



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: Pharmacology and Pathophysiology for Nurses

Subject	Cat-nbr	Term	Mode	Units	Campus
NSC	2500	1, 2010	ONC	1	Toowoomba

<b>Academic group:</b>	FOSCI
<b>Academic org:</b>	FOS002
<b>Student contribution band:</b>	National Priority Nursing
<b>ASCED code:</b>	060301

## STAFFING

Examiner: Guang Liu  
Moderator: Jianxiong Wang

## REQUISITES

Pre-requisite: BIO1203

## RATIONALE

The purpose of this course is to provide students with an understanding of the pathophysiology of the most common diseases affecting patients in developed countries. This course will then build on an understanding of normal physiology and pathophysiology to address treatment approaches to such diseases with a particular focus on pharmacology and nutrition. Information learnt from this course will be integrated into learning from nursing practice courses.

## SYNOPSIS

This course focuses on understanding the basis for disease states that are most prevalent in the developed world and how they can be treated. Major topics to be covered include mental health disorders, inflammatory, cardiovascular, musculoskeletal, gastrointestinal, endocrine, respiratory, and urinary diseases, shock and cancer. Perioperative drugs will also be considered.

## OBJECTIVES

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

1. Identify how a disruption to homeostasis can lead to enhanced disease processes of human body;
2. Identify the pathological processes involved in the major burdens of disease including mental health breakdown, endocrine disorders, nervous system breakdown, musculoskeletal, gastrointestinal, respiratory and renal disease, cancer, shock and addiction and cardiovascular disease;
3. Demonstrate an ability to differentiate the major drug groups that are used to treat the relevant burdens of disease and those that are used perioperatively by defining the drug

- groups mode of action, indications, contraindications, potential interactions, adverse effects and therapeutic outcomes;
4. Demonstrate an ability to appreciate the interrelatedness of the main burdens of disease by associating these to the breakdown of homeostatic mechanisms and the drug and nutritional therapies that may be used to promote health and well being;
  5. Demonstrate skills and knowledge required to participate in laboratory exercises in a safe manner.

## TOPICS

	Description	Weighting (%)
1.	The role of neurotransmitters in health and disease	7.50
2.	Pathophysiology and pharmacological treatment of conditions affecting mental health (Mental health breakdown 7.5% Nervous system breakdown) 10%	17.50
3.	Anaesthesia	5.00
4.	Pain Relief	5.00
5.	Nutrition	5.00
6.	Addiction	5.00
7.	Inflammation	2.50
8.	Cardiovascular disease and treatment by drugs, exercise, nutrition and fluid regulation	12.50
9.	Musculoskeletal disease	5.00
10.	Gastrointestinal disease	5.00
11.	Endocrine disease	7.50
12.	Respiratory disease	5.00
13.	Oncology	7.50
14.	Renal disease	5.00
15.	Shock	5.00

## 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).

2003, *Australian medicines handbook*, Australian Medicines Handbook Pty Ltd, Adelaide.  
(viewed 25 July 2008, <http://amh.hcn.net.au/> This handbook is available online free through the Library using USQ connect username and password.)

Galbraith, A, Bullock, S & Manias, E2006, *Fundamentals of Pharmacology: A text for nurses and allied health professionals*, 5th edn, Pearson Education, Australia.

Jenkins, G, Kemnitz, C & Tortora, G2007, *Anatomy and physiology: From science to life*, John Wiley & Sons, New York.

(Pack includes textbook, DVD & WileyPlus Access card for online access.)

## 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.

Bryant, B, Knights, K & Salerno, E2003, *Pharmacology for health professionals*, Mosby, Sydney.

Marieb, EN & Hoehn, K2010, *Human anatomy and physiology*, 8th edn, Pearson, Menlo Park, California.

McCance, K & Huether, S2006, *Pathophysiology: the biological basis of disease in adults and children*, 5th edn, Elsevier Mosby, St Louis.

Rang, HP et al2003, *Pharmacology*, 5th edn, Churchill Livingstone, Edinburgh.

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Examinations	2.00
Laboratory or Practical Classes	12.00
Lectures	26.00
Private Study	115.00
Quizzes	3.00
Test	1.00
Tutorials	6.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date	Objectives assessed	Graduate skill	Level assessed
PTA OF 1HR RESTRICTED TEST CMA	30	15	02 Mar 2010 (see note 1)	1, 2, 3, 4	U3	2
LABORATORY QUIZZES	100	30	02 Mar 2010 (see note 2)	All	U2, U3, U8	2, 2, 2
PTB OF 1HR RESTRICTED TEST S/A	20	8	23 Apr 2010 (see note 3)	1, 2, 3, 4	U3	2
PT A OF 2HR REST EXAM (CMA)	60	30	END S1 (see note 4)	1, 2, 3, 4	U3	2
PT B OF 2HR REST EXAM (S/A)	40	17	END S1 (see note 5)	1, 2, 3, 4	U3	2

### NOTES

- Assesment Item 1 and 3, Mid semester test Part A and B due in week 8, Examiner to advise correct date.
- Assesment items 2 due at the completion of each module, examiner to advise the correct dates.
- Assesment Item 1 and 3, Mid semester test Part A and B due in week 8, Examiner to advise correct date.
- Examination dates will be available during the Semester. Please refer to the examination timetable when published (Part A & B).
- Examination dates will be available during the Semester. Please refer to the examination timetable when published (Part A & B).

## GRADUATE QUALITIES AND SKILLS

Elements of the following USQ Graduate Skills are associated with the successful completion of this course.

Problem Solving (Skill U2)	Intermediate (Level 2 )
Academic, professional and digital literacy (Skill U3)	Intermediate (Level 2 )
Managmt, Planning & Org Skills (Skill U8)	Intermediate (Level 2 )

## IMPORTANT ASSESSMENT INFORMATION

- Attendance requirements:  
It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, laboratory classes and tutorials) 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. To maximize their chances of satisfying the objectives of the practical component of the course, students should attend and actively participate in the tutorial sessions in the course.
- Requirements for students to complete each assessment item satisfactorily:

- To complete the tests and examinations satisfactorily, students must obtain at least 50% of the marks available for that assessment. (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:  
Not applicable for this course as there are no assignments.
  - 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:  
To be assured of receiving a passing grade a student must achieve at least 50% of the total weighted marks available for the course.
  - 6 Examination information:  
In a Restricted Examination and/or Test, candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the restricted examination for this course are: writing materials (non-electronic and free from material which could give the student an unfair advantage in the examination); calculators which cannot hold textual information (students must indicate on their examination paper the make and model of any calculator(s) they use during the examination;. Students whose first language is not English, may, take an appropriate unmarked non-electronic translation dictionary (but not technical dictionary) into the examination. Dictionaries with any handwritten notes will not be permitted. Translation dictionaries will be subject to perusal and may be removed from the candidate's possession until appropriate disciplinary action is completed if found to contain material that could give the candidate an unfair advantage.
  - 7 Examination period when Deferred/Supplementary examinations will be held:  
Any Deferred or Supplementary examinations for this course will be held during the next examination period.
  - 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).
- 10 In order to attend laboratory classes, students must provide and wear appropriate personal protective equipment. This shall include a laboratory coat, closed in shoes, and safety glasses. Such equipment must be approved by supervising staff. Failure to provide and wear the appropriate safety equipment will result in students being excluded from classes
- 11 Harvard (AGPS) is the referencing system required in this course. Students should use Harvard (AGPS) style in their assignments to format details of the information sources they have cited in their work. The Harvard (AGPS) style to be used is defined by the USQ Library's referencing guide. <http://www.usq.edu.au/library/help/referencing/default.htm>