

**SCHOOL OF PHYSICAL AND GEOGRAPHICAL
SCIENCES**

Forensic Geoscience

CHE-30034

Module Handbook

2011-2012

Aims of the module

This module aims to teach students key theoretical and practical issues of some specialist areas of Forensic Science which complement the core curriculum of the course and where topics are at the forefront of and of relevance to research in Forensic Science. These areas include: forensic geoscience, forensic geophysics, forensic entomology, forensic palynology and palaeontology.

Intended Learning Outcomes

On successful completion of this module, you will have acquired:

1. Demonstrate a systematic knowledge and understanding of the series of specialist topics presented.
2. Describe, explain and assess standard theoretical and practical search techniques and trace evidence retrieval within the topics of Forensic Geoscience.
3. Evaluate information of relevance to the topic obtained from a variety of sources including scientific literature, forensic science databases and other primary sources.
4. Make informed judgements about the issues, limitations and current knowledge in forensic science within the specialist areas.
5. Describe and explain how the specialist disciplines can be applied to crime solving.

MODULE TEACHING PLAN

Week	Lecture Date	Lecture	Laboratory	Assessments
1	Tues: 24/01/12 JP	L1. Introduction to the module; overview & guide to assessment	Read Ruffell & McKinley (2005) article & choose area	
	Thurs: 26/01/12 JP	L2. Overview of current search techniques & geoscientific trace analysis	Start lit. review and locate secondary references	
2	Tues: 31/01/12 JP	L3. Macro-scale: remote sensing & analysis techniques, including case studies.	Continue lit. review search and start report	
	Thurs: 03/02/11 JP	L4. Macro-scale: forensic geophysical investigations (background to practical)		
3	Tues: 7/02/12 MM	L5. Natural & artificial materials as trace evidence, including case studies	Continue lit. review report (add figures!)	
	Thurs: 9/02/12 JP	L6. Micro-scale: soil as trace evidence		
4	Tues: 14/02/12 PT	L7. Guest Lecture: Forensic botany: case studies	Complete lit. review report	Individual literature area review via VLE by 5pm Friday
	Thurs: 16/02/12 MM	L8. Guest Lecture: Forensic micro-palaeontological trace evidence	Student-led, outdoor CSI practical Groups: 2	
5	Tues: 21/02/12 CS-C	L9. Guest Lecture: Holocaust Archaeology	Student-led, outdoor CSI practical	
	Thurs: 23/02/12 FD	L10. Forensic Entomology I	Groups: 2	
6	Tues: 28/02/12 FR	L11. Forensic Archaeology I	Student-led, outdoor CSI practical	
	Thurs: 01/03/12 FD	L12. Forensic Entomology II	Groups: 2	
7	Tues: 06/03/12 FR	L13. Forensic Archaeology II	Student-led, outdoor CSI practical	Wk4 Groups: to submit group report via VLE by 5pm Friday
	Thurs: 8/03/12 FD	L14. Forensic Entomology III	Groups: 2	
8	Tues: 13/03/12 FR	L15. Forensic Archaeology III		Wk5 Groups: to submit group report via VLE by 5pm Friday
	Thurs: 15/03/12 FD	L16. Forensic Entomology IV		
9	Tues: 20/03/12 JP	L17. Section review		Wk6 Groups: to submit group report via VLE by 5pm Friday
	Thurs: 22/03/12 JP	L18. Exam preparation		
10	Tues: 27/03/12	No lecture		Wk7 Groups to submit group report via VLE by 5pm Friday
	Thurs: 29/03/12	No lecture		

BOOKS

- Ruffell, A. & McKinley, J. (2008) *Geoforensics*, Wiley-Blackwell, Chichester, UK, 300pp.
- Pye & Croft (2003) *Forensic Geoscience: Principles, Techniques & Applications*, Geological Society of London Special Publication, 232, 318p.
- Pye, K. (2007) *Geological & Soil Evidence: Forensic applications*. CRC Press, Taylor & Francis Group, US, 335pp.
- Milsom, J. & Eriksen, J. (2011) *Field Geophysics, 4th Edition (Geological Field Guide)*, John Wiley & Sons, 250pp.

OPERATION OF THE MODULE

The first lecture slot is devoted to describing the operation of the module and an introduction and historical overview of the subject. Subsequent lectures will deal with selected topics within the Forensic Science specialisms field. Some of these will feed into the practical exercises. The web-site is an important resource for students on this module:

www.students.keele.ac.uk

This site hosts:

- Module handbook; Reading list; Lecture notes; Assessment guides, background reference articles, previous exam questions, web-based information sources

ASSESSMENT

You need to achieve an overall mark of 40% to pass this module.

The assessment of this module has three main components:

An **end-of-module examination** based on three out of four long answer questions. This comprises 60% of the assessment. You are required to achieve a minimum mark of 30% in this component.

A **group project mark** which is derived from a digitally submitted student group report, based on the outdoor student-led, crime scene investigation practical exercise. This should be completed and digitally submitted via VLE within three weeks of the student respective practicals. The group report contributes 20% to the overall module mark.

An **individual literature area critical review mark**, based on a student-chosen area. Students are expected to locate secondary references and provide a polished review of a chosen area. Reports will be digitally submitted via VLE. The review report contributes 20% to the overall module mark.

STUDENT FEEDBACK

We welcome informal feedback and suggestions from all students during the semester. You can also feed your comments back to us through your student representatives (Stars) at the Student-Staff-Liaison Committee (SSLC) meetings. Towards the end of the module, you will be asked to complete a **short questionnaire** giving your views of the module delivery. This is an important factor in informing our future development of this module and your considered views are greatly appreciated by the staff.