The University of Southern Queensland

Course Specification

Description: Problem Solving Using ICT's

<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>
</tr>
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<tbody>
<tr>
<td>EDU</td>
<td>2471</td>
<td>10749</td>
<td>1, 2002</td>
<td>ONC</td>
<td>1.00</td>
<td>TWMBA</td>
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</table>

Academic Group: FOEDU
Academic Org: FOE002
HECS Band: 1
ASCED Code: 070100

STAFFING
Moderator: Jerry Maroulis

RATIONALE
There is considerable debate within the educational community about the benefits of ICT's as a medium for learning general problem-solving skills which can be transferred to unfamiliar settings.

SYNOPSIS
This course will focus on the applications of ICT's in the development of problem-solving skills. Students will be introduced to the theory and practice of problem solving to support learning in the classroom. A range of software will be introduced as an approach to problem solving and the application classrooms will be examined. Other approaches to teaching problem-solving using ICT's and related techniques will be investigated.

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

- discuss the underlying philosophy of and issues relating to problem solving;
- discuss approaches to problem solving using ICT's;
- examine software in aiding problem solving from an educational perspective;
- critically analyse appropriate software to solve problems;

TOPICS

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>1. Problem solving models and strategies</td>
<td>20.00</td>
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<tr>
<td>2. Problem solving in a computer based learning environment</td>
<td>10.00</td>
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</tbody>
</table>
3. Logo Programming basics  
4. Problem solving with spreadsheet applications  
5. Problem solving with strategic thinking, games and simulation software  
6. Problem solving using the web  
7. Utilising problem solving across curriculum areas  

**TEXT and MATERIALS required to be PURCHASED or ACCESSED:**

Books can be ordered by fax or telephone. For costs and further details use the 'Book Search' facility at http://bookshop.usq.edu.au by entering the author or title of the text.

Introductory booklet.

**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**

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
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<tbody>
<tr>
<td>Lectures</td>
<td>14</td>
</tr>
<tr>
<td>Private Study</td>
<td>120</td>
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<tr>
<td>Tutorial</td>
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**ASSESSMENT DETAILS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks Out of</th>
<th>Wtg(%)</th>
<th>Required</th>
<th>Due Date</th>
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<tr>
<td>ASSIGNMENT 1 - RESEARCH PAPER</td>
<td>40.00</td>
<td>40.00</td>
<td>Y</td>
<td>04 Mar 2002</td>
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<td>(see note 1)</td>
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<td>ASSIGNMENT 2 - SCENARIO</td>
<td>60.00</td>
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<td>(see note 2)</td>
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NOTES:
1. Further details about the due dates are detailed in the assessment section of the Course Specifications.
2. Further details about the due dates are detailed in the assessment section of the Course Specifications.

OTHER REQUIREMENTS
1. Students will be required to use appropriate software for preparation of assignments and tutorial exercises submitted for assessment.
2. When there is more than one marker for a single item of assessment, the distribution patterns and means for the different markers will be compared and marks adjusted if necessary.
3. Marking criteria are provided in course material as mark guides or as part of assignment specifications.
4. Course Grades will be calculated by aggregating the weighted result or numerical score for each summative assessment item. Any ungraded assessment requirement will receive a Pass, Fail or Incomplete.
5. All assessment items must be satisfactorily completed. Assessment items must be passed overall.
6. If assignments are submitted after the due date without an approved extension of time, a penalty of 10% of the mark awarded by the examiner for the assessment item will apply for each day late.