

Liverpool John Moores University

Title: DEVELOPMENTAL BIOLOGY
Status: Definitive
Code: **5214NATSCI** (122074)
Version Start Date: 01-08-2021

Owning School/Faculty: Biological and Environmental Sciences
Teaching School/Faculty: Biological and Environmental Sciences

Team	Leader
Mirko Pegoraro	Y
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Sally Williamson	
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Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 56

Total Learning Hours: 200 **Private Study:** 144

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	24
Practical	16
Workshop	16

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	Essays	Exam	50	2
Report	Practical	Practical Report	50	

Aims

To explain the molecular mechanisms by which animals and plants grow and

develop and how this has been advanced with the use of state-of-the-art methodologies. To discuss how the mechanisms of body plan development is conserved across animals. To explain how the study of developmental biology has generated modern transgenic and stem cell biology for the practical benefit of human health.

Learning Outcomes

After completing the module the student should be able to:

- 1 Explain the molecular mechanisms underlying embryonic development
- 2 Evaluate the experimental methodology that can be used in developmental biology
- 3 Discuss the conservation of the molecular mechanisms controlling body plan development
- 4 Discuss how recent advances in embryo manipulation can be used in regenerative medicine and animal and plant biotechnology.

Learning Outcomes of Assessments

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

Essays	1	2	3	4
Practical Report	1	2	3	

Outline Syllabus

Theory underlying, and the techniques used to understand, the molecular mechanisms of growth and development of organisms.

Learning Activities

The module is delivered through a combination of lectures, practicals and workshops.

Notes

We explain how state-of-the-art molecular and genetic tools are used to understand mechanisms that regulate the growth and development of organisms. It covers methodology and practical experiments that illuminate the molecular mechanisms that underpin of developmental processes.