

3.00 credits

22.5 h + 15.0 h

Q2

Teacher(s)	Benoit Nicolas ;Hardwick Robert (coordinator) ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	<ul style="list-style-type: none"> • Identification of available data sources that can be analysed (Web databases, applications, etc.), • Extracting and converting data into usable files • Using concrete examples from different areas of performance, • Identification of the main measures used to evaluate individuals and teams, and how they can be formulated and applied. • Simplified data processing with Excel • Advanced data processing (importing datasets, dataframe, subset, database cleaning, basic statistics, creating a simple function) • Data visualisation • Creating dashboards • Ethical and legal issues relating to the collection and secure storage of of potentially sensitive personal information.
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <ul style="list-style-type: none"> • Explain the value of acquiring, managing and analysing data in the context of physical activity practice (1.1) • Use the key concepts used in monitoring physical activity and sport (e.g. performance measurements, monitoring participants, workload management, etc.). (1.1, 1.5) • Apply data management techniques (spreadsheets, databases, etc.) (1.5, 1.10) • Work with data sets (importing files, filtering data for analysis, etc.) (1.5, 1.10) • Process data submitted by designers and reproduce transformations (e.g. calculation of VO2 from raw data, calculation of HRV monitoring indicators, • Create effective data visualisations (1.5, 1.10, 2.1, 4.1, 7.2) • Analyse data to calculate key indicators related to identified concepts (1.5, 1.10, 2.1, 2.2, 4.1, 4.4, 7.2). • Demonstrate practical experience in conducting analyses on data sets (2.2) • Apply ethical issues such as confidentiality and data security Apply ethical issues such as confidentiality and data security (7.4)
Evaluation methods	Final exam
Teaching methods	Lectures - practical work
Content	<p>This course introduces the principles and practices of data analysis and management in the context of physical activity and sport. Students will explore data sources and learn how to extract, convert, and prepare data for analysis. Through practical examples, the course covers key performance measures for individuals and teams, demonstrating how these can be applied in real-world scenarios.</p> <p>Participants will gain hands-on experience with both simplified and advanced data processing techniques, including the use of Excel and programming-based methods for importing datasets, cleaning data, applying basic statistics, and creating simple functions. The course also emphasizes data visualization to effectively communicate insights. Alongside technical skills, students will examine the ethical and legal issues related to data collection and confidentiality of sensitive personal information, ensuring responsible use of data.</p>
Other infos	This course is strictly reserved for FSM students. It is not open to other UCLouvain students.
Faculty or entity in charge	FSM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Motor Skills: Physical Education	EDPH2M	3		