Module Title **Fundamentals of Organic Chemistry** **Keywords** Aromaticity, Aromatic Substitution, Aromatic Heterocycles, Structure Elucidation, Resonance	Reference AS2232 SCQF SCQF Level 8 SCQF Points 15 ECTS Points 7.5 Created May 2002 Approved May 2011 Amended August 2007 Version No. 1

This Version is No Longer Current

The latest version of this module is available here

Prerequisites for Module

Students should have completed an introductory course in organic chemistry and be familiar with structure, naming and reactions of aliphatic compounds, (AS1801) or equivalent.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To enable the student to apply mechanistic principles to the interpretation of organic reactions and explain the reactions and properties of aromatic compounds.

The properties and identification of drugs e.g. Amphetamine(Ectasy), Aspirin, barbiturates, cocaine, LSD, Morphine, Codeine, Heroin, Paracetamol.

Indicative Student Workload

Contact Hours	Full Time
Laboratory Work	9
Tutorials	21
Directed Study	
Directed Study	65
Private Study	
Private Study	55

Mode of Delivery

This module is delivered via tutorials using open / distance

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1. Predict aromatic character and behaviour and explain conjugation/delocalization in aromatic structures.
2. Illustrate, through the use of mechanistic curly arrows, how organic reactions proceed and propose synthetic routes for given organic reactions.
3. Demonstrate practical synthetic chemistry skills and present and interpret experimental results.

Indicative Module Content

Review of mechanistic concepts as applied to organic reactions: aromaticity, aromatic electrophilic substitution reactions, orientation effects, activating and deactivating groups, aromatic nucleophilic substitution, diazonium salts and use in synthesis. Aromatic heterocyclic compounds: classification and reactivity of ?-equivalent and ?-excessive systems, pyrrole, furan, thiophene, imidazole, pyridine, pyrimidine, purine.

learning materials and laboratory classes.

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2
Component 2	3

Coursework (30% weighting): Laboratory formal report.

Examination (70% weighting)

Indicative Bibliography

1. McMURRY, J. <I>Organic Chemistry.</I> Current Edition.Brooks/Cole
2. BROWN, W.H., FOOTE, C.S.,IVERSON, B.L. and ANSLYN, E.V. <I>Organic Chemistry.</I> Current Edition. Brooks/Cole.
3. LOUDON,G. M. <I>Organic Chemistry.</I> Current Edition. Oxford University Press.
4. PATRICK, G. <I>Introduction to Medicinal Chemistry.</I> Current Edition. Oxford University Press.