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MODULE DESCRIPTOR

Module Title

Biological Science

Reference	PH1131	Version	3
Created	September 2018	SCQF Level	SCQF 7
Approved	July 2013	SCQF Points	15
Amended	September 2018	ECTS Points	7.5

Aims of Module

To provide a foundation for the study of biological pharmaceutical sciences and human physiology.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Recognise and explain the structure of cells (both prokaryotic and eukaryotic), tissues and organs.
- 2 Explain the function of sub-cellular components and describe cell signalling pathways, both generally and with reference to specific specialised cells.
- 3 Demonstrate an ability to solve biological problems.

Indicative Module Content

Development of the fundamentals of cell and molecular biology necessary for understanding the physiology, pathology and therapeutics covered in successive modules. Topics include: Cell biology: organelle structure and function, nucleic acids, replication, transcription and translation, mitosis and meiosis, chromosome structure, genetics and variation. Prokaryotes: bacterial cell wall structure and endotoxin, public health microbiology. Eukaryotic tissues: cell function, differentiation and specialisation, inter- and intracellular communication, transport, cell signalling, receptor regulation, G-proteins, nerve cells, cardiac muscle cells, vascular smooth muscle cells.

Module Delivery

Lectures and coursework sessions (consisting of practical exercises including laboratory work, data interpretation, computer-based exercises and tutorials). Directed study (consisting of paper and electronic based materials often incorporating self-assessment and directed reading).

Indicative Student Workload

	Full Time	Part Time
Contact Hours	52	N/A
Non-Contact Hours	98	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Examination	Weighting:	100%	Outcomes Assessed:	1, 2, 3
Description:	A two hour paper containing MCQ and short answer questions.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

To pass this module, the student MUST achieve a module Grade of Grade D or better.

Module Grade	Minimum Requirements to achieve Module Grade:
A	When the mark for C1 is 70% or more.
B	When the mark for C1 is 60-69%.
C	When the mark for C1 is 50-59%.
D	When the mark for C1 is 40-49%.
E	When the mark for C1 is 35-39%.
F	When the mark for C1 is less than 35%.
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None, in addition to course entry requirements.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 TORTORA, G.J and DERRICKSON, B.H. Principles of anatomy and physiology. Current edition. New York: J Wiley and Sons
- 2 BORON, W.F. and BOULPAEP, E.L. Medical Physiology. Current edition. Oxford: Saunders Elsevier Science.
- 3 TRC Pharmacology app. Available from: <https://coo.lumc.nl/TRC/redirect.aspx?lessonid=30>