

**COURSE SPECIFICATION DOCUMENT**

<b>Academic School</b>	General Education
<b>Programme:</b>	General Education
<b>FHEQ Level:</b>	3
<b>Course Title:</b>	Scientific Reasoning
<b>Course Code:</b>	GEP 3140
<b>Course Leader:</b>	Mary Robert
<b>Student Engagement Hours:</b>	120
Lectures & Discussion:	24
Seminar / Tutorials:	16
Study Visit	5
Independent / Guided Learning:	75
<b>Semester:</b>	Fall/Spring/Summer
<b>Credits:</b>	12 UK CATS credits 6 ECTS credits 3 US credits

**Course Description:**

What do you consider when you consider your carbon footprint? How do you evaluate the quality and conclusions of a double blind trial? This core course aims to provide a means by which the student can effectively communicate an understanding and appreciation of the impact of science on everyday life and academic enquiry. Scientific areas to be explored range from ethics to evolution, physics to physiology, climate change to conservation, and trials and testing to thinkers and innovators. This core course teaches students to reflect critically on information so that they may make informed personal decisions about matters that involve science and understand the importance of science in other areas of their studies.

**Prerequisites:** None

**Aims and Objectives:**

The primary aim of this course is to develop an understanding and appreciation of the impact of science on everyday life so that students may take part confidently in discussions with others about issues involving science. Students will be taught to critically read and understand the essential points of media reports about matters that involve science. This should lead students to reflect critically on the information included in or omitted from, such reports so that they may make informed personal decisions about matters that involve science, such as health, diet, use of energy resources, climate change.

**Programme Outcomes:**

A3, A4, A5, A6, A7  
B7, B11

A detailed list of the programme outcomes is found in the Programme Specification. This is maintained by Registry and located at:

<https://www.richmond.ac.uk/programme-and-course-specifications/>

**Learning Outcomes:**

By the end of this course, successful students should be able to:

- Demonstrate knowledge and understanding of key scientific concepts including the scientific method
- Demonstrate the ability to describe, explain and predict natural phenomena
- Demonstrate the ability to make informed personal decisions about science, including the ability to critically assess and evaluate the information included in and omitted from media reports
- Communicate, both orally and in writing, an understanding of science as presented in popular media (e.g., at the level of *Horizon* (TV) *In Our Time* (radio) or *The New Scientist/Scientific American*).

**Indicative Content:**

- Scientific Method
- Turning Points in science
- Scientific Thinkers and innovators (across a range of scientific areas including Physics)
- Ethics and Science including genetic modification
- Clinical Trials
- Climate change
- Conservation
- Evolution
- Nutrition and Health
- Science as it relates to public policy
- Population and Reproduction

