



The University of Southern Queensland

## Course specification

<b>Description: Endocrine and Neurophysiology</b>						
Subject	Cat-nbr	Class	Term	Mode	Units	Campus
BIO	3323	55194	2, 2006	ONC	1.00	Toowoomba

<b>Academic group:</b>	FOSCI
<b>Academic org:</b>	FOS002
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	010913

### STAFFING

Examiner: Michael Watson

Moderator: Guang Liu

### REQUISITES

Pre-requisite: BIO2203

### RATIONALE

The aim of this course is to provide an in-depth understanding of the nervous and endocrine systems as the major control systems of the human body.

### SYNOPSIS

This course builds on the foundations obtained in the course BIO2203 (Systems Physiology) to examine the two major control systems of the human body. The initial components will examine neural control mechanisms including sensory perception. Subsequently, endocrine mediators will be discussed along with reproductive physiology. The pathophysiology of various relevant disease states will be considered.

### OBJECTIVES

On completion of this course students will be able to:

1. discuss the physiology of sensory perception including visual, auditory, vestibular systems;
2. describe the central neural processing which occurs in the visual and somatosensory systems;
3. appreciate the cellular mechanisms for learning and plasticity in the central nervous system;
4. describe the neural processing that occurs in the motor system in order to learn a motor skill and in producing co-ordinated movement;
5. describe the role of the autonomic nervous system, hypothalamus and pituitary in the regulation of the endocrine system;

6. explain the integrated role of the major peripheral endocrine glands in the regulation of sleep, stress and metabolism;
7. describe the role and regulation of the reproductive systems, including changes during gestation and parturition;
8. describe the developmental changes in the embryo with regard to the nervous, cardiovascular and respiratory systems;
9. demonstrate effective skills for searching databases and electronic resources;
10. demonstrate skills and knowledge required to perform laboratory experiments safely with appropriate equipment, including computer software and hardware for data acquisition and analysis.

## TOPICS

	Description	Weighting (%)
1.	Sensory perception	18.00
2.	Motor systems	20.00
3.	Central integrative systems	18.00
4.	Peripheral endocrine glands	12.00
5.	Peripheral endocrine glands	20.00
6.	Reproductive physiology	12.00

## 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).

Guyton, AC & Hall, JE *Textbook of Medical Physiology*, 11th edn, Elsevier, Philadelphia (ISBN 0721602401).

## 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.

Berne RM & Levy MN 2000, *Principles of Physiology*, 3rd edn, Mosby, St Louis.

Bray JJ et al 1999, *Lecture Notes on Human Physiology*, 4th edn, Blackwell Science, Malden.

Guyton, AC & Hall JE 2000, *Textbook of Medical Physiology*, 10th edn, Saunders, Philadelphia.

Hardman JG, Goodman GA & Limbird LE 2001, *Goodman & Gilman's: The Pharmacological Basis of Therapeutics*, 10th edn, McGraw Hill, New York.

Kandel ER, Schwartz JH & Jessell TM 2000, *Principles of Neural Science*, 4th edn, Appleton & Lange, Norwalk.

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Examinations	3.00
Laboratory or Practical Classes	18.00
Lectures	26.00
Private Study	118.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
REPORT	50.00	15.00	25 Jul 2006 (see note 1)
2000 WORD ESSAY	50.00	15.00	25 Jul 2006 (see note 2)
3HR RESTRICTED EXAM	120.00	70.00	END S2 (see note 3)

### NOTES

1. Examiner will advise due date of report.
2. Examiner will advise due date for essay.
3. Examination dates will be available during the Semester. Please refer to the examination timetable when published.

## 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. To maximize their chances of satisfying the objectives of the practical component of the course, students should attend and actively participate in the laboratory sessions in the course.
- 2 Requirements for students to complete each assessment item satisfactorily:  
To complete each of the assessment items satisfactorily, students must obtain at least 50% of the marks available for each assessment item.
- 3 Penalties for late submission of required work:  
If students submit assignments after the due date without prior approval then a penalty of 10% of the total marks available for the assignment will apply for each working day late.
- 4 Requirements for student to be awarded a passing grade in the course:  
To be assured of a passing grade, students must demonstrate, via the summative assessment items, that they have achieved the required minimum standards in relation to the objectives of the course by: (i) satisfactorily completing the examination and assignments; and (ii) obtaining at least 50% of the total weighted marks available for all summative assessment items. Students who do not qualify for a Passing grade may, at the discretion of the Examiner, be awarded a Supplementary Examination and/or

assigned additional work to demonstrate to the Examiner that they have achieved the required standard. It is expected that such students will have gained at least 45 % of the total marks available for all summative assessment items.

- 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 Restricted Examination, 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; English translation dictionaries (but not technical dictionaries); Translation dictionary. With the Examiner's approval, candidates may, take an appropriate non- electronic translation dictionary into the examination. This will be subject to perusal and, if it is found to contain annotations or markings that could give the candidate an unfair advantage, it may be removed from the candidate's possession until the appropriate disciplinary action is completed.
- 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 in Semester 3 of the current academic year.
- 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 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.
- 10 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).
- 11 The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the Examiner. Students must retain a copy of each item submitted for assessment. If requested by the Examiner, students will be required to provide a copy of assignments submitted for assessment purposes. Such copies should be despatched to USQ within 24 hours of receipt of a request being made. The examiner of a course may grant an extension of the due date of an assignment in extenuating circumstances.