3 pillars of sustainable digital innovation
    - Legal: focus on the challenges of legal regulation (GDPR, AI Act, …),
    - Human (diversity, inclusivity…),
    - Environmental

- Part 3: digital innovation and AI as the answer to tomorrow's challenges?
  - 3.1 - How the circular economy is impacting digital transformation.
  - 3.2 - Tech for Good / IT for Green: digital innovation for the common good.
  - 3.3 - GreenTech / Green for IT: Reducing the environmental footprint of digital technology
  - 3.4 - Digital solutions for the disabled: Handitech

2) WORKING LOAD

Here, you should allocate the effective working load of the course, including an estimation of the personal work required from the student.

TABLE 1

Course's types	Number of hours	Notes
Effective presence		
- *Magistral Course*	4	
- *Interactive Course*	4	+ 4h of corporate sessions
- *Tutorials*	4	
- *Coaching*	4	
Training from a distance		
- *Video-conferences*		
- *Webinars*		
Self-learning		
- *Books 'readings*		
- *E-learning*		
- *Research*		
Outdoors-training		
- *In firms*		
- *Internship*		
Personal work		
- *Group Projects*	10	
- *Individual Projects*		
- *Personal work*	10	
Total working time for the student	***40***	

3) ***EDUCATIONAL METHODS***

Tick here the different educational methods used:

X Coaching
X Case Study
☐ E-Learning and/or Self-learning
X Interactive courses
X Presentations
X Projects
☐ Research
☐ Seminars
☐ Tutorials
☐ Visits

4) ***ASSESSMENT***

Sum up briefly the course assessment's mechanism (two or three lines) in order to introduce the assessment's table that you have to complete below (table n°2).
You must also define clearly how feedback will be given to students (in accordance with the feedback policy).

Attendance and active participation in class are compulsory.

Assessment process:

- Continuous assessment (30%):

The analysis work required to prepare the lessons will be marked (it may be individual or collective, depending on the subject).

- Collective project to be presented at the end of the term (70%):

Students will have to present a digital innovation project based on AI technologies. This work will be done in groups and will be both written (dossier) and presented orally.

Students will have to present a digital innovation project to meet the challenges of responsible digital. This work will be done in groups and will be both written (dossier) and presented orally.

List the assessment for each modality.

TABLE 2

Modality	Type of control	Length (h)	Number	Weighting (%)
Continuous assessment	Continuous assessment (CONT)			30
	Mid-term exam (MIDT)			
	Participation (PARTN)			
	MCQ			
Final exam	Oral final exam (ORAL)			
	Written final exam (ENDT)			
Others	Case study (CASE)			
	Group Project (GPROJ)			35
	Individual Project (IPROJ)			
	Written assignment (WRITTEN)			35
	Exercises (EXERC)			
Total				**100%**

5) <u>RECOMMENDED READING</u>

Name of books (indicate only three or four must-read references) / Name of reviews:

Reference book (appellation reserved for books selected by the School and necessarily bought by all the students):

Class books:

- Innovation, Sustainability, and Technological Megatrends in the Face of Uncertainties
  o Abeba N. Turi,
  o Pooja Lekhi

- Green Technological Innovation for Sustainable Smart Societies   o Chinmay Chakraborty

Reviews:

<u>Internet Resources:</u>

Please indicate here if you use the school intranet site to put on-line documents and/or if you advise the visit of web sites to students.

Name of the Website	**URL**