COURSE SPECIFICATION DOCUMENT

Academic School	General Education
Programme:	General Education
***FHEQ* Level:**	3
Course Title:	Quantitative Reasoning
Course Code:	GEP 3120
Course Leader:	Mary Robert
Student Engagement Hours:	120
Lectures:	22.5
Seminar / Tutorials:	22.5
Independent / Guided Learning:	75
Semester:	Fall/Spring/Summer
Credits:	12 UK CATS credits 6 ECTS credits 3 US credits

Course Description:
This course develops an understanding of basic mathematical concepts and their presence in a range of contexts and applications. Is it possible to use mathematics to predict the next new trends in music or the next tsunami? How do you calculate the impact of an oil spill? Topics such as interest rates, interpreting graphs, probabilities associated with decision making and mathematics in the environment and the creative arts will be covered.

Prerequisites: N/A

Aims and Objectives: This course aims to give students quantitative skills while enabling them to make connections between disciplines. Through lectures, readings, discussions and group and individual projects, this course will encourage students to explore mathematics in different areas and to use mathematics to critically analyse problems.

Programme Outcomes:
A3, A4, A5, A6, A7
B5, B7, B8

A detailed list of the programme outcomes is found in the Programme Specification. This is maintained by Registry and found 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 an understanding of basic statistical measures and how to calculate them in real-life examples
- Demonstrate an ability to manipulate data using spreadsheets and plot graphs
- Demonstrate an ability to calculate probabilities & percentages in a variety of real-life situations
- Demonstrate an understanding of graphs and are able to draw conclusions by analysing graphs
- Demonstrate an ability to critically analyse mathematical problems in different contexts

Indicative Content:

- History and Context
- Statistical measures, analysing data
- Probability and the use of probability in decision making
- Percentages and interest rates
- Interpreting graphs
- Economic indexes: understanding different inequality coefficients
- Game Theory
- Using Mathematics to model behaviour
- Mathematics in a variety of areas (e.g. climate change; creative arts)

Assessment:
This course conforms to the University Assessment Norms approved at Academic Board.

Teaching Methodology:
This course will be taught through a combination of lectures and seminar-type activities, including group work, sub-group activities, classroom discussion, and the

showing of documentaries. The general approach to classes is informal, and discussion is viewed as an essential part of an interactive and participatory learning program. Audio-visual aids, study materials and electronic learning resources will be used as appropriate.

Lectures provide a framework for the course, and are designed to ensure students have an overview of main issues and concerns on a particular topic, receive clarification on the major points of debate understand the broad dimensions of core problems, and are aware of relevant literature in the specific area of concern. It is essential that lectures are supplemented with assigned readings; together, the readings and the lectures are designed to provide guidance for seminar discussion.

Bibliography:

See syllabus for complete reading list

IndicativeText(s):
No set text; course utilises case studies, press media, etc.

Journals

Web Sites

Please Note: The core and the reference texts will be reviewed at the time of designing the semester syllabus

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Change Log for this CSD:

Major or Minor Change?	Nature of Change	Date Approved & Approval Body (School or LTPC)	Change Actioned by Academic Registry
Major	Learning Outcomes and Indicative Content	24/02/17	08/06/17