

GV110-4-AU/ZA / GV110-5-AU/ZA
Scientific Reasoning for the Social Sciences
2020–2021

Lecturer and Module Supervisor

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Module Administrator

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Module available for Study Abroad students: Yes No

ASSESSMENT: This module is assessed by 100% coursework (AU & ZA)

LISTEN AGAIN: Listen Again is restricted to SpLD students

INSTANT DEADLINE CHECKER

Assignment Title	Due Date Monday 9.45am	Coursework Weighting	Feedback Due
Online class activity	Week 4,7,10	40%	3 weeks after due date
Online test	Week 12	60%	Week 16

TOP READS

- Okasha, Samir. 2016. Philosophy of Science. A Very Short Introduction. Oxford University Press
- Kellstedt, Paul, and Whitten, Guy. 2013. The Fundamentals of Political Science Research. 2nd Edition. Cambridge University Press.
- Clarke, Kevin and Primo, David. 2012. A Model Discipline. Political Science and the Logic of Representations. Oxford University Press

MODULE DESCRIPTION

The module provides an introduction to the philosophy and theory of (empirical social) science, its structure, and methods. It asks questions such as “What is science?”, “What is the scientific method?”, “How is knowledge generated?”, “How is scientific progress made?”, or “How to do science?” Introducing students to the basics of the scientific methods in the social sciences, allows them to understand better how to formulate research problems independently, identify and acquire the necessary additional methods skills within their degree program, and to conduct work that fulfills satisfactory standards of research quality. This not only pertains to students’ classes during the second and third academic year or their capstone dissertation but also provides them with a solid foundation for potential postgraduate studies or employment in research-related jobs.

Module Aims

This module seeks to enable students to assess scientific logic and assumptions, evaluate scientific theories and empirical evidence, and build intuition for good research designs.

Module Outcomes:

By the end of the module the students will have achieved the following:

1. Gained an understanding of the basic issues in research design and philosophy of science.
2. Learnt how to construct a scientific explanation (research question, theory-building, hypotheses).
3. Understood how to empirically evaluate scientific theories.

MODULE STRUCTURE AND TEACHING

The module will be delivered by a (i) weekly pre-recorded lecture and (ii) a weekly interactive lecture. The pre-recorded lecture will consist of one or more items of prepared content that students can access electronically and must study before the interactive lecture. The interactive lecture will consist of one 50-minute lecture in which students can ask questions about, and discuss various aspects of, the prepared content with the module supervisor.

ASSESSMENT

Assessment is by three class activities (40% of final mark) and a final test assignment (60% of final mark). Activities will go online at the beginning of the term (week 1) and submissions close in week 4, 7, and 10 for the three activities, respectively. The final test assignment goes online the day after the last lecture of the module (week 12) and submission closes 24h later.

Where a student is unable to undertake the assessment by the deadline, and it is deemed impossible to consider a late submission request due to the nature of the assessment, an extenuating circumstances form should be submitted which will be considered by the Board of Examiners.

PARTICIPATION AND READINGS:

We expect of you during lectures or interactive lectures:

- To attend all lectures and classes after having done the required reading.
- To pay attention and take notes as necessary.
- To think about the readings and lectures notes before the class, and be ready to discuss them: try to identify the key assumptions in the texts; map the structure of the argument; underline the conclusions. Highlight to yourself points you don't understand. (If you don't understand it, there's great likelihood others have not understood it either, so don't be shy to ask.) Ask yourself whether you agree with the text, whether you can identify weaknesses or gaps in the argument, and what could someone who disagrees with it argue against it.
- To offer your participation as required (answering questions, asking questions etc.). Learning about and discussing these texts is a communal endeavour and it is a matter of good citizenship to contribute. Further, part of what we want you to achieve, and what we mark you for, is clear and confident oral presentation. You are expected to answer questions, raise new points, and contribute to the progression of discussion in class.

Please take into account amount of reading required immediately prior to assessment deadlines.

How to submit your essay using FASER

You will be able to access the online submission system via your myEssex portal or via <https://FASER.essex.ac.uk>. FASER allows you to store your work-in-progress. This facility provides you with an ideal place to keep partially completed copies of your work and ensures that no work, even drafts, is lost. If you have problems uploading your coursework, you should contact ltt@essex.ac.uk. You may find it helpful to look at the FASER guide <http://www.essex.ac.uk/it/elearning/faser/default.aspx>. If you have any questions about FASER, please contact your administrator or refer to the handbook.

Under NO circumstances is your coursework to be emailed to the administrators or the lecturer. This will NOT be counted as a submission.

Coursework deadline policy for undergraduates

There is a single policy at the University of Essex for the late submission of coursework in undergraduate courses. Essays must be uploaded before 09.45 on the day of the deadline.

All coursework submitted after the deadline will receive a mark of zero. The mark of zero shall stand unless the student submits satisfactory evidence of extenuating circumstances that indicate that the student was unable to submit the work prior to the deadline. For further information on late submission of coursework and extenuating circumstances procedures please refer to <http://www.essex.ac.uk/students/exams-and-coursework/ext-circ.aspx>.

Essay feedback will be given via FASER.

ALL submissions should be provided with a coversheet (Available from Moodle).

Plagiarism

Plagiarism is a very serious academic offence and whether done wittingly or unwittingly it is your responsibility. **Ignorance is no excuse!** The result of plagiarism could mean receiving a mark of zero for the piece of coursework. In some cases, the rules of assessment are such that a mark of zero for a single piece of coursework could mean that you will fail your degree. If it is a very serious case, you could be required to withdraw from the University. It is important that you understand right from the start of your studies what good academic practice is and adhere to it throughout your studies.

The Department will randomly select coursework for plagiarism checks and lecturers are very good at spotting work that is not your own. **Plagiarism gets you nowhere; DON'T DO IT!**

Following the guidance on referencing correctly will help you avoid plagiarism.

Please familiarise yourself with the University's policy on academic offences:

<http://www.essex.ac.uk/about/governance/policies/academic-offences.aspx>.

Extenuating circumstances for late submission of coursework

The university has guidelines on what is acceptable as extenuating circumstances for later submission of coursework. If you need to make a claim, you should upload your coursework to FASER and submit a late submission of coursework claim which can be found here: <http://www.essex.ac.uk/students/exams-and-coursework/late-submission.aspx>. This must be done within seven days of the deadline. FASER closes for all deadlines after seven days. The Late Submissions committee will decide whether your work should be marked and you will be notified of the outcome.

If you experience significant longer-term extenuating circumstances that prevent you from submitting your work either by the deadline or within seven days of the deadline, you should submit an Extenuating Circumstances claim form for the Board of Examiners to consider at the end of the year <http://www.essex.ac.uk/students/exams-and-coursework/ext-circ.aspx>.

READING

The following three books will be used in the course. In addition you will receive additional lecture materials online via Moodle.

- Okasha, Samir. 2016. *Philosophy of Science. A Very Short Introduction*. Oxford University Press
- Kellstedt, Paul, and Whitten, Guy. 2013. *The Fundamentals of Political Science Research*. 2nd Edition. Cambridge University Press.
- Clarke, Kevin and Primo, David. 2012. *A Model Discipline. Political Science and the Logic of Representations*. Oxford University Press

Sessions:

Introduction

Week 2 Overview: What is Science, Social Science, Political Science, and why it needs Scientific Reasoning

Required Reading:
Okasha. Chapter 1
Kellstedt/Whitten. Chapter 1
Clarke/Primo. Chapter 1

Additional reading:
Lewens, Tim. 2016. *The meaning of science: An introduction to the philosophy of science*. Hachette: Pelican,

The Fundamentals of Scientific Knowledge

Week 3 Scientific inference

Required Readings:
Okasha. Chapter 2
Popper, Karl. *The Logic of Scientific Discovery*. New York: Harper & Row, 1959, Chapter 1.

Week 4 Scientific progress

Required Reading:
Okasha. Chapter 5
Kuhn, Thomas S. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1970, 2nd edition, Chapters 2-5.

Additional reading:
Laudan, Larry. 1978. *Progress and its problems: Towards a theory of scientific growth*. Berkeley: University of California Press. Chapter 3

Week 5 Scientific Discovery I: Understanding, theories, models

Required Readings:
Okasha, Chapter 4
Clarke/Primo, chapters 3-4

Additional reading:

Laudan, Larry. 1978. Progress and its problems: Towards a theory of scientific growth. Berkeley: University of California Press. Chapter 1

Week 6 Scientific Discovery II: Positivism, Empiricism, and Falsification

Required Readings:

Okasha. Chapter 3

Clarke/Primo, chapters 4-5

Additional reading:

Hacking, Ian. 1983. Representing and Intervening. Cambridge: Cambridge University Press. Chapter 1-2.

Week 7 Hands-on session: interviews, narratives, experiments, surveys, coding

The Road to Scientific Knowledge

Week 8 Description

Required Readings:

Kellstedt/Whitten, Chapter 5.

Wheelan, Charles. 2013. Naked Statistics. New York: Norton. Chapter 2-3.

Week 9 Inference

Required Readings:

Kellstedt/Whitten, Chapter 6-7.

Wheelan, Charles. 2013. Naked Statistics. New York: Norton. Chapter 9.

Week 10 Causality

Required Readings:

Okasha. Chapter 3

Kellstedt/Whitten, Chapter 3.

Hacking, Ian. 1983. Representing and Intervening. Cambridge: Cambridge University Press. Chapter 3.

Angrist, Joshua and Pischke, Jörn-Steffen. 2015. Masteric 'Metrics. Princeton: Princeton University Press. Chapter 1

Conclusion

Week 11 Review and Questions