Practical Chemistry for Forensic Scientists 2

Module Code: ARC5023-D
Academic Year: 2018-19
Credit Rating: 40
School: School of Archaeological and Forensic Sciences
Subject Area: Archaeology
FHEQ Level: FHEQ Level 5
Module Leader: Dr Christopher Gaffney

Additional Tutors:

Pre-requisites: Practical Chemistry 1 2017-18
Co-requisites:

Contact Hours

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
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<tr>
<td>Seminar</td>
<td>23</td>
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<tr>
<td>Practical classes and</td>
<td>6</td>
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<tr>
<td>Laboratory</td>
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<tr>
<td>Directed Study</td>
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Availability Periods

<table>
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<tr>
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<th>Location/Period</th>
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<tr>
<td>BDA</td>
<td>University of Bradford / Academic Year (Sept - May)</td>
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Module Aims

This module builds on what you learned in stage 1. You will further develop your skills for the synthesis of compounds, and in the manipulation of the physical properties of coordination compounds. You will apply advanced spectroscopic techniques for the structure elucidation of reaction products. You will gain experience of the physical basis of separation science and its applications in laboratory chromatographic techniques. You will
develop greater understanding of the use of practical chemistry in forensic contexts. You will develop your professional and transferable skills.

Outline Syllabus

Analysing situations and assumptions, identifying problems and defining tasks, formulating objectives and approaches. Standardisation of operating procedures, laboratory documentation. Develop reflective practice, skills audit, identifying developmental needs, CV writing, covering letters.


Module Learning Outcomes

On successful completion of this module, students will be able to...

1. Perform multistep preparative syntheses and characterise the products through advanced analytical techniques;

2. Describe how the underpinning principles of separation techniques are applied in laboratory chromatography.

3. Employ synthetic and analytical skills in the laboratory.

4. Critically evaluate, choose and carry out appropriate analytical methods.

5. Use a range of sources to analyse and evaluate chemical data to problem solve in the forensic context.

6. Prepare CV material and skills audit.

Learning, Teaching and Assessment Strategy

Laboratory-based work will include staff-led demonstration of practical and manipulative skills at the bench and supervision of students' experimental work. Pre-laboratory workshops will be provided for each experiment to familiarise students with the concepts and procedures, the post lab workshops will allow students to reflect on the results and their significance. Teaching of health and safety and laboratory skills will be delivered in workshops. Laboratory skills will be taught and practised in laboratory sessions. Students will receive feedback in the form of marked laboratory reports, review of laboratory records and orally in seminars. Workshops will be used to develop reflective practice, and for developing professional attributes in CV and cover letter writing. Problem based seminars will be used to develop understanding of the use of practical chemistry in forensic situations.

Students will be assessed on continuous summative assessment of practical work and reports. Additionally a CV, cover letter and a skills audit will be undertaken.
## Mode of Assessment

<table>
<thead>
<tr>
<th>Type</th>
<th>Method</th>
<th>Description</th>
<th>Length</th>
<th>Weighting</th>
<th>Final Assess'</th>
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<tr>
<td>Summative</td>
<td>Coursework</td>
<td>CV, cover letter and a skills audit</td>
<td>0-2000 words</td>
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<td>Summative</td>
<td>Coursework</td>
<td>Practical Reports</td>
<td>0-7000 words</td>
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## Legacy Code (if applicable)

## Reading List
To view Reading List, please go to [rebus:list](rebus:list).