

# Greek and Roman Studies 321

## ANCIENT TECHNOLOGY

### Course Outline

Winter 2012

- Instructor: Dr John Humphrey
- Office: SS 530; telephone 403 220 5538; email [humphrey@ucalgary.ca](mailto:humphrey@ucalgary.ca)
- Office Hours: MWF 11:00-11:45, or by appointment; email consultation any time
- Web Page: Login through the Blackboard site using your **ucalgary** email username and password. Click on "GRST 321."
- Class Time: MWF 12:00-12:50
- Classroom: ST 147
- Text: J.W. Humphrey et al. *Greek and Roman Technology: a sourcebook*. London: Routledge, 1998.
- Assignments:
1. Five **discussions** [20% in total]. Irregularly through the term, we will form small groups to discuss a problem or topic related to the preceding lectures and readings. Each group will submit in advance (and in point form) an outline of its collective response. The class time will be used to summarize these and have a general discussion.
  2. **Midterm test** [20%]. This test will examine material from the first half of the course, with a series of multiple-choice questions based on slides and required readings.
  3. An **essay** of about 2000 words [20%]. The topics for this assignment will be announced in class and posted on Blackboard by late January, together with the due date for each. I encourage you to select topics due just before or after the midterm break, for which I will be willing to grant short extensions; extensions will **not** be granted to topics due from mid-March to early April.
  4. A 2-hour **final examination** scheduled by the Registrar [40%]. This will consist of two equal parts: the equivalent of the midterm test, examining material *only* from the second half of the course; and an interpretive essay, to be selected from a variety of topics that treat the course as a whole.
- Notes:
1. I expect universal attendance at and participation in the group discussions, which are an essential element of the course. Unauthorized absences could result in a failing grade.
  2. I encourage you to maintain consultation with me throughout the term, to ask for help when you are floundering or confused, to discuss difficulties with the discussions, and to keep me aware of unexpected absences.
  3. The withdrawal deadline for this course is Friday 13 April 2012. You can track your current standing in the course through Blackboard. The last day to withdraw from this course with a refund of fees is Friday 20 January 2012.
  4. The Department of Greek and Roman Studies draws the attention of all students in its courses to the University regulations on plagiarism, cheating, and other academic misconduct, which can be found in the on-line version of the 2011-2012 University *Calendar* ([www.ucalgary.ca/pubs/calendar/current/k.html](http://www.ucalgary.ca/pubs/calendar/current/k.html)).

## Course Schedule

	<u>DATE</u>	<u>TOPIC</u>	<u>SOURCEBOOK READINGS</u>
Jan	09 Mo	Introduction to the course	
	11 We	Historical outline i: before the Greeks	
	13 Fr	Historical outline ii: the Greeks and Romans	
	16 Mo	Sources of information: documents and archaeology	
	18 We	Energy and machines in antiquity	Chapter 2a-2b
	20 Fr	Military technology	Chapter 12
	23 Mo	Hero's inventions	Chapter 2c
	25 We	<b>Discussion 1:</b> technical limitations that prevented an ancient industrial revolution	
	27 Fr	Food i: cultivation and domestication	Chapter 3
	30 Mo	Food ii: agricultural tools	Chapter 3
Feb	01 We	Food iii: processing	Chapter 4
	03 Fr	Food iv: the ancient diet	Chapter 4
	06 Mo	Water i: wells and water-lifting devices	Chapter 8
	08 We	Water ii: water conduction and conservation	Chapter 8
	10 Fr	Water iii: constructing urban water systems	Chapter 8
	13 Mo	<b>Discussion 2:</b> applying ancient hydraulic techniques in the modern world	
	15 We	Metals i: mining and metallurgy	Chapters 5a and 6
	17 Fr	Metals ii: casting and fine metalworking	Chapter 9a
	20 Mo	<i>Midterm break: no classes</i>	
	22 We	<i>Midterm break: no classes</i>	
	24 Fr	<i>Midterm break: no classes</i>	
	27 Mo	<b>Midterm Test</b>	
	29 We	Household and workshop production i: textiles	Chapter 9c
Mar	02 Fr	Household and workshop production ii: ceramic techniques	Chapter 9d
	05 Mo	Household and workshop production iii: ceramic shapes; symposium	
	07 We	Transportation i: vehicles, roads, and bridges	Chapter 10a
	09 Fr	Transportation ii: boats	Chapter 10b
	12 Mo	Transportation iii: harbours and navigation	Chapter 10b
	14 We	Weights, measures, and currency	Chapter 10c
	16 Fr	Communication i: Bronze-Age scripts	Chapter 11b
	19 Mo	Communication ii: Greek and Latin alphabets	Chapter 11b
	21 We	Communication iii: books and publication	Chapter 11b
	23 Fr	<b>Discussion 3:</b> the importance of communication	
	26 Mo	Timekeeping	Chapter 11a
	28 We	Construction i: Bronze-Age ziggurats and pyramids	Chapter 7
	30 Fr	Construction ii: Bronze-Age Greek cities and citadels	Chapter 7
Apr	02 Mo	Construction iii: classical Greek construction	Chapter 7
	04 We	Construction iv: imperial Roman engineering	Chapter 7
	06 Fr	<i>Good Friday: no lectures</i>	
	09 Mo	<b>Discussion 4:</b> how built structures reflect social demands	
	11 We	<b>Discussion 5:</b> societies' attitude to technology and progress	Chapter 13
	13 Fr	<i>Bermuda Shorts Day: class cancelled</i>	

## General Bibliography

Some of the following works are housed in the Reserve Reading Room of the Library, where they are available for consultation and, infrequently, for short-term loan. Copies of the rest are available in the main stacks. For more specific books and articles, see the bibliographies following each chapter in the *Sourcebook*.

### General Works

- C. Singer et al. *A History of Technology*, vols. 1 and 2.  
T.K. Derry and T.I. Williams. *A Short History of Technology from the Earliest Times to A.D. 1900*.  
H. Hodges. *Technology in the Ancient World*.  
A.P. Usher. *A History of Mechanical Inventions*.  
M. Daumas, ed. *A History of Technology and Invention*, vol. 1.  
V.G. Childe. *What Happened in History*.  
K.D. White. *Greek and Roman Technology*.  
R.J. Forbes. *Studies in Ancient Technology*, 9 vols.  
J.W. Humphrey. *Ancient Technology*.  
L. Sprague de Camp. *The Ancient Engineers*.

### Classical Antiquity

- E. Vermeule. *Greece in the Bronze Age*.  
A. Burford. *Craftsmen in the Greek and Roman World*.  
C. Mossé. *The Ancient World at Work*.

### Specific Technologies

- K.D. White. *Roman Farming*.  
J.F. Healy. *Mining and Metallurgy in the Greek and Roman World*.  
A.T. Hodge. *Roman Aqueducts and Water Supply*.  
L. Casson. *The Ancient Mariners*.  
D. Diringer. *Writing*.  
J.G. Landels. *Engineering in the Ancient World*.  
D. Hill. *A History of Engineering in Classical and Medieval Times*.

### Reference Works

- J.P. Oleson. *Bronze Age, Greek, and Roman Technology: A Selected, Annotated Bibliography*.  
J.P. Oleson. *Handbook of Engineering and Technology in the Classical World*.

**POLICIES AND NOTES:**

1. The making up of missed tests/assignments will not be granted without prior notification, and only in cases for medical reasons certified by a medical doctor. Please note that the deadline for applying for a deferred final exam is **April 27, 2012** and the appeal must be made to the Dean of Arts. For more see the University Calendar (<http://www.ucalgary.ca/pubs/calendar/current/g-6.html>).
2. Consult the University Calendar for withdrawal/refund dates. **January 20:** Last day to drop Winter Term half courses with a fee refund. **January 23:** Last day to add or swap Winter Term half courses; last day to change registration from audit to credit or credit to audit.
3. STUDENTS SHOULD OBSERVE THE REGULATIONS ON "STUDENT MISCONDUCT" (PLAGIARISM, CHEATING, ETC.) WHICH CAN BE FOUND IN **SECTION K** OF THE ONLINE VERSION OF THE 2011-2012 UNIVERSITY OF CALGARY CALENDAR (<http://www.ucalgary.ca/pubs/calendar/current/k.html>). If you are unclear about any of this, please do not hesitate to contact me.
4. Disabilities: It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. For more information visit the Disability Resource Centre's website - <http://www.ucalgary.ca/drc>.