The University of Southern Queensland

Course specification

Description: Mathematics Communication Level A						
Subject	Cat-nbr	Class	Term	Mode	Units	Campus
UNP	7381	48218	3, 2005	EXT	1.00	Toowoomba

Academic group:	OPACS
Academic org:	OPACSP
Student contribution band:	2
ASCED code:	010199

STAFFING

Examiner: Linda Galligan
Moderator: Robyn Pigozzo

RATIONALE

Students considering entry into Psychology, Education, Nursing and Arts require some mathematical knowledge and skills if they are to be successful in their chosen field of study. Students need to be numerate and need to have a basic understanding of functional relationships and classification of data if they are to operate successfully at the tertiary level. Students also need to develop and practise language and problem solving skills in English so that they can build upon their existing knowledge and express themselves adequately in the mathematical context. This course is designed to allow students to appreciate the diverse applications and power of mathematics; the precise language and structure of mathematics; and to develop confidence and reduce anxiety by using mathematics skills in a variety of problem solving sessions.

SYNOPSIS

There are two compulsory parts of the course. Part A consists of the mastery of the content of selected topics within arithmetic, algebra, measurement, graphing and statistics. Students are also expected to show competence in communicating using mathematical language in English. Part B consists of group work designed to develop the mathematical communication and problem solving skills of students. This work utilises the content mastered in Part A of the course.

OBJECTIVES

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

1. demonstrate an understanding of mathematical topics essential for tertiary study as detailed below;
2. demonstrate an ability to select and use appropriate technology such as calculators, measuring instruments and computers with selected software;
3. select and use appropriate mathematical procedures;
4. work accurately and manipulate formulae;
5. transfer and apply mathematical procedures to a range of situations;

6. demonstrate problem solving through using a range of problem solving strategies, selecting appropriate mathematical procedures, identifying the problem, reflecting on the solutions, extending and generalizing from problems:
7. On successful completion of this course, students will be able to demonstrate communication through:
8. understanding, organising and presenting information in a variety of forms (such as oral, written, symbolic, pictorial and graphical);
9. using mathematical terms and symbols accurately and appropriately;
10. using accepted spelling, punctuation and grammar in written communication;
11. translating material from one form to another when appropriate (eg words to formulas);
12. recognising necessary distinctions in the meanings of words and phrases according to whether they are used in a mathematical or non-mathematical situation.

TOPICS

	Description	Weighting (%)
1.	Arithmetic (Modules 1A,1B,1C - integers, fractions, decimals, percentages, ratios in triangles, powers, measurement and appropriate notation)	30.00
2.	Algebra (Modules 2A,2B,2C - expressions, equations-linear, and simultaneous)	20.00
3.	Graphing (Modules 3A - linear, parabolic, exponential, logarithmic and simultaneous)	30.00
4.	Statistics (Modules 4A - data collection, classification, interpretation and display)	20.00

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).

2001, *Mathematics Communication Level A Book 1*, USQ,

2001, *Mathematics Communication Level A/B Book 2*, USQ,

Students are expected to have a scientific calculator.

Galligan, L. et al 2002, *Mathematics communication: problem solving book*, USQ, Toowoomba.

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
Assessment	36.00
Directed Study	48.00
Private Study	80.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
TEST 1A	22.00	6.00	08 Nov 2005 (see note 1)
TEST 1B	32.00	8.00	08 Nov 2005 (see note 2)
TEST 1C	32.00	8.00	08 Nov 2005 (see note 3)
TEST 2A	20.00	8.00	08 Nov 2005 (see note 4)
TEST 2B	21.00	8.00	08 Nov 2005 (see note 5)
TEST 2C	11.00	6.00	08 Nov 2005 (see note 6)
TEST 3A	23.00	8.00	08 Nov 2005 (see note 7)
TEST 4A	20.00	8.00	08 Nov 2005 (see note 8)
REVISION TEST	40.00	10.00	08 Nov 2005 (see note 9)
ASSIGN 1 ST. PROBLEM	20.00	6.00	08 Nov 2005 (see note 10)
ASSIGN 2 - REPORT	24.00	12.00	08 Nov 2005 (see note 11)
ASSIGN 3 - STOCKMARKET	30.00	12.00	08 Nov 2005 (see note 12)

NOTES

1. Due mid term
2. Due mid term
3. Due by last week of term
4. Due mid term
5. Due mid term
6. Due by last week of term

7. Due by last week of term
8. Due by last week of term
9. Due by last week of term
10. Due by end of term
11. Due by week 9 of term
12. Due by week 11 of term

IMPORTANT ASSESSMENT INFORMATION

1 Attendance requirements:
Students are required to attend at least 80% of the mathematics communication group work sessions and ensure their attendance is registered with the staff member in charge of the activity. It is the students' responsibility to study all course material to pass the mathematics competency tests. Students need to attend module sessions to complete competency tests and seek support as necessary.

2 Requirements for students to complete each assessment item satisfactorily:
To complete each of the competency tests satisfactorily, students must demonstrate mastery of each test. Students may be required to re-submit a test until mastery is obtained. To complete each assignment satisfactorily, students must obtain at least 50% of the marks available in each assignment. Students may be required to re-submit an assignment that is unsatisfactory. Unless approved by the examiner, all assessment items must be received prior to the start of the exam period for the semester in which the course is offered.

3 Penalties for late submission of required work:
If students submit assignments after the due date without an approved extension of time then a penalty of 5% of the total marks available for the assignments may apply for each 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 attempt all of the summative assessment items, achieve an aggregated mark of at least 50% in the total marks allocated for all summative assessment items and satisfactorily (as stated in Assessment 2) completing all assignments and competency tests. Students who do not qualify for a Passing grade may, at the discretion of the Examiner, be assigned additional work to demonstrate to the Examiner that they have achieved the required standard. It is expected that such students have gained at least 40 % of the total marks available for all 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:
There is no examination in this course.

7 Examination period when Deferred/Supplementary examinations will be held:
N/A

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

1 Students must retain a copy of each item submitted for assessment. This must be produced within 24 hours if required by the Examiner. In accordance with the University's Assignment Extension Policy (Regulation 5.6.1), the examiner of a course may grant an extension of the due date of an assignment in extenuating circumstances.

OTHER REQUIREMENTS

1 Part A is predominantly a self-paced course. Students work sequentially through the modules they are required to master at their own pace, completing this part of the work by the end of the term. Mastery of a module is demonstrated by the student taking appropriate tests before proceeding with study of another module. Mastery of Modules 1A, 1B, 2A, and 2B can be shown by listening to a tape based on these modules and completing a revision test. Students not completing this test satisfactorily will be required to complete the appropriate module tests.

2 Part B consists of different activities each week. Students must participate actively in the group work of the problem solving sessions. Students also must submit written work as required.