

ENVS2620: Biosciences for EOHS

Singapore PSB

Trimester 2 - 2024 (Singapore)



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

OVERVIEW

Course Description	Introduces to the student the basic components of biological systems and provides a background knowledge of human physiology and anatomy in relation to environmental and occupational health. Topics include animal cell structure, micro-organisms and basic biochemistry, major body systems, defence mechanisms and reproduction.
Requisites	This course is only available to students enrolled in the Bachelor of Environmental & Occupational Health & Safety program.
Contact Hours	Singapore PSB Integrated Learning Session Face to Face on Campus 40 hour(s) per Term Full Term Contact hours are regular and on a weekly basis. Total face to face contact will be 40 hours.
Unit Weighting	10
Workload	Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10-unit course.

COURSE OUTLINE

CONTACTS

Course Coordinator **University of Newcastle, Australia**
A/Prof Charles Lee
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Consultation: Mondays: 6-7pm

Teaching Staff **University of Newcastle, Australia**
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Questions/ Requests can be logged through:

<http://www.psb-academy.edu.sg/current-students/current-student-enquiries/>

SYLLABUS

Course Content The course covers the fundamentals of the anatomy, physiology and biochemistry of the human body as they relate to environmental and occupational health. Major topics are:

- Cell structure and function and cellular organisation into tissues, organs and organisms
- Viruses, bacteria and fungi
- Homeostasis
- Cellular respiration
- Human respiratory system and breathing
- Blood, lymph, the cardiovascular system and transport in the body
- Endocrine and nervous systems and communication
- Skeleto-muscular systems and movement
- Digestion and metabolism
- Excretion
- Immunity and body defence
- Reproduction

Course Learning Outcomes

On successful completion of this course, students will be able to:

1. Describe the ultra-structure of cells and outline the functions of major organelles;
2. Describe, using examples, the organisation of cells into tissues, organs and organisms;
3. Explain with examples homeostasis;
4. Outline the processes of cell respiration;
5. Describe the structures and functions of major systems in the human body concerned with intake of materials and information; transport and distribution of materials; nervous and hormonal communication; movement; breakdown and metabolism of materials; excretion, body defence and reproduction.

Course Materials

Required Text:

Biology of Humans: Concepts, Applications and Issues (6th Edition) (2016)

Authors: JM Goodenough J and B A McGuire

Published by: Pearson International

ISBN 13:978-0134045443

Recommended Reading:

Human Physiology: An Integrated Approach (6th Edition)
Author: Dee Unglaub Silverthorn (2013)
Published by: Pearson International
ISBN 10:0321798600 or ISBN 13:9780321798602

Other Resources:

<http://www.humanbiology.com> and <http://www.physiologyplace.com>

SCHEDULE

Week	Date of Class	Topic	Assessment Due
1	8 May	Introduction & Homeostasis	
2	15 May	Digestion & Nutrition	
3	22 May	Neuron & Action Potential	
4	29 May	Sensory System	
5	31 May	Muscular System	
6	12 June	Metabolism & Energy	
Mid Term Break			
8	19 June	Circulatory System	24 June: Progress Test
9	3 July	Respiratory System	
10	4 July	Secretory System	
11	10 July	Body Defence Mechanisms	
12	24 July	Reproductive Systems	29 July: GP Assignment
13	31 July	Growth	
13	1 August	Revision	
Trimester 2 (Singapore) Exam Period			
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ASSESSMENTS

This course has 3 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Class Test - Progress Test	24 June 2024	Individual	30%	1, 2, 3, 4, 5
2	Group Presentation	29 July 2024	Group	30%	1, 2, 3, 4, 5
3	Final Examination	Exam Period	Individual	40%	1, 2, 3, 4, 5

Late Submissions

The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

Assessment 1 - Class Test - Progress Test

Assessment Type	In Term Test
Description	30 Multiple Choice Questions from the first six (6) topics
Weighting	30%
Due Date	24 June 2024
Submission Method	Online
Assessment Criteria	Marks will be awarded for choosing the best answer from multiple choice questions based on the material covered
Return Method	Not Returned
Feedback Provided	In Class - Feedback provided in class after the release of test marks

Assessment 2 - Group Presentation

Assessment Type	Presentation
Description	PowerPoint presentation to be prepared as a group and submitted.
Weighting	30%
Due Date	29 July 2024
Submission Method	Online through Turnitin on Canvas
Assessment Criteria	Given on the assignment details document
Return Method	Online via Canvas
Feedback Provided	Online – Feedback provided in an assessment rubric.

Assessment 3 - Final Examination

Assessment Type	Formal Examination
Description	Questions that require long and short answers
Weighting	40%
Due Date	In Formal Exam period
Submission Method	Formal Exam
Assessment Criteria	Knowledge relevant to the questions
Return Method	Not Returned
Feedback Provided	None

ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

*Skills are those identified for the purposes of assessment task(s).

Communication Methods

Communication methods used in this course include:

- Booking appointment through telephone following by direct contact with lecturer/ course coordinator during consultation hours.
- Email communication to lecturer/ course coordinator.

Course Evaluation

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement. Student feedback has been satisfying all these years and hence no changes have been made to this offering of the course.

Oral Interviews (Vivas)

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the [Oral Examination \(viva\) Procedure](#). In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the [Student Conduct Rule](#).

Academic Misconduct All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity policy, refer to <http://www.newcastle.edu.au/policy/000608.html>.

Adverse Circumstances You are entitled to apply for special consideration because adverse circumstances have had an impact on your performance in an assessment item. This includes applying for an extension of time to complete an assessment item. Prior to applying you must refer to the Adverse Circumstances Affecting Assessment Items Procedure, available at <http://www.newcastle.edu.au/policy/000940.html>. All applications for Adverse Circumstances must be lodged via the online Adverse Circumstances system, along with supporting documentation.

Important Policy Information The 'HELP for Students' tab in UoNline contains important information that all students should be familiar with, including various systems, policies and procedures.

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.

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