



The University of Southern Queensland

## Course specification

<b>Description: Mathematics/Statistics Complementary Studies A</b>						
Subject	Cat-nbr	Class	Term	Mode	Units	Campus
MAT	8180	40314	1, 2005	ONC	1.00	Toowoomba

<b>Academic group:</b>	FOSCI
<b>Academic org:</b>	FOS003
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	010199

### STAFFING

Examiner: Tony Roberts  
Moderator: Chris Harman

### RATIONALE

This course exists to satisfy the need for some flexibility in Honours and Masters programs in Mathematics and Statistics to cater for the widely varying interests and chosen specializations of students.

### SYNOPSIS

This course provides the opportunity for a student to pursue an area of study that will complement the other studies in the student's program. Typically the course will consist of specialized investigations extending knowledge and skills in a certain area. The studies could involve, for example, directed readings, extension of the project (where appropriate), or some other approved activity which would complement the student's studies in the program.

### OBJECTIVES

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

1. demonstrate knowledge and skills in the complementary study area.

## TOPICS

Description	Weighting (%)
1. The content of the course may be chosen to be one of the following areas; other choices may be available. Suitable Level 3 courses enhanced by advanced work may also be chosen.	50.00
1.1. What is Mathematics? (Ron Addie)	
1.2. Biomechanics in Sport (Chris Harman)	
1.3. Mathematical methods of asymptotic approximation (Tony Roberts)	
1.4. Quantum Computing (Tony Roberts)	
1.5. Water Waves (Tony Roberts)	
1.6. Games Theory (Tony Roberts)	
1.7. Introduction to Hyrdodynamic Stability (Sergey Suslov)	
1.8. Mathematics: the role of attitudes and beliefs (Patricia Cretchley)	
1.9. Computer Algebra: Friend or foe? (Patricia Cretchley)	
1.10. Mathematics Assessment: Current issues and trends (Patricia Cretchley)	
1.11. Is Mathematics Education a Research Domain? (Patricia Cretchley)	
1.12. Bridging the Gaps: Primary to Secondary, and Beyond (Patricia Cretchley)	
1.13. Towards Gender Equity in Mathematics Education (Patricia Cretchley)	
1.14. Teaching Geometry in an age of technology: perspectives for the 21st century (Patricia Cretchley)	
1.15. Mathematics then - and now! (Patricia Cretchley)	
1.16. Sampling and Survey Design (Ashley Plank)	
1.17. Statistical Process Control (Paul Fahey)	
1.18. Statistical Principles and Consulting (Paul Fahey)	
1.19. Computational and Bayesian Statistics (Peter Dunn)	
1.20. Generalised Linear Models (Peter Dunn)	

2. Assessment for the course will also vary according to the nature of the study undertaken by each student. By the end of the third week of semester, the supervisor will provide to the examiner, for approval by the Associate Dean - 50.00
- 2.1. an outline of the study
  - 2.2. the objectives of the study
  - 2.3. the format, timing and weighting of the assessment items for the study
  - 2.4. a statement about attendance requirements
  - 2.5. requirements for students to complete each assessment item satisfactorily
  - 2.6. Penalties for late submission of required work.
  - 2.7. requirements for student to be awarded a passing grade in the course
  - 2.8. the method used to combine assessment results to attain final grade
  - 2.9. Examination information
  - 2.10. Examination period when Deferred/Supplementary examinations will be held
  - 2.11. any other requirements deemed necessary by the Examiner

### **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).

To be advised by the student's supervisor.

### **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.

### **STUDENT WORKLOAD REQUIREMENTS**

ACTIVITY	HOURS
Private Study	150.00
Supervisor Consultation	15.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
APPROVED ASSESSMENT PROGRAM	100.00	100.00	01 Mar 2005 (see note 1)

### NOTES

1. Further details about the due dates are detailed in the assessment section of the Course Specifications.

## IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:  
The complementary study area chosen will be assigned after consultation with the examiner and the appropriate Program Coordinator. Students may be directed to a certain complementary study, or they may be asked to nominate an appropriate study. It is the student's responsibility to find a staff member willing to supervise their study. It is the students' responsibility 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 be advised when the student's Complementary Studies is determined.
- 3 Penalties for late submission of required work:  
To be advised when the student's Complementary Studies is determined.
- 4 Requirements for student to be awarded a passing grade in the course:  
To be advised when the student's Complementary Studies is determined.
- 5 Method used to combine assessment results to attain final grade:  
To be advised when the student's Complementary Studies is determined.
- 6 Examination information:  
To be advised when the student's Complementary Studies is determined.
- 7 Examination period when Deferred/Supplementary examinations will be held:  
To be advised when the student's Complementary Studies is determined.
- 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 The supervisor will advise the student and the examiner of the details of the study and the assessment program in writing by the end of week 3 of the semester as in TOPICS above.