

Institute of Continuing Education

## **Codebreaking from Linear B to Bletchley**

Start date	14 January 2018	End date	14	January 2018
Venue	Madingley Hall Madingley Cambridge			
Tutor	Dr A. Christofilopoulou	Course coo	de	1718NDX052
Director of	Programmes	Emma Jennings		
For further information on this course, please contact		Public Programme Coordinator, Clare Kerr clare.kerr@ice.cam.ac.uk or 01223 746237		
To book	See: www.ice.cam.ac.uk	or telephone 0122	23 7	46262

### Tutor biography

Dr Anastasia Christofilopoulou is the Assistant Keeper and Cyprus Curator for the Department of Antiquities of the Fitzwilliam Museum Cambridge. She is currently co- acting Keeper of Antiquities as well as a leading 3-year research project aiming to re-contextualise and redisplay the Fitzwilliam Museum's collections of Ancient Cyprus. Together with Dr Yannis Galanakis (Faculty of Classics) and Dr James Grime (independent scholar in Mathematics), she has curated an interdisciplinary exhibition on the history of codebreaking. Anastasia is also a panel Tutor for the Institute of Continuing Education in Cambridge, currently engaged in teaching the 'The Classical World' unit of the Undergraduate Certificate in Archaeology II, as well as a weekend course in 'Curating Classical Antiquity'. Previously, she has held research and teaching posts in Cambridge, London and Berlin and has been a College supervisor for Art and Archaeology in Cambridge since 2007.

Anastasia currently teaches for the Undergraduate Certificate in Archaeology II as well as for the weekend courses and the Ancient & Classical Worlds Summer programmes. Her teaching style includes introducing students to the archaeological, historical and sociological context of the material evidence examined during her lectures and seminars, paired with regular handling sessions and practical exercises with ancient objects. These allow students to experience ancient material cultures first hand, as well to develop academic and practical skills for their future professional orientations in the fields of archaeology, classics and Museum studies.

### Course programme

09:30	Terrace bar open for pre-course tea/coffee
10:00 – 11:30	The Cambridge Codebreakers
11:30	Coffee
12:00 – 13:00	In depth: deciphering ancient languages and scripts versus codebreaking in the modern era.
13:00	Lunch
14:00	A trip to The Fitzwilliam Museum. Taxi collection from Madingley Hall
14:20- 15:20	Extensive tour and talk at the Codebreakers exhibition (Octagon
	Gallery)
15:25 – 16:20	Handling session with Mycenaean artefacts (Antiquities Seminar
	room)
16:20-16:45	Coffee and final discussion (day-school ends)
16:45	Taxi return to Madingley Hall

### **Course syllabus**

### Aims:

- To acquaint students with the history and development of cryptography as a discipline as well as of the similarities between cryptanalysis and deciphering of ancient languages and scripts.
- To provide unique insight into the wealth of archival and historical evidence stored within the Cambridge University Museums and College archives, normally not accessible to the public.
- To familiarize students with the unique intellectual achievements and parallel narratives of two distinct groups of 'codebreakers' working at the same time but independently: those involved in breaking the Second World War codes and those who deciphered the ancient script of Linear B – Europe's earliest comprehensible writing system.

### Content:

This study days follows a pioneering and interdisciplinary exhibition, Codebreakers and Groundbreakers (Fitzwilliam Museum & Museum of Classical Archaeology) and expands on the history of cryptography and the decipherment of ancient scripts and languages. On 1 July 1952 Michael Ventris, an architect by training who had turned linguist, announced on BBC radio his proposed decipherment of the Linear B script, a script that had puzzled many scholars, for over fifty years. The decipherment of the Linear B script, which was preserved by accident in a number of clay baked tablets, excavated firstly at Knossos and later at a number of other Mycenaean sites, changed for ever our understanding of the Late Bronze Age world and eventually our approach to the study of ancient Greece. A little more than a year earlier, on 15 May 1951, mathematician Alan Turing (1912–54) argued, during a BBC Third programme broadcast, that 'It is now not altogether unreasonable to describe digital computers as brains.' This broadcast had followed the publication of an important paper, in which Turing had speculated about the possibility of creating machines that think. Turing became well known posthumously as the most influential codebreaker of the Second World War, but many mathematicians and computers scientists today consider him as one of the twentieth century's greatest mathematicians. These two stories, the decipherment of an Aegean Bronze Age script and the efforts of the British codebreakers during the Second World War, are examined together with the remarkable intellectual achievements and parallel narratives of many other codebreakers.

Our learning approach during the day will be based on a variety of archaeological and archival evidence and will encourage participants to explore and eventually assess 'codebreaking' in all its forms.

### Presentation of the course:

The course will employ a range of teaching methods, including analysis of specific paradigms within the range of topics examined. These will include questions on the nature of the collections on display as part of this special exhibition, discussion on curatorial practices regarding this unique material, as well as interactive discussions on the evolution of the disciplines of cryptography and deciphering ancient languages and scripts.

The course will also include an extensive guided tour of the exhibits as well as a handling class with unique objects from the Mycenaean collections of the Antiquities Department in the Fitzwilliam Museum.

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

• Gain in depth knowledge of the Cambridge Codebreakers particularly the teams of linguists, mathematicians and early computer scientists who worked as part of the Government's Code and Cypher School and at Bletchley Park.

• Develop a good understanding of the history and evolution of cryptography and ancient linguistics.

• Acquire basic skills of handling ancient objects as well as identifying their conservation needs, or special display requirements.

• Reflect and communicate (through class participation and relevant discussion) on the importance of interdisciplinary collaboration between social sciences such as linguistics and archaeology with the sciences of mathematics, cryptography and cryptanalysis.

### 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					
Christophilopoulou, I. Galanakis and J. Grime (eds.),	From breaking the Enigma Codes to the Decipherment of Linear B', The Fitzwilliam Museum,	Cambridge, 2017.					
T. Howarth	Cambridge between two wars	London, 1978.					
P. M. Steele (ed.)	Understanding Relations Between Scripts, The Aegean Writing Systems	Oxford, 2017.					
In addition, the following two articles will be distributed in class:							
A. Christophilopoulou,	'Codebreakers and Groundbreakers'	November/December					
A. Robinson,	'The Master Decoders', News Scientist,	November 17, 2017,					

46-49.

### Website addresses

http://www.fitzmuseum.cam.ac.uk/calendar/whatson/codebreakers-and-groundbreakers

https://www.classics.cam.ac.uk/museum/exhibitions/exhibitions/codebreakers

https://www.classics.cam.ac.uk/ORDER/seminars/projects/mycep/decipherment

https://www.classics.cam.ac.uk/pdfs/mycep/process.pdf

http://www.cam.ac.uk/research/news/cracking-the-code-the-decipherment-of-linear-b-60-years-on

Early Writing Systems project (CREWS) online at: https://crewsproject.wordpress.com/.

### 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 and lunch will be provided. 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: 09 January 2018