Course specification

Description: Mathematics Tertiary Preparation Program Level D

<table>
<thead>
<tr>
<th>Subject</th>
<th>Cat-nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
<th>Units</th>
<th>Campus</th>
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<tr>
<td>TPP</td>
<td>7184</td>
<td>44029</td>
<td>2, 2005</td>
<td>EXT</td>
<td>1.00</td>
<td>Toowoomba</td>
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Academic group: OPACS
Academic org: OPACSP
Student contribution band: 2
ASCED code: 010199

STAFFING
Examiner: Janet Taylor
Moderator: Colin Carmichael

REQUISITES
Pre-requisite: TPP7183

RATIONALE
Students intending to enrol in Mathematics or some branches of computer science must be competent in certain basic mathematical topics so that they are adequately prepared for courses involving mathematics in their undergraduate studies. Furthermore they need to become reflective thinkers so that they can monitor, evaluate and control their thinking when learning and applying mathematics. This preparatory mathematics course is designed to provide students with the required mathematical competencies and skills.

SYNOPSIS
Using the principles of self-paced instruction, the course guides students through a carefully sequenced series of topics which provide the foundation for understanding the mathematics they will encounter in their tertiary study. A workbook approach is used and students can proceed through the modules of work at a pace suitable to their own needs. Opportunities for seeking additional assistance are provided through some of the assessment instruments used e.g. problem sets and learning diaries. Metacognitive development is encouraged through the use the learning diaries. Opportunities for self assessment are provided throughout and at the end of each module.

OBJECTIVES
On successful completion of this course students should be able to:
1. demonstrate an understanding of a number of mathematical topics essential for tertiary study detailed above;
2. demonstrate the application of higher order thinking skills necessary for the successful learning of mathematics at a higher level;
3. interpret and solve a range of problems involving mathematical concepts relevant to this course;
4. communicate effectively solutions to a range of problems.

**TOPICS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>1. Discrete mathematics</td>
<td>10.00</td>
</tr>
<tr>
<td>2. Algebra, functions and geometry</td>
<td>20.00</td>
</tr>
<tr>
<td>3. Matrices</td>
<td>10.00</td>
</tr>
<tr>
<td>4. Trigonometry</td>
<td>20.00</td>
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<tr>
<td>5. Differentiation</td>
<td>20.00</td>
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<tr>
<td>6. Integration</td>
<td>20.00</td>
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**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).

All required textbooks for this course will be provided by OPACS. Student will need to acquire a scientific calculator. Student will need access to a computer. All study materials are supplied as part of the course.
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.

ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks out of</th>
<th>Wtg(%)</th>
<th>Due date</th>
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<tr>
<td>REVISION ASSIGNMENT &amp; LEARNING</td>
<td>1.00</td>
<td>0.00</td>
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<tr>
<td>ASSIGNMENT 1A &amp; LEARNING DIARY</td>
<td>36.00</td>
<td>6.00</td>
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<tr>
<td>ASSIGNMENT 2A &amp; LEARNING DIARY</td>
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<tr>
<td>ASSIGNMENT 3A &amp; LEARNING DIARY</td>
<td>51.00</td>
<td>6.00</td>
<td>02 Sep 2005</td>
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<tr>
<td>ASSIGNMENT 4A &amp; LEARNING DIARY</td>
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<td>6.00</td>
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<tr>
<td>ASSIGNMENT 5A &amp; LEARNING DIARY</td>
<td>45.00</td>
<td>6.00</td>
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<td>ASSIGNMENT 6A &amp; LEARNING DIARY</td>
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<td>6.00</td>
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<tr>
<td>EXAMINATION 3 HOURS</td>
<td>100.00</td>
<td>64.00</td>
<td>END S2</td>
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</table>
(see note 1)

NOTES

1. Examination date will be available during the semester. Please refer to the examination timetable when available.

IMPORTANT ASSESSMENT INFORMATION

1 Attendance requirements:
   There are no attendance requirements for this course. However, 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 complete each of the assessments satisfactorily, students must normally obtain at least 50% of the marks available for each assessment. Students may be required to re-submit an assignment or complete extra work for each assignment that is unsatisfactory. All assignments, extra work and re-submissions must be received prior to 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 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 attempt all of the summative assessment items, achieve at least 50% in the examination, achieve an aggregated mark of at least 50% in the total marks allocated for the assignments, and at least 50% of the available weighted marks for the 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 have gained at least 40% 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:
Examinations in this course are restricted examinations. 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; 1 A4 page of handwritten or typed notes (written on both sides); English translation dictionaries (but not technical dictionaries).

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

1 Students must retain a copy of each item submitted for assessment. This must be produced within five days if required by the Examiner.

OTHER REQUIREMENTS

1 The time it will take to complete this mathematics course will vary and will depend on the student's background and experiences; times indicated above are a guideline only.