## EMBA-2224-531-Business Analytics

| **Name of lecturer(s) & Email** | **Level, Status, Timing** | **ECTS, CH & HW/GW*, Online** |
|---|---|---|
| Gisele HITES<br>ghites@gmail.com | Level 2<br>Elective<br>Between 21-09-23 and 23-09-23 | 3<br>20 & 66<br>4 |

### Description of the course unit
The future is uncertain. But a little data collection and a little data analysis can help a whole lot in managing the risks that the future holds in store for us. This course focuses on those quantitative methods that can concretely assist managers in making decisions under uncertainty. This is not a theoretical course. All quantitative methods are presented using concrete business scenarios and are implemented using tools available within the Excel environment. The objective is to equip managers with simple tools that they can easily implement to improve decision-making.

### Course unit Chapters
- Spreadsheet modelling and analysis
- Monte Carlo simulation and risk analysis
- Linear optimization

### Learning outcomes of the course unit
1. Use data-driven approaches to create predictive analytical models
2. Develop, implement and analyse Monte Carlo simulation models
3. Create and solve linear optimisation problems
4. Create linear optimisation models for a variety of applications
5. Use the following Excel tools to apply the methodologies mentioned above: Goal Seek, Regression, Risk Solver Platform, Scenario Manager, Solver, Trendline, XLMiner

### Teaching Methods
Interactive Lecture, Guided Instruction

### Learning Activities
Interactive lectures, In-class exercises, Group work, Individual project

### Learning Objectives (Check Academic Rules & Regulations)
- Learning Objective 1.1: Mastery
- Learning Objective 1.2: Not Covered
- Learning Objective 2.1: Not Covered
- Learning Objective 2.2: Introduction
- Learning Objective 3.1: Introduction
- Learning Objective 3.2: Not Covered

### Evaluation scale
0-20

### Assessment methodology / Students Use of Time and Load
Class participation & Preparation
- weight 10%
- workload estimated ≈ 20 hours
- due 24-09-23

Group assignment
- weight 40%
- workload estimated ≈ 20 hours
- due 08-10-23

Individual Assignment
- weight 50%
- workload estimated ≈ 20 hours
- due 29-10-23

### Contribution to the Sustainable Development Initiative
Non Applicable

### Asynchronous Learning Material (Coursera)
- Set up Google Analytics for a single page website
- Create an A/B web page marketing test with Google Optimize
- Building Custom Regional Reports with Google Analytics

### Readings

**Required**
Evans, J. (2019). Business Analytics (3rd ed.). Pearson.

**Recommended**
Wheelan, C. (2014). Naked Statistics: Stripping the Dread from the Data (1st ed.). W. W. Norton & Company.

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**Notice:** The information available in the course outline is subject to change. Please keep yourself informed at all times by regularly checking your Front Office Portal hosted on Canvas.