Description: Graphical User Interface Programming

<table>
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<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>CSC</td>
<td>3402</td>
<td>24433</td>
<td>2</td>
<td>2003</td>
<td>ONC</td>
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Academic Group: FOSCI
Academic Org: FOS003
HECS Band: 2
ASCED Code: 029999

STAFFING
Examiner: Richard Watson
Moderator: Khaleel Petrus

OTHER-REQUISITES
Recommended Requisites: CSC1401

RATIONALE
Modern corporate and industrial computing increasingly requires systems to operate with highly functional graphical user interfaces (GUIs) based on, X-Windows or MS-Windows environments. Such interface environments are often object-oriented and require a very different programming approach from that used in more traditional systems. In addition, the design of the user interface, including cognitive and user considerations, design principles and guidelines, task analysis and interface evaluation, is paramount to the success of software.

SYNOPSIS
This course covers elementary and advanced programming in a graphical user interface (GUI) environment such as MS-Windows or X-Windows. Design issues appropriate to user interface design are explored providing the student with the skills required for user interface implementation. Both practical and theoretical design issues are considered with students developing and evaluating various designs.

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

- understand the basic paradigm underlying most graphical user interfaces.
• be familiar with the general characteristics of a number of popular interfaces, such as Windows and X-Windows and their associated toolkits and development environments.
• understand the important conceptual level issues associated with good interface design.
• understand the purpose of toolkits and prototyping tools, and be able to write significant programs using a particular environment.

**TOPICS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>1. Theory of GUI design and implementation</td>
<td>30.00</td>
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<tr>
<td>2. Characteristics of particular GUIs. (These may vary depending on availability of software etc., but will probably include Windows and X-Windows.)</td>
<td>15.00</td>
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<tr>
<td>3. Theory and purpose of toolkits and prototyping environments</td>
<td>5.00</td>
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<tr>
<td>4. Advanced GUI programming using a particular high-level environment</td>
<td>50.00</td>
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**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 Book 2003, *Course CSC3402 Graphical User Interface Programming*, USQ Distance Education Centre, Toowoomba.

Selected Readings 2003, *Course CSC3402 Graphical User Interface Programming*, USQ Distance Education Centre, Toowoomba.

Study Book 2003, *Course CSC3402 Graphical User Interface Programming*, USQ Distance Education Centre, Toowoomba.


(Only for those students programming in Tcl/Tk.)

**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>Examinations</td>
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<tr>
<td>Lectures</td>
<td>26</td>
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<tr>
<td>Practical Experience</td>
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<td>Private Study</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</td>
<td>20.00</td>
<td>20.00</td>
<td>Y</td>
<td>05 Sep 2003</td>
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<tr>
<td>ASSIGNMENT 2</td>
<td>20.00</td>
<td>20.00</td>
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<td>2 HOUR CLOSED EXAMINATION</td>
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<td>60.00</td>
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NOTES:
- 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.

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 gained by the student 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 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 marks for the 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 aggregate of the weighted marks obtained for each of the summative assessment items in the course.

6 Examination information:
In a Closed Examination, candidates are allowed to bring only writing and drawing instruments into the examination.

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 at the end of the semester of the next offering of this course.

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/SECARIAT/calendar/Part5/ or in the printed version of the current USQ Handbook.