



How memory functions and changes throughout life

Start date 11 January 2020

End date

12 January 2020

Venue Madingley Hall
Madingley
Cambridge
CB23 8AQ

Tutor Dr Andrea Greve

Course code

1920NRX025

Director of ISP and LL

Sarah Ormrod

For further information on this course, please contact the Lifelong Learning team

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To book

See: www.ice.cam.ac.uk or telephone 01223 746262

Tutor biography

Dr Andrea Greve is a psychologist and neuroscientist at the University of Cambridge who works for the Medical Research Council at the Cognition and Brain Sciences Unit. Her research focusses on investigating theories of learning by using behavioural and functional brain imaging techniques (MRI and EEG/MEG) with the aim to understand the cognitive and neural mechanisms, which support human episodic memory. Andrea has been giving a variety of lectures in Psychology and Cognitive Neuroscience at Edinburgh University, Cardiff University and the University of Cambridge. She also supervises undergraduate and postgraduate students.

Course programme

Saturday

Please plan to arrive between 13.00 and 15.00. Please note you can check in to the room from 14.00. You can meet other course members in the Terrace bar where tea and coffee are available.

15:00 **Session 1 - What is memory and how does it work?**

16:15 Tea

16:45 **Session 2 - Psychological and neural theories of memory**

18:30 Dinner

20:00 Session 3 - Memory in everyday life

21:30 Terrace bar open for informal discussion

Sunday

07:30 Breakfast

09:30 **Session 4 - What happens when memory goes wrong?**

10:45 Coffee

11:15 **Session 5 - Memory strategies and why they work**

12:30 Free

13.00 Lunch

14.00 **Session 6 – Prospective memory and the science of forgetting**

15.15 Course ends

Course syllabus

Aims:

This course will explore neural and psychological theories of memory with the aim to:

- introduce a cognitive framework that explains how our memory system functions
- apply this framework to predict memory success and failure in everyday life
- explore practical strategies on how we can facilitate different kinds of memory
- facilitate a better understanding of how memory changes throughout life

This course does not require any prior knowledge of psychology or neuroscience.

Content:

The first session on day one introduces different types of memories and their functions as a first building block to understand the mechanisms by which memory operates. Importantly, we will discuss the meaning of the word 'memory' as it is used in everyday life and in psychological research. The second session builds on the first one by focussing on psychological theories that describe how encoding, consolidation and retrieval processes operate. We will explore the context in which these processes are likely to succeed. The third session combines the knowledge of the first two sessions by presenting a series of everyday life scenarios in applied exercises. The goal is to enable students to recognise the different memory types and function.

The first session on day two will explore different neurological and psychological reasons for why memory might fail. A classroom experiment will illustrate the concept of interference and we will discuss signs of pathological memory decline. The second session focusses on mnemonic strategies and we will explore how to improve memory through a series of exercises. The final session links theories of forgetting and prospective memory to psychological mechanism and practical exercises we have explored throughout this course.

Presentation of the course:

This course is delivered through a variety of teaching methods which includes lectures, classroom discussions and practical exercises to facilitate the transfer of knowledge into everyday life.

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

- describe different types of memory systems and functions;
- identify and apply methods that facilitate different types of memory;
- map symptoms of memory decline to normal, healthy ageing;
- demonstrate the skill to use mnemonic strategies.

Reading and resources list

Listed below are texts that might be of interest should you wish to supplement your learning on the course. Any essential reading is marked with an asterisk *

Author	Title	Publisher and date
Daniel L. Schacter	The Seven Sins of Memory: How the mind forgets and remembers	Houghton Mifflin, 2002
Oliver Sacks	The Man Who Mistook His Wife for a Hat	Picador, 2011
Daniel L. Schacter	Searching for Memory: The Brain, the Mind and the Past	Basic books, 1997
Howard Eichenbaum	From Conditioning to Conscious Recollection	OUP, 2004
Michael Hasselmo	How we remember: Brain Mechanisms of Episodic Memory	MIT Press, 2013

Website addresses

Additional information

Venue

Details of how to find Madingley Hall can be found on our website:
<http://www.ice.cam.ac.uk/who-we-are/how-to-find-the-institute>

Refreshments

Tea and coffee, lunch and dinner will be provided as specified in the timetable. If you have any specific dietary requirements or allergies and have not already advised us, please inform our Admissions Team on ice.admissions@ice.cam.ac.uk or +44 (0)1223 746262.

Note Students of the Institute of Continuing Education 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 Institute course should be taken as evidence of enrolment.

Information correct as of: 03 January 2020