



The University of Southern Queensland

Course specification

The current and official versions of the course specifications are available on the web at <http://www.usq.edu.au/coursespecification/current>.
Please consult the web for updates that may occur during the year.

Description: Current Topics in Biomedical Sciences

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
BIO	2901	74740	1, 2008	ONC	1.00	Toowoomba

Academic group:	FOSCI
Academic org:	FOS002
Student contribution band:	2
ASCED code:	019999

STAFFING

Examiner: Michael Kotiw
Moderator: Guang Liu

REQUISITES

Pre-requisite: BIO2103 or NSC1951

RATIONALE

An understanding of current advances in biomedical sciences will provide nurses and biomedical scientists with useful knowledge that will assist in clinical or research workplaces.

SYNOPSIS

In this course students extend their knowledge of basic biomedical sciences to include new technologies and alternative therapies that are utilised in diagnosing diseases or improving human health.

OBJECTIVES

On completion of this course students will be able to:

1. describe the basis of genetic inheritance, and diagnostic or therapeutic strategies using DNA technologies (Mid-Semester Test);
2. explain the role of stem cells and bioengineering and their potential in treatment of diseases (Mid-Semester Test);
3. discuss the pharmacological basis for the use of natural and herbal medicine including their interactions with conventional medicines (Exam);
4. explain the rationale for using various diagnostic imaging techniques (Exam);
5. describe how alterations in serum or tissue markers can be measured biochemically as a basis for diagnosis (Exam);
6. explain the importance of infection control in minimising the potential spread of diseases (Exam).

TOPICS

	Description	Weighting (%)
1.	Genetics, DNA technologies and DNA based diagnostics	23.00
2.	Gene therapies	11.00
3.	Stem cells and potential therapies	11.00
4.	Natural and herbal medicines including drug interactions	11.00
5.	Bioengineering and organ transplantations	11.00
6.	Diagnostic imaging	11.00
7.	Clinical Biochemistry	11.00
8.	Aspects of Infection Control	11.00

TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

Interactive Physiology CD-ROM

Bryant, B, Knights, K & Salerno, E 2006, *Pharmacology for health professionals*, 2nd edn, Mosby, Sydney.

Marieb, EN 2007, *Human anatomy and physiology*, 7th edn, Benjamin/Cummings, Menlo Park, California.

Timberlake, K 2006, *Chemistry: an introduction to general, organic and biological chemistry*, 9th edn, Pearson Benjamin/Cummings, San Francisco.

REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

2007, *Australian medicines handbook*, Australian Medicines Handbook Pty Ltd, Adelaide.

(Available online through library catalogue)

Barnes, J, Anderson, L & Phillipson, J 2002, *Herbal medicines: a guide for health care professionals*, 2nd edn, Pharmaceutical Press, London.

Brody, TM et al 2005, *Human pharmacology: molecular to clinical*, 4th edn, Mosby, St Louis.

Cree, L & Rischmiller, S 2000, *Science in nursing*, 4th edn, Harcourt, Sydney.

(revised)

Hinwood, B 1993, *A textbook of science for the health professions*, 2nd edn, Chapman & Hall, London.

Hollins, M 1992, *Medical physics*, Thomas Nelson and Sons Ltd, Surrey.

Rang, HP et al 2007, *Pharmacology*, 6th edn, Churchill Livingstone, Edinburgh.

Tiziani, A 2006, *Havard's nursing guide to drugs*, 7th edn, Harcourt Brace & Company, Sydney.

Vander, A, Sherman, J & Luciano, D 2001, *Human physiology: the mechanisms of body function*, 8th edn, McGraw-Hill, New York.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Directed Study	9.00
Examinations	1.50
Lectures	18.00
Private Study	132.50
Tutorials	9.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
1HR CLOSED MID-SEMESTER TEST	50.00	33.00	03 Mar 2008 (see note 1)
1.5HR CLOSED EXAMINATION	100.00	67.00	END S1 (see note 2)

NOTES

1. Examiner will advise the date of mid-semester closed test.
2. Examination dates will be available during the Semester.

IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:
It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements for students to complete each assessment item satisfactorily:
To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks or a grade of at least C-. (Depending upon the requirements in Statement 4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course).
- 3 Penalties for late submission of required work:
If students submit reports after the due date without prior approval then a penalty of 5% of the total marks gained by the student for the assignment may apply for each working day late.
- 4 Requirements for student to be awarded a passing grade in the course:
To be assured of receiving a passing grade a student must achieve at least 50% of the total weighted marks available for the course.

- 5 Method used to combine assessment results to attain final grade:
The final grades for students will be assigned on the basis of the weighted aggregate of the marks obtained for each of the summative assessment items in the course.
- 6 Examination information:
In a Closed Examination, candidates are allowed to bring only writing and drawing instruments into the examination.
- 7 Examination period when Deferred/Supplementary examinations will be held:
Any Deferred or Supplementary examinations for this course will be held during the examination period of the following semester.
- 8 University Regulations:
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL <http://www.usq.edu.au/corporateservices/calendar/part5.htm> or in the current USQ Handbook.

ASSESSMENT NOTES

- 9 Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. One of the following temporary grades may be awarded IDS (Incomplete-Deferred Examination); IDM (Incomplete Deferred Make-up); IDB (Incomplete - Both Deferred Examination and Deferred Make-up).