

# Syllabus: Advanced Quantitative Methods in Economics (ECOM077)

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Office hours: Thursday 12-1PM and 5-6PM.

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## Course Description

This part of the module will introduce students to coding and data analytics principles. This will be done in the context of Python, which due to its wide applicability has become the most commonly use programming language so far.

This is supposed to be an interactive class where part of the time will be devoted to students solving in-class coding problems. For that, please bring your laptops and install Python before the class. You should download and the Miniconda [distribution](#), which will contain python interpreter. You should also download [Spyder](#), which is the Integrated Development Environment (IDE) that will allow us to interact with python.

## Prerequisites

This class assumes no coding background but will use concepts from the first half of the module.

## References

- [Introduction to Python for Econometrics, Statistics and Data Analysis](#), Kevin Sheppard

- [QuantEcon.org](https://QuantEcon.org).

## Assessment

- Two take-home assignments, 20% each.
- Final Project: 60%. (Also take-home).

## Schedule

- Week 1: Installing python, data types, basic algebra, loading and saving, plotting.
- Week 2: Control flow, conditional statements, breaking up the code into functions.
- Week 3: Optimization.
- Week 4: Data analysis, Pandas package.
- Week 5: Extra: Object Oriented Programming. Python in Excel, AI tolls (as time permits).