

Weekend Courses 2023-24

Seven Cambridge Nobel Prizes

Start date: 9 February 2024 **End date:** 11 February 2024

Venue: Madingley Hall
Madingley
Cambridge
CB23 8AQ

Tutor: Dr Vasos Pavlika **Course Code:** 2324NRX021

Tutor biography

Dr Vasos Pavlika is Associate Professor (Teaching) in Mathematics and Statistics in the Biochemical Engineering Department of University College London, Departmental Tutor and Director of Studies of the Physical Sciences in the Department for Continuing Education, University of Oxford, Departmental Tutor of Mathematics and Statistics at the London School of Economics and Political Science, an Online Tutor for SOAS, University of London, and an Associate Tutor for the Open University. He teaches Applied Mathematics, Engineering Mathematics, the History of Mathematics, Mathematical Economics, Statistics and Computer Programming at undergraduate and postgraduate level. Vasos is an Applied Mathematician with a background in CFD and Magnetostatics. He has 34+ years teaching experience in many UK universities as well being an external examiner overseas in: Australia, Bahrain, Bulgaria, China, Egypt, Greece, India, Latvia, Malaysia, the Maldives, Nepal, Oman, Philippines, Poland, Singapore, Sri Lanka, and Switzerland on undergraduate and postgraduate degrees. Vasos has been interested in the History of Mathematics and Science for over 34 years and has published over 50 peer reviewed papers in Applied Mathematics, CFD, Magnetostatics, the History of Mathematics, the History of Science, Teaching Computer Programming, and novel methods of teaching in Higher Education.

Course programme

Friday

Please plan to arrive between 16:30 and 18:30. You can meet other course members in the Terrace Bar which opens at 18:15. Tea and coffee making facilities are available in the study bedrooms.

19:00	Dinner
20:30 – 22:00	The atom revealed: J J Thomson, Ernest Rutherford and Neils Bohr
22:00	Terrace Bar open for informal discussion

Saturday

07:30	Breakfast (for residents only)
09:00 – 10:30	X-rays: Arthur Holly Compton and Charles Wilson
10:30	Coffee
11:00 – 12:30	Paul Dirac: Quantum genius and yet the strangest man and Erwin Schrodinger, the enigma
13:00	Lunch
14:00 – 16:00	Free time
16:00	Tea
16:30 – 18:00	The atom revisited: James Chadwick, George Thomson and Max Born
18:00 – 18:30	Free time
18:30	Dinner
20:00 – 21:30	DNA: Crick, Watson and Wilkins but what about Franklin?
21:30	Terrace Bar open for informal discussion

Sunday

07:30	Breakfast (for residents only)
09:00 – 10:30	Forces unravelled: Salam and Weinberg
10:30	Coffee
11:00 – 12:30	Stars at Cambridge: Chandrasekhar and Fowler
12:45	Lunch

The course will disperse after lunch

Course syllabus

Aims:

The course will allow you to:

- understand the role that Cambridge University has had in creating Nobel Laureates
- comprehend the work of many Nobel Laureates who were associated with Cambridge University
- become familiar with the lives and times of the Nobel Laureates discussed

Summary of content:

The lives and work of Nobel Prize winners who were at one stage in their careers associated with the University of Cambridge.

Presentation of the course:

The course will be taught with PowerPoint presentations, discussions, and occasional YouTube presentations.

As a result of the course, within the constraints of the time available, you should be able to:

- comprehend the role of Cambridge University in producing and shaping many Nobel Laureates
- appreciate the varied and interesting lives these Nobel Laureates led
- appreciate the groundbreaking and epoch-making contribution of these Nobel Laureates
- comprehend the Science of these Nobel Laureates

Reading and resources list

There are no compulsory readings for this course. However, you may find the below recommended reading list of interest to supplement your course.

Born, M, *My Life: Recollections of a Nobel Laureate* (Routledge Library Editions: 20th Century Science), (2014)

Chandrasekhar, S, *An Introduction to the Study of Stellar Structure* (Dover Books on Astronomy), (2003)

Fraser, G, *Cosmic Anger: Abdus Salam - The First Muslim Nobel Scientist*, Oxford University, Press, UK, (2008)

Fermelo, G, *The Strangest Man: The Hidden Life of Paul Dirac, Quantum Genius*, Faber and Faber, (2009)

Glynn, J, *My Sister Rosalind Franklin*, OUP Oxford, (2012)

Heilbron, J L, *Ernest Rutherford: And the Explosion of Atoms* (Oxford Portraits in Science). OUP USA, (2003)

Kumar, M, *Quantum: Einstein, Bohr and the Great Debate About the Nature of Reality* (2009)
Schrodinger, E and Penrose, R, *What is Life?: With Mind and Matter and Autobiographical Sketches* (Canto Classics), Cambridge University Press, (2012)

Thomson, G J J, *Thomson and the Cavendish Laboratory in his day* Doubleday, (1965)

Weinberg, S, *To Explain the World: The Discovery of Modern Science*, Penguin, (2016)

Watson, J D, *DNA. The Secret of Life*, Arrow books, (2002)

Note: Institute of Continuing Education (ICE) students are entitled to 20% discount on books published by Cambridge University Press (CUP) which are purchased at the Press bookshop, 1 Trinity Street, Cambridge (Mon-Sat 9am – 5:30pm, Sun 11am – 5pm). A letter or email confirming acceptance on to a current ICE course should be taken as evidence of enrolment.

(Information correct as of 15 May 2023)