

#### Summary Information

Module Code	4504YAUBIO
Formal Module Title	Genetics
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
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	120
Practical	24

#### Module Offering(s)

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

## Aims and Outcomes

Aims	The aim of the module is for students to develop an understanding of the basic laws of biological heredity and variation, along with basic theories of molecular genetics. Students will develop an understanding of the basic attributes of genes and genomes. The module also allows students to broaden their knowledge of genetics and improve their experimental skills in heredity research. An understanding of the basic theories will support the ability of students to engage with appropriate practical sessions, and to apply this knowledge to scientific research.
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Describe basic theories and concepts of general and molecular genetics.
MLO2	2	Recognise the application of general and molecular genetics into research and development within the field.
MLO3	3	Describe the basic experimental principle and technology of general genetics.

## Module Content

Outline Syllabus	The module content will include the three basic laws of genetics, basic theories of quantitative genetics, heterosis and its genetic theory, identification and repair of gene mutation, chromosome structure and quantitative variation, cytoplasmic genetics, population genetics and biological evolution. The module will cover basic attributes of genes and genomes; the types and characteristics of genetic information, and their modes of storage and transmission; the molecular mechanism of gene expression regulation; the types and characteristics of genetic markers, the methods and principles of genome mapping; mutation and repair and recombination mechanism of genes; plant development and its molecular mechanisms.
Module Overview	
Additional Information	The module is designed to provide an understanding of the basic theories and concepts of general and molecular genetics, along with development of basic experimental skills.

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Exam 1	25	2	MLO1, MLO2, MLO3
Practice	Practice	10	0	MLO1, MLO2, MLO3
Exam	Exam 2	10	0	MLO1, MLO2, MLO3
Test	Test 1	5	0	MLO1, MLO2, MLO3
Exam	Exam 3	30	2	MLO1, MLO2, MLO3
Exam	Exam 4	10	0	MLO1, MLO2, MLO3

Test	Test 2	10	0	MLO1, MLO2, MLO3
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## 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
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