Analysis of Controlled Substances

Module Code: CFS6006-B
Academic Year: 2018-19
Credit Rating: 20
School: School of Chemistry and Biosciences
Subject Area: Chemistry and Forensic Science (ceases 2016)
FHEQ Level: FHEQ Level 6
Module Leader: Alan Hague

Additional Tutors:

Pre-requisites:
Co-requisites:

Contact Hours

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Lectures</td>
<td>12</td>
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<tr>
<td>Laboratory</td>
<td>36</td>
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<tr>
<td>Directed Study</td>
<td>150</td>
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<td>Examinations DO NOT USE</td>
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Availability Periods

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<tr>
<th>Occurrence</th>
<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

To introduce classification systems for controlled and dangerous substances (drugs of abuse and explosives) and the process for development and review of law in the UK.

To develop skills in the screening and chemical analysis of controlled substances. To provide opportunities for development of group working and presentation skills through a challenging forensic case requiring analysis and interpretation.
Outline Syllabus


Explosives. Classification systems. Primary and secondary explosives, detonators. Types and effects of explosions. Composition of chemical explosives, propellants and discharge residues.

Presumptive colorimetric tests for drugs of abuse, explosives and firearms discharge residues.

Immunoassays for drugs of abuse: EMIT, ELISA, RIA, CEDIA, FPIA. Detection of drugs in body fluids, hair, sweaty secretions, derivatisation: solvents: chromatographic analysis.

Application of black-box analytical techniques: Chromatographic - GC. HPLC: Spectroscopic - MS, MS-MS. FTIR. Raman. NAA. SEM_EDX.

Forensic Case Study.

Module Learning Outcomes

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

1. Define classification systems for controlled and dangerous substances and describe the process for development and review of the law in the UK.

2. Choose and explain the chemical or biochemical basis for presumptive and spot tests, and propose protocols for avoidance of contamination in forensic recovery and analysis of trace deposits in crime scene and laboratory environments.

3. Recover trace substances from various substrates whilst avoiding contamination, select and carry out appropriate presumptive and spectroscopic/chromatographic tests, and interpret the analytical results both scientifically and forensically in the context of case circumstances.

4. Employ personal, time management, study and team-working skills and analytical and problem-solving skills, and communicated through a casework report and orally.

Learning, Teaching and Assessment Strategy

Teaching will take place through lectures, in staff-led seminars with reading material provided in advance of sessions and in supervised, practical casework with students working collectively.

Mode of Assessment
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<th>Type</th>
<th>Method</th>
<th>Description</th>
<th>Length</th>
<th>Weighting</th>
<th>Final Assess'</th>
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<tbody>
<tr>
<td>Summative</td>
<td>Examination - closed book</td>
<td>Two hour closed book exam</td>
<td>2 hours</td>
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<tr>
<td>Summative</td>
<td>Coursework</td>
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**Legacy Code (if applicable)**
CT-3041L

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