Data and Business Insights

ECTS : 3

Enseignant responsable : Anouck ADROT (https://dauphine.psl.eu/recherche/cvtheque/adrot-anouck)

Langue du cours : Français

Volume horaire : 18

Description du contenu de l'enseignement :

This course aims to:

- Learn how data and datafication shapes business models, production of services and goods as well as policies and the functioning of societies;
- Learn to exploit data and produce a relevant storyline based on its visualization and processing on Tableau;
- Take a critical stance on data usage in organizations. Understand avenues for organizations to tackle its inherent challenges.

The course is based on learning-by-doing teaching principles. It requires continuous involvement and regular teamwork. There is no final exam in this course, but each team has to produce a video that synthesizes the team's advances on a specific issue, based on their visualization of data sets. *Brain* attendance to the course is compulsory. This means that the students who use phones and computers to process information unrelated to the content of the course can get excluded. During the courses, the instructors include some lecture sessions, during which computers and phones are strictly forbidden. The students should bring papers and pen to attend the courses. All the documentation is provided on Moodle and will NOT be sent by email. This course is on Moodle. **1, 2 Module 1 (sessions 1,2) - Why data matters?** Distinction between data and information (lecture + in class activity). Datafication and growing use of data by organizations. How data can change decision-making and strategy. Preparation of the data project (assignments 1 and 2): How question can we tackle with data and how? Tableau settlement and basic learning of Tableau. Quizz 1 on lectures and podcasts about the impact and challenges inherent to data. **3, 4 Module 2 (sessions 3,4) - How to manipulate data?** Tableau training:

- Preparing data for the project;
- learning of Tableau functionalities and visuals' preparation.

5, 6 Module 3 (5,6) - How to integrate data in business strategy and practices? Quizz 2. Vote for the best visual of the data project. Case studies: CVS + Ikea: How organizations adapt their strategies and management to integrate data? Debrief on the asynchronous debate.

Compétences à acquérir :

At the end of the course, students will be able to:

- **Identify and collect data:** identify sources of data, distinguish diverse types of data, understand the licenses inherent to data, extract data and prepare data for analysis;
- **Analyze data:** clean, format data, choose an adequate method to process data;
- **Represent and visualize data:** Use Tableau as a visualization tool and produce relevant visuals, select the best visuals;
- **Provide insights from data:** identify and narrate insights from data and address burning questions with data, different question from practical issues;
- **Collaborate in a project:** collaboratively produce insights from data, receive feedback and integrate feedback in the completion of the project.

Pré-requis obligatoires

This course does not require any specific knowledge in programming and computer science. Knowledge of Excel functions (or any other means to structure and process data) can help to prepare the data and produce the assignments.
The students can also rely on pre-existing knowledge and interest in digital economy and business. Here are some references that can help develop such knowledge:
• Floridi L., (2016), « The Fourth Revolution: How the Infosphere is Reshaping Human Reality », 272 p., Oxford University Press, Oxford.

Mode de contrôle des connaissances :

Part of the grading involves continuous assessment. It will be reduced to 0 for the students who miss 3 sessions (or more)

without justification. **1) Assessment type: Contribution to the class.% of the grade: 20 Individual/team: Individual Nature:** Brain attendance, contribution to the discussion in class, involvement during team work during the class. This grade can be lowered by excessive usage of phones and computers in class. **2) Assessment type: In class Quizz. % of the grade: 10 Individual/team: Individual Nature:** At the beginning of session 2 and session 5, an online quizz will take place about the major notions explained in the class, 1 reading, 1 podcas and 1 video accessible to the class. The documentation package to prepare for the quizz can be found on Moodle. The quizz takes place 15 minutes after the beginning of the class and lasts between 5 and 15 minutes. **3) Assessment type: Peer feedback "assessment part of the workshops".% of thr grade: 10 Individual/team: Individual Nature:** Quality, precision and originality of the individual assessments of the assignments (intermediary assignments to produce the video). Grades get lowered by excessive usage of AI to produce assessments. **4) Assessment type: Data project video. % of the grade: 50 Individual/team: Team Nature:** Prepare a video to present your insights to the whole class. The grade takes into consideration the quality of the rationale provided by the teams. **5) Assessment type: Participation into the asynchronous debate (voices). % of the grade: 10. Individual/team: Team. Nature:** Each team has to produce a voice to participate and contribute to the ongoing debate about data usage in organizations. **Your data project (teamwork)** The data project consists of addressing a specific question by visualizing data. The students will gather by teams to complete this project. In a nutshell, each team has to work on data (by using Tableau) to produce a visual that can help Londong Great Region to deal with sustainability issues. After importing the data on Tableau, each team provides answers to the questions that motivate their study. Each visual should be justified and explained. Also, the insights from each visual should be detailed. In the project, the teams also reflect on the issues that challenged their work, including data collection and cleaning, the production of visuals and their refinement, the limitations of their reasoning based on data.Each team produces a video that should be sent to London Greater Region. The other teams will vote for the best video. The teams will receive feedback about their videos (and some assignments) through Moodle, which helps them improve their production. **Asynchronous debate (teamwork)** During the whole course, each team participates into an asynchronous debate, through the sharing of voices. The objective is to take the time to collective discuss about a pending question related to data usage in organizations. To prepare the debate, the students can rely on the documentation provided on Moodle. The numerical grade distribution will dictate the final grade. The passing grade for a course is 10/20. **Attendance** Attendance is mandatory. Students are expected to attend all classes, arrive on time, and stay for the entire session. Repeated absences or lateness may affect the final grade. **Class Participation** Active participation is encouraged, as it contributes to making classes more engaging and instructive. Students are expected to come prepared and contribute thoughtfully to discussions. When participation is part of the course assessment, it is evaluated based on the quality of contributions rather than their quantity. **Exam Policy** Students are not allowed to bring any materials into exams, except those explicitly authorized by the instructor. Unexcused absences from exams or failure to submit assigned cases will result in a grade of zero when calculating final averages. All exams must be submitted at the end of the examination period. **Communication and Grading** All questions or concerns regarding grading or course policies must follow the official procedures. No direct negotiation with instructors about grades or assessments is permitted. Be aware of the rules in Université Paris Dauphine about plagiarism and cheating during exams. All work turned in for this course must be your own work, or that of your own group. Working as part of a group implies that you are an active participant and fully contributed to the output produced by that group.

Bibliographie, lectures recommandées :

- Brynjolfsson E., McAfee A., (2012), « Race Against the Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly », Digital Frontier Press, 100 p;
- Chignard S., Benyayer L-D., (2015), « Datanomics Les nouveaux business models des données », FYP Editions, 192 p;
- Chignard S., Marchandise J-F., (2012), « L'Open data : Comprendre l'ouverture des données publiques », FYP 192 p;
- Gouiguoux J-P., (2016), « Open Data - Consommation, traitement, analyse et visualisation de la donnée publique », Editions ENI, 580 p;
- Kober V. (2017), « Open data - Ouverture, exploitation, valorisation des données publiques », Territorial Éditions, 136 p. - O'Neil C., (2016), "Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy, Crown, 272 p;
- Shirky C., (2008), "Here Comes Everybody: The Power of Organizing Without Organizations", Penguin Press, 336 p;
- Tapscott D., Williams A.D., (2007), "Wikinomics: How Mass Collaboration Changes Everything", Portfolio, 324 p;
- Shapiro, Carl, Varian, Hal R. (1999), "Economie de l'information, Guide stratégique de l'économie des réseaux", Bruxelles, De Boeck Université;
- Verdier C., (2016), « État des lieux et enjeux de l'Open Data », Éditions universitaires européennes, 64 p;
- Yau N., (2013), « Data visualisation : De l'extraction des données à leur représentation graphique », Eyrolles, 356 p;
- Research : Ngwenyama, O., Rowe, F., Klein, S., & Henriksen, H. Z. (2024). The open prison of the big data revolution: false consciousness, faustian bargains, and digital entrapment. Information Systems Research, 35(4), 2030-2058.

Anouck ADROT is a graduate of the École Normale Supérieure, with a doctorate and PhD from ParisDauphine University and Georgia State University. She is a senior lecturer at Paris-Dauphine University. Her work focuses on information transmission and coordination within and between organizations in turbulent contexts such as crisis situations. She is also interested in the emerging dynamics of reinvention or abandonment of information and communication systems in inter-organizational collectives.