

Summary Information

Module Code	6505YAUBIO
Formal Module Title	Bioinformatics
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	10
Academic level	FHEQ Level 6
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Yunnan Agricultural University

Learning Methods

Learning Method Type	Hours
Lecture	24
Practical	16

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-PAR	PAR	January	12 Weeks

Aims and Outcomes

Aims	Bioinformatics is an emerging interdisciplinary subject that combines molecular biology, genomics, big data analysis, and computer networks. It is one of the major frontiers of life sciences and natural sciences. Bioinformatics is a major elective course for biotechnology majors and an elective course for students majoring in agriculture. The aim of the module is to provide students with an understanding of the basic terminology, principles, and research contents of bioinformatics, to learn using important internet biological databases and analytical tools, and to master some internet-based bioinformatics software through problem-based and task-based learning methods. The module is designed to improve the ability of students to analyse and solve problems in their work, study and future research work.
------	---

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Describe the basic research methods and related bioinformatics databases, and master some of them.
MLO2	2	Use information technology to analyse and explore the biological significance in biomolecular information.
MLO3	3	Analyse biological problems by using biological software, predict and analyse the results of molecular biological experiments.

Module Content

Outline Syllabus	The module covers the acquisition and processing of biological data, data retrieval of biological databases, the alignment and analysis of nucleic acid and protein sequence, gene prediction and annotation of genome, the analysis and prediction of protein structure, and the evolution and phylogeny of biological molecules.
Module Overview	
Additional Information	The module relies upon, and is focused on network databases and online software, students will therefore require internet connection.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Exam	40	2	MLO1, MLO2, MLO3
Artefacts	Report	50	0	MLO1, MLO2, MLO3
Test	Test	10	0	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------

Katie Evans	Yes	N/A
-------------	-----	-----

Partner Module Team

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------