

MGT-644(b) **Computational Methods for Doctoral Research in Management**

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Cursus	Sem.	Type
Management of technology		Obl.

Language of teaching	English
Credits	2
Session	
Exam	Written & Oral
Workload	60h
<b>Hours</b>	<b>84</b>
Courses	84
<b>Number of positions</b>	

**Summary**

The objective of this course is to introduce doctoral students to computational methods for data-driven empirical research in management.

**Content**

The course complements courses in statistics and econometrics with a programmatic understanding of how to acquire, store, manipulate, measure, plot, analyze, and classify data. The course requires students to program in Python. Students who are not proficient with the basic syntax, data structures, and programming methods of Python should take an online course or boot camp to learn the basics of Python **prior to the start of class**. Please contact the Professor for suggested courses, tutorials, or MOOCs that would help you to fulfill this requirement.

By the end of the course, students will understand how to work with data in python to conduct doctoral research in economics and management. The ultimate learning objective of the course is to build a toolkit that will elevate the empirical quality of each student's dissertation.

**Keywords**

Data Processing, Visualization, Cloud Computing, Data Analysis, Text Analysis, Simulation, Machine Learning.

**Assessment methods**

Students will be evaluated based on five, take-home assignments – each worth 20% of the overall course grade. Each assignment should take 5 to 6 hours to complete. Each assignment is due before the start of the next class; the final assignment is due one week after the final class.

Create a new jupyter notebook for each assignment and commit it to your git repository. Name your jupyter notebooks sequentially as:

**a1.ipynb a2.ipynb a3.ipynb a4.ipynb a5.ipynb**