

ECON0055 Syllabus 2020/2021

Teaching & Timetabling

ECON0055 will have the following classes:

- **Wednesdays 2 hours between 11h -13h** (UK time / Online)
- **Thursdays 90 minutes between 9h am -10h30** (UK time / one F2F group)

There are currently around 12 students in the module.

Textbook & Lecture notes

The classes are not following a textbook. There will be *lecture notes* available written by the lecturer (as part of a textbook he is writing) and academic papers will be used that will be available as pdf-files on Moodle.

Required Software

You are required to install Mathematica on your laptop / desktop or use UCL cluster-room computers where Mathematica is pre-installed. You will be able to download a copy of Mathematica from the ISD Software Database under the UCL campus license *for free*. The module will be taught using *Mathematica*, but students are welcome to submit their solutions to assignments and exams using *Python*, *R* or *MatLab*. Teaching will however only use *Mathematica*.

The topics and weeks

The topics of the course as they were taught in the previous 2 years will all return, however their order has been adapted to the new format for 20/21. The schedule will now be

- **Research week on the Economics of Space Exploration & the Economics of Climate Change**
 - Week 1: *This is a week we spend discussing & researching the topics about which you will produce a short, recorded, presentation during reading week.*
- **Science, Technology & Productivity**
 - Week 2: *From Engineering to productivity*
 - Week 3: *Economic growth and technological progress*
- **Data, Information & the network of Knowledge**
 - Week 4: *Data & Information*
 - Week 5: *The network of Knowledge*
- **Scientific Advance & Technological progress**
 - Week 6: *Productive Networks of knowledge*
 - Week 7: *The growing networks of Science*
- **Paradigm change & Schools of Thought**
 - Week 8: *Paradigms & paradigm change in a network of researchers*
 - Week 9: *Communities in the network of people, papers and patents*
- **Research week on the Economics of Space Exploration & the Economics of Climate Change**
 - Week 10: *This is a week we spend discussing & researching the projects about which you will produce a report during the last week.*

Check out the [Weekplanner](#) here on Moodle for a suggested way of distributing the work across any week.

General structure of the Course material

For each **topic** you will find a folder on Moodle containing:

- The relevant lecture notes;
- The relevant academic papers;

And each **week** there will be

- a *page* on the Moodle site containing a brief outline of *what* we are studying that week and *why*;
- two preparatory “*lessons*” on Moodle, *one for each class* that week,

Formative Assignment

There will be 4 short problem sets that you can submit for feedback

- Week 2-3 (feedback in week 4)
- Week 4&5 (feedback in week 6)
- Week 6-7 (feedback in week 8)
- Week 8-9 (feedback in week 10)

Summative Assessment

The project consists of two marked activities

- **Week 6:** Submit recorded presentation about your research project (feedback in week 7)
- **Week 11:** Submit research report about your research project (feedback in early January 2021)

The *weighted geometric mean* of the 2 components will count 50% towards your final mark. The final piece of summative assessment is the 50% Take Home Exam.

- **Take-Home Exam:** Issued in week 10, to be submitted in the first week of January 2021.

The Take-Home Exam has the same format as *the formative assignments*.

Workload

Standard UCL 15-credit modules should require about **150 hours** of quality-time work.

- The ECON0114 Take-Home exam has a workload of approximately **8 hours**;

The remaining hours workload of the module is distributed as follows:

- **10h preparation** for the Take-Home Exam (December-January *outside of term*)
- 11 weeks (including *reading week*) of **12h** per week of assignments, readings, problem sets, video-lectures, contact hours, etc.

Be aware that the workload of a term 1 module that finishes before term 2 starts will have a higher workload in term 1 than term 1 modules with a large final exam in term 3!