llsma2002

2021

Research Methods

UCLouvain

10.00 credits	60.0 h	Q1

Teacher(s)	Chevalier Philippe ;Decrop Alain ;El Akremi Assaad ;
Language :	English
Place of the course	Louvain-la-Neuve
Prerequisites	None
Main themes	The objective for this course is to provide students in business management with tools and skills necessary in Qualitative and Quantitative Research Methods, and to strengthen their logic reasoning skills, in order to help them develop rigorous arguments. A good understanding of principles and techniques of research in management will enable students to apply these techniques, as well as acquire on their own additional techniques rooted in their field of research.
Learning outcomes	**At the end of this learning unit, the student is able to :**
	On successful completion of this program, each student will acquire the following skills :
	1. A scientific and systematic approach
	2. Knowledge and reasoning
	3. Project management
	4. Personal and professional development
	At the end of this course, the student will be able to :
	• confidently conceive, formulate and motivate his/her personal research project, from the research questions to the choice of data analysis approaches;
	• show their understanding of major qualitative and quantitative research methods and their ability to make use, and interpret the results of the used research techniques;
	• develop a qualitative and a quantitative research design;
	• identify and conduct the appropriate techniques for different kinds of research questions;
	• critically analyze a scientific research contribution in management.
Evaluation methods	**Continuous evaluation**
	• Date: To be specify later
	• Type of evaluation: continuous assessment not remediable
	• Comments: In group/individual, written preparations, reading scientific articles, exercises, etc.
	Evaluation week
	• Oral: No
	• Written: No
	• Unavailability or comments: No
	Examination session
	• Oral: No
	• Written: No
	• Unavailability or comments: individual work at the end of the January session which can be represented in case of failure in the second session.
Teaching methods	Methodological and theoretical lectures of teachers, accompanied by empirical studies illustrations, alternate with discussions and applications with participants. Teaching is based on reading of scientific articles and book chapters deemed essential to master qualitative and quantitative research methodologies in Management. Students are expected to summarize and present some of these and to discuss it in groups. The content of this course (for example Quantitative Research Methods) will be adapted to the level of advancement of students in order to follow them in their research projects.
Content	**Qualitative Research Methods:**
	• General characteristics of qualitative approaches
	• Research design and data collection
	• Interview Guide and questioning
	• Analyzing and making sense of data
	• Data Quality Control

- Reflexivity and heterodox approaches
- Ethnographic and Visual Approaches

Quantitative Research Methods

- Defining Research Problems and background to quantitative research.
- Research designs
- Hypothesis Testing (Conceptual)
- Type I and Type II Error
- Sampling, probability and sampling distributions.
- Statistical Power
- Description and Measurement: Levels of measurement, normal distribution, reliability, validity, and generalizability.
- Surveys: development and variable measurement
- Control variables
- Common Method Variance: Assessment and remedies
- Cross-sectional and longitudinal field studiesExperimental and quasi-experimental research
- Multiple regressions: linear regression, nonlinear regression
- Bayesian analysis usefulness in research in Management: an introduction
- Bootstrapping: an introduction for testing mediation, moderation and moderated mediation
- Structural Equation Models: an introduction
- Multilevel modeling: an introduction

Logic and algorithm

- Logic, automata and context free languages.
- Turing machines. Turing machines build on automata to make it possible to build more elaborate proofs.
- Computability and Complexity theory. Does a problem have an answer? Is the problem well formulated? How can we determine a priori the level of difficulty of a problem?
- Analysis of algorithms.

Inline resources	Moodle
Bibliography	See on Moodle
Faculty or entity in charge	CLSM

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Management	GEST2M	10		🔍