

Liverpool John Moores University

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Title: CELL BIOLOGY
Status: Definitive
Code: **4002BCBMOL** (101426)
Version Start Date: 01-08-2011

Owning School/Faculty: Pharmacy & Biomolecular Sciences
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

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Academic Level: FHEQ4 **Credit Value:** 12.00 **Total Delivered Hours:** 40.50

Total Learning Hours: 120 **Private Study:** 79

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	32.000
Practical	6.000
Workshop	1.500

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Exam	70.0	1.00

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS2	ESSAY	30.0	

Aims

To provide an introduction to eukaryotic cellular and molecular biology.

Learning Outcomes

After completing the module the student should be able to:

- 1 Describe the histology of basic tissue types.
- 2 Describe eukaryotic cell structure and function including all the major organelles.
- 3 Give an account of essential aspects of eukaryotic molecular biology.
- 4 Explain the basic patterns of inheritance

Learning Outcomes of Assessments

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

EXAM	1	2	3	4
ESSAY	1	2	3	

Outline Syllabus

An introduction to the histology of basic tissue types including blood, epithelium, muscle and connective tissues.

Cell cycle, mitosis, meiosis, DNA structure, histones, eukaryotic DNA replication, transcription and translation. Recombination.

Cell structure: Generalised eukaryotic cell structure (nucleus, mitochondria, membranes, the golgi body, endoplasmic reticulum, lysosomes, peroxisomes chloroplasts in plant cells). The structure and function of key organelles: the mitochondria and chloroplasts. Endoplasmic reticulum and Golgi. Lysosomes and peroxisomes.

Patterns of inheritance.

Learning Activities

Outline Syllabus:

An introduction to the histology of basic tissue types including blood, epithelium, muscle and connective tissue.

Cell cycle, mitosis, meiosis. DNA structure, histones. Eukaryotic DNA replication, transcription and translation. Recombination.

Cell structure: mitochondria and chloroplasts. Endoplasmic reticulum and Golgi.

Lysosomes and peroxisomes. Cytoskeleton.

Patterns of inheritance.

References

Course Material	Book
Author	Russell, P J
Publishing Year	2006
Title	iGenetics:A Molecular Approach
Subtitle	
Edition	
Publisher	Pearson
ISBN	0805346651

Course Material	Book
Author	Alberts B
Publishing Year	2003
Title	Essential Cell Biology
Subtitle	
Edition	
Publisher	Garland
ISBN	0815334818

Course Material	Book
Author	Alberts B
Publishing Year	2008
Title	Molecular Biology of the Cell
Subtitle	
Edition	5th
Publisher	Garland
ISBN	

Course Material	Book
Author	Young B
Publishing Year	2006
Title	Wheater's Functional Histology
Subtitle	A text and colour atlas
Edition	
Publisher	Livingstone
ISBN	044306850

Course Material	Book
Author	Griffiths AJF
Publishing Year	2000
Title	Introduction to genetic analysis
Subtitle	

Edition	
Publisher	Freeman
ISBN	0716735202

Course Material	Book
Author	Mueller
Publishing Year	2001
Title	Emery's elements of genetic analysis
Subtitle	
Edition	
Publisher	Churchill Livingstone
ISBN	044307125

Notes

This course is intended to provide a basic knowledge of cell and molecular biology suitable both for students who will later specialise in different areas and those who will study these subjects at Levels 2 and 3.