



Title:	Animal & Plant Physiology APPROVED
Long Title:	Animal & Plant Physiology
Module Code:	PHOL6007
Duration:	1 Semester
Credits:	5
NFQ Level:	Fundamental
Field of Study:	Physiology
Valid From:	Semester 1 - 2018/19 (September 2018)
Module Delivered in	2 programme(s)
Module Coordinator:	Brigid Lucey
Module Author:	Craig Murphy
Module Description:	This module introduces the student to the systems of both multicellular animals and vascular plants, structure and function of incorporated organelles, physiological processes and inter-relationship between the systems.
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
LO1	Describe different types of cell and tissue structures found in plants and explain their biological functions
LO2	Examine the growth, development and transport mechanisms required in plant systems
LO3	Identify the structure and function of tissues found in different animal systems
LO4	Outline the physiological processes of species-specific systems and the interactions between these systems
LO5	Perform relevant laboratory experiments, collate data, interpret results and write scientific reports
Pre-requisite learning	
Module Recommendations	
<i>This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named MTU module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).</i>	
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>	
No requirements listed	

Module Content & Assessment

Indicative Content

Plant Structure

Plant cell structure. Epidermal tissue, ground tissue and vascular tissue. Organ systems within plants.

Plant Physiology

Plant life cycles. Transport of water and minerals within the plant. Photosynthesis. Hormone cycling. Growth and movement responses. Sexual and asexual reproduction. Nutritional requirements.

Animal Tissue

Structure and organisation of cells and tissues within animal systems. Functional roles of epithelial, connective, muscle and nervous tissues.

Animal Physiology

Processes involved in the species-specific function and regulation of physiological systems; including, nervous, cardiovascular, respiratory, immune, digestive (monogastric and ruminant) and excretory systems.

Assessment Breakdown

	%
Course Work	100.00%

Course Work

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Multiple Choice Questions	Theory assessment on lecture material; plant structure and function	1,2	30.0	Week 8
Written Report	Laboratory work and written reports on thematic areas	5	20.0	Every Second Week
Practical/Skills Evaluation	Laboratory Exam	5	20.0	Week 12
Short Answer Questions	Theory assessment on lecture material; animal structure and function	3,4	30.0	Sem End

No End of Module Formal Examination

Reassessment Requirement

Repeat examination

Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.

The institute reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time				
<i>Workload Type</i>	<i>Workload Description</i>	<i>Hours</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	Theory and concepts	2.0	Every Week	2.00
Lab	Laboratory practicals/report writing	2.0	Every Second Week	1.00
Independent & Directed Learning (Non-contact)	Self-directed learning/practical reports	4.0	Every Week	4.00
Total Hours				8.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				3.00

This module has no Part Time workload.

Module Resources

Recommended Book Resources

- Urry, L., Cain, M., Wasserman, S., Minorsky, P. & Reece, J. 2017, *Campbell Biology*, 11th Ed., Pearson [ISBN: 9780134093413]

Supplementary Book Resources

- Akers & Denbow 2013, *Anatomy and Physiology of Domestic Animals*, 2nd Ed., Wiley Blackwell [ISBN: 9781118356388]

This module does not have any article/paper resources

Other Resources

- Website: Wiley 2018, *Biology*
<http://www.dummies.com/education/science/biology/>
- EBook: *Anatomy and Physiology of Animals*
https://craftx.org/sites/all/themes/craft_blue/pdf/Anatomy_and_Physiology_of_Animals.pdf

Module Delivered in

Programme Code	Programme	Semester	Delivery
CR_SAGBI_8	<u>Bachelor of Science (Honours) in Agri-Biosciences</u>	1	Mandatory
CR_SAGBI_7	<u>Bachelor of Science in Agri-Biosciences</u>	1	Mandatory