

Liverpool John Moores University

Title: FURTHER STUDIES IN BIOLOGY & CHEMISTRY
Status: Definitive
Code: **3508IFYSP** (107130)
Version Start Date: 01-08-2011

Owning School/Faculty: Liverpool Business School
Teaching School/Faculty: Liverpool Business School

| Team | Leader |
|--------------------|--------|
| Elizabeth Thompson | Y |

Academic Level: FHEQ3
Credit Value: 12.00
Total Delivered Hours: 68.50
Total Learning Hours: 120
Private Study: 51

Delivery Options

Course typically offered: Runs Twice - S1 & S2

| Component | Contact Hours |
|-----------|---------------|
| Lecture | 55.000 |
| Practical | 11.000 |

Grading Basis: 40 %

Assessment Details

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|----------|-------------------|--------------------|---------------|---------------|
| Exam | AS2 | Module Examination | 100.0 | 2.50 |

Aims

Acts as an extension module, allowing students a further opportunity to further their knowledge and understanding of basic principles of Biology and Chemistry. It will, in particular, introduce students to additional topics in Plant Biology, Ecology, Genetics and Inorganic Chemistry.

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate through written assignments an enhanced knowledge of Genetics, Ecology and Plant Biology.
- 2 Present chemical data and ideas in a clear and accurate form.
- 3 Describe how inorganic chemical reactions work and the main factors which affect them.
- 4 Describe the important elements, and the trends in their properties, of the Periodic Table.
- 5 Recall relevant information and deploy it effectively under test and/or examination conditions.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

| | | | | | |
|------|---|---|---|---|---|
| EXAM | 1 | 2 | 3 | 4 | 5 |
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Outline Syllabus

1. *Genetics including concept of the gene, heredity and genetics, evolution, gene technology.*
2. *Ecology with reference to human ecology and eco-systems, pollution and conservation.*
3. *Plant Biology – structure, plant growth and development, plant reproduction, transport, water balance and temperature control.*
4. *Physical properties and chemical reactions of certain elements and their compounds.*
5. *Redox 2 – electrode potentials, disproportionate reactions, corrosion and a storage cell.*
6. *Transition metal chemistry – electronic configurations, characteristic properties of transition metals, catalysis.*

Learning Activities

Tutor-led theory lessons to small classes, practical tasks carried out under laboratory conditions, formative assignments, class tests and terminal module examination.

References

| | |
|------------------------|--|
| Course Material | Book |
| Author | Toole, G & S |
| Publishing Year | 1999 |
| Title | Understanding Biology for Advanced Level |
| Subtitle | |
| Edition | 4th edition |
| Publisher | |

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|-------------|---------------|
| ISBN | 9780748739578 |
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|------------------------|-----------------------------------|
| Course Material | Book |
| Author | Adds, J et al |
| Publishing Year | 2004 |
| Title | Genetics, Evolution and Diversity |
| Subtitle | |
| Edition | |
| Publisher | Nelson Thornes Advanced Science |
| ISBN | |

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|------------------------|---|
| Course Material | Book |
| Author | Adds, J et al |
| Publishing Year | 2000 |
| Title | Exchange and Transport, Energy and Ecosystems |
| Subtitle | |
| Edition | |
| Publisher | Nelson Thornes Advanced Science |
| ISBN | |

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|------------------------|---|
| Course Material | Book |
| Author | Chapman, B |
| Publishing Year | 2003 |
| Title | Structure, Bonding and Main Group Chemistry |
| Subtitle | |
| Edition | 2nd edition |
| Publisher | |
| ISBN | 97807487765590 |

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|------------------------|---|
| Course Material | Book |
| Author | Chapman, B |
| Publishing Year | 2003 |
| Title | Organic Chemistry, Energetics, Kinetics and Equilibrium |
| Subtitle | |
| Edition | 2nd edition |
| Publisher | |
| ISBN | 9780748776566 |

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|------------------------|---|
| Course Material | Book |
| Author | Beavon, R and Jarvis, A |
| Publishing Year | 2003 |
| Title | Periodicity, Quantitative Equilibria and Functional Group Chemistry |
| Subtitle | |
| Edition | 2nd edition |
| Publisher | |
| ISBN | 9780748776573 |

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|------------------------|--|
| Course Material | Book |
| Author | Jarvis, A |
| Publishing Year | 2004 |
| Title | Transition Metals, Quantitative Kinetics and Applied Organic Chemistry |
| Subtitle | |
| Edition | 2nd edition |
| Publisher | Nelson Advanced Science series |
| ISBN | 9780748776580 |

Notes

Enables students to further their studies in Biology and Chemistry and broaden the background that they would be able to bring to a range of science and related degrees.