Description: Graphical User Interface Programming

<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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<tbody>
<tr>
<td>CSC</td>
<td>3402</td>
<td>44344</td>
<td>2, 2005</td>
<td>ONC</td>
<td>1.00</td>
<td>Toowoomba</td>
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Academic group: FOSCI

Academic org: FOS003

Student contribution band: 2

ASCED code: 029999

STAFFING

Examiner: Stijn Dekeyser
Moderator: Khaleel Petrus

OTHER-REQUISITES

Recommended Pre-requisite: CSC2402

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. This course is not offered at Wide Bay in even years.

OBJECTIVES

On completion of this course students will be able to:

1. understand the basic paradigm underlying most graphical user interfaces;
2. 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;
3. understand the important conceptual level issues associated with good interface design;
4. 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 and GUI design and implementation</td>
<td>30.00</td>
</tr>
<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>
</tr>
<tr>
<td>4. Advanced GUI programming using a particular high-level environment</td>
<td>50.00</td>
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</table>

### 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).


(Only for those students programming in VisualBasic.Net)


Introductory Book 2005, *Course CSC3402 graphical user interface programming*, USQ Distance and e-Learning Centre, Toowoomba.

Selected Readings 2005, *Course CSC3402 graphical user interface programming*, USQ Distance and e-Learning Centre, Toowoomba.

Study Book 2005, *Course CSC3402 graphical user interface programming*, USQ Distance e-Learning 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>
<td>2.00</td>
</tr>
<tr>
<td>Lectures</td>
<td>26.00</td>
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<tr>
<td>Practical Experience</td>
<td>24.00</td>
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<tr>
<td>Private Study</td>
<td>110.00</td>
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ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks out of</th>
<th>Wtg(%)</th>
<th>Due date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSIGNMENT 1</td>
<td>20.00</td>
<td>20.00</td>
<td>05 Sep 2005</td>
</tr>
<tr>
<td>ASSIGNMENT 2</td>
<td>20.00</td>
<td>20.00</td>
<td>24 Oct 2005</td>
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<tr>
<td>2 HOUR CLOSED EXAMINATION</td>
<td>60.00</td>
<td>60.00</td>
<td>END S2 (see note 1)</td>
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</table>

NOTES
1. 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 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/corporateservices/calendar/part5.htm or in the current USQ Handbook.