https://courseoutline.auckland.ac.nz/dco/course/BIOSCI/107/1243

BIOSCI 107 : Biology for Biomedical Science: Cellular Processes

Science

2024 Semester One (1243) (15 POINTS)

Course Prescription

The cellular basis of mammalian form and function. Particular emphasis will be placed on cellular components and processes of blood, neural, muscular, reproductive, immune and supporting systems and how they contribute to the structure and function of the body as a whole.

Course Overview

This course provides an introduction to human biology with particular emphasis on the cellular basis of form and function. Cellular components and processes of blood, neural, muscular, immune and supporting systems will be discussed. The course focuses primarily on processes relevant in humans, however, the fundamental nature of the topics covered is of much wider relevance, and the course is recommended for anyone interested in biology. This course is one of the four core courses taken by first year BHSc or BSc (Biomedical Science) students wanting to apply for clinical programme selection.

Course director: Anthony Phillips; Course coordinators: Suzanne Reid and Monica Kam; Course email: biosci107@auckland.ac.nz

Course Requirements

No pre-requisites or restrictions

Capabilities Developed in this Course

Capability 3: Knowledge and Practice
Capability 4: Critical Thinking
Capability 5: Solution Seeking
Capability 6: Communication
Capability 7: Collaboration

Graduate Profile: Bachelor of Science

Learning Outcomes

By the end of this course, students will be able to:

1. Identify and describe the structure and function of human cells and tissues. (Capability 3 and 4)
2. Define and describe the cellular processes that enable human cells to perform required functions. (Capability 3 and 4)
3. Use and apply practical laboratory equipment correctly to collect experimental data. (Capability 3, 4, 5, 6 and 7)
4. Critically evaluate experimental data, presenting findings clearly and logically. (Capability 3, 4, 5, 6 and 7)
5. Participate in group discussions, communicating effectively and logically. (Capability 3, 4, 5, 6 and 7)

Assessments

Assessment Type	Percentage	Classification
Laboratories	20%	Group & Individual Coursework
Quizzes	10%	Individual Coursework
Test	30%	Individual Test
Final Exam	40%	Individual Examination
4 types	100%	

Assessment Type	Learning Outcome Addressed				
	1	2	3	4	5
Laboratories	✔	✔	✔	✔	✔
Quizzes	✔	✔			
Test	✔	✔			
Final Exam	✔	✔			

Students must pass Theory (Quizzes, Test, Exam) and Practical (Laboratories) components independently in order to pass the course overall.

Tuākana

Tuākana Science is a multi-faceted programme for Māori and Pacific students providing topic specific tutorials, one-on-one sessions, test and exam preparation and more. Explore your options at
https://www.auckland.ac.nz/en/science/study-with-us/pacific-in-our-faculty.html
https://www.auckland.ac.nz/en/science/study-with-us/maori-in-our-faculty.html

The School of Biological Sciences has an active Tuākana programme. For more information and to find contact details for the Biological Sciences Tuākana coordinator, please see https://www.auckland.ac.nz/en/science/study-with-us/maori-and-pacific-at-the-faculty/tuakana-programme.html

Key Topics

BIOSCI 107 content covers seven topic modules:

1. Cells & Tissues
2. Cell Structure & Function
3. Special Topics
4. Blood & Immune
5. Cell Processes
6. Excitable Tissue: Neurons
7. Excitable Tissue: Muscles

Special Requirements

The course assessment includes an in person evening test (6.30-8.00 pm) part way through semester; the date of the test is published within the BIOSCI 107 Canvas course before the start of Semester.

Students are required to supply and wear a lab coat and safety glasses while in the teaching lab.

Workload Expectations

This course is a standard 15 point course and students are expected to spend 10 hours per week involved in each 15 point course that they are enrolled in.

For this course, you can expect ~35 hours of lectures, 15 hours of laboratories, with the remaining ~70 hours spent reading and thinking about the content, and working on assignments and/or test preparation.

Delivery Mode

Campus Experience

Attendance is required at labs to complete practical components of the course.
We strongly recommend lecture attendance, but they will also be available as recordings. Other learning activities including labs will not be available as recordings.The activities for the course are scheduled as a standard weekly timetable.

Learning Resources

Course materials are made available in a learning and collaboration tool called Canvas which also includes reading lists and lecture recordings (where available).

Please remember that the recording of any class on a personal device requires the permission of the instructor.

Course guide:

A combined lecture and laboratory guide is available for purchase through UBIQ or can be downloaded for free via Canvas. You will need to bring the relevant pages from the laboratory manual to each of your practical sessions.

Prescribed text:

Tortora et al, Principles of Anatomy and Physiology, the 3rd Asia Pacific edition, Wiley Publishing (IBSN number 9780730363538). This is also the prescribed text for MEDSCI 142. Older editions are also suitable.

An additional supporting textbook:

This text is particularly recommended as useful for students who do not have a strong background in biology: Campbell's Biology, Urry *et al.* (2021) 12th Edn., Australia and New Zealand version. (Pearson Benjamin Cummings). This is also the prescribed text for BIOSCI 101.

Health & Safety

Students will be advised of basic lab safety requirements prior to attending labs and will need to wear appropriate clothing for each of the lab sessions.

Student Feedback

During the course Class Representatives in each class can take feedback to the staff responsible for the course and staff-student consultative committees.

At the end of the course students will be invited to give feedback on the course and teaching through a tool called SET or Qualtrics. The lecturers and course co-ordinators will consider all feedback.

Your feedback helps to improve the course and its delivery for all students.

Staff welcome feedback on the course throughout the semester, including the SET evaluations. Please contact your course coordinator or student representative at any time with your feedback.

Academic Integrity

The University of Auckland will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as a serious academic offence. The work that a student submits for grading must be the student's own work, reflecting their learning. Where work from other sources is used, it must be properly acknowledged and referenced. This requirement also applies to sources on the internet. A student's assessed work may be reviewed for potential plagiarism or other forms of academic misconduct, using computerised detection mechanisms.

Class Representatives

Class representatives are students tasked with representing student issues to departments, faculties, and the wider university. If you have a complaint about this course, please contact your class rep who will know how to raise it in the right channels. See your departmental noticeboard for contact details for your class reps.

Copyright

Inclusive Learning

All students are asked to discuss any impairment related requirements privately, face to face and/or in written form with the course coordinator, lecturer or tutor.

Student Disability Services also provides support for students with a wide range of impairments, both visible and invisible, to succeed and excel at the University. For more information and contact details, please visit the Student Disability Services' website http://disability.auckland.ac.nz

Special Circumstances

If your ability to complete assessed coursework is affected by illness or other personal circumstances outside of your control, contact a member of teaching staff as soon as possible before the assessment is due.

If your personal circumstances significantly affect your performance, or preparation, for an exam or eligible written test, refer to the University's aegrotat or compassionate consideration page https://www.auckland.ac.nz/en/students/academic-information/exams-and-final-results/during-exams/aegrotat-and-compassionate-consideration.html.

This should be done as soon as possible and no later than seven days after the affected test or exam date.

Learning Continuity

In the event of an unexpected disruption, we undertake to maintain the continuity and standard of teaching and learning in all your courses throughout the year. If there are unexpected disruptions the University has contingency plans to ensure that access to your course continues and course assessment continues to meet the principles of the University's assessment policy. Some adjustments may need to be made in emergencies. You will be kept fully informed by your course co-ordinator/director, and if disruption occurs you should refer to the university website for information about how to proceed.

The delivery mode may change depending on COVID restrictions. Any changes will be communicated through Canvas.

Student Charter and Responsibilities

The Student Charter assumes and acknowledges that students are active participants in the learning process and that they have responsibilities to the institution and the international community of scholars. The University expects that students will act at all times in a way that demonstrates respect for the rights of other students and staff so that the learning environment is both safe and productive. For further information visit Student Charter https://www.auckland.ac.nz/en/students/forms-policies-and-guidelines/student-policies-and-guidelines/student-charter.html.

Disclaimer

Elements of this outline may be subject to change. The latest information about the course will be available for enrolled students in Canvas.

In this course students may be asked to submit coursework assessments digitally. The University reserves the right to conduct scheduled tests and examinations for this course online or through the use of computers or other electronic devices. Where tests or examinations are conducted online remote invigilation arrangements may be used. In exceptional circumstances changes to elements of this course may be necessary at short notice. Students enrolled in this course will be informed of any such changes and the reasons for them, as soon as possible, through Canvas.