

Liverpool John Moores University

Title: Organic Chemistry
Status: Definitive
Code: **3503YAUBIO** (127880)
Version Start Date: 01-08-2021

Owning School/Faculty: Pharmacy & Biomolecular Sciences
Teaching School/Faculty: Yunnan Agricultural University

Team	Leader
Katie Evans	Y

Academic Level: FHEQ3 **Credit Value:** 20 **Total Delivered Hours:** 66
Total Learning Hours: 200 **Private Study:** 134

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	40
Practical	24

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Exam	30	2
Practice	AS2	Practical report	20	
Exam	AS3	Exam covering organic chemistry experiments	50	

Aims

The aim of the module is to teach students about the composition, structure, properties, synthesis, mutual transformation methods and related theoretical knowledge of organic compounds. Through the study of this module, students will master the basic knowledge and basic theory of organic chemistry, understand the latest achievements and development trends of the subject, and master the basic

operation skills of organic chemistry experiments.

Learning Outcomes

After completing the module the student should be able to:

- 1 Apply the basic theory and knowledge of organic chemistry to analyse, judge, and solve organic chemistry problems.
- 2 Recall the naming rules of various organic compounds and the different representation methods of organic molecular structures, adopting the system of nomenclature to name various organic compounds, and write the organic molecular structural formula correctly.
- 3 Describe the physical and chemical properties of various organic compounds, apply basic organic reactions to identify organic compounds, infer the structure of organic compounds, design reasonable organic synthesis routes and analysis, and solve complex organic chemistry problems.
- 4 Record and process experimental data, accurately draw the schematic diagram of the experimental device, write the experimental report, and consult the relevant chemistry manual.
- 5 Demonstrate basic experimental techniques relevant to organic chemistry, whilst observing good laboratory practice.

Learning Outcomes of Assessments

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

Exam	1	2	3	4	5
Practice	1	2	3	4	5
Exam	1	2	3	4	5

Outline Syllabus

The module includes study of alkanes, alkenes, alkynes, diolefins, aromatic hydrocarbons, optical isomerism, halogenated hydrocarbons, alcohols, phenols, ethers, aldehydes, ketones, quinones, carboxylic acids and their derivatives, substituted acids, nitrogen and phosphorous compounds, heterocyclic compounds, fats, and carbohydrates. Practical experiments include recrystallization of acetanilide, ordinary distillation, paper chromatography, extraction of crude oil and steam distillation.

Learning Activities

The module is delivered through a series of lectures and students will also perform practical experiments relevant to the study of organic chemistry.

Notes

The module is designed to promote the development of students' ability in autonomous learning, knowledge application and innovative thinking.