PROPOSAL TO INTRODUCE A NEW COURSE

1. COURSE DETAILS

1.1 Course ID COMP2091

1.2 Course name - Long

Computing 2

1.3 Course name - Abbreviated

Computing 2

1.4 Course Authority: Dr Geoff Whale
extension: x54046
email: G.Whale@unsw.edu.au

1.5 Organisational Unit responsible for course

School: School of Computer Science & Engineering **Faculty:** Engineering

Academic Group Code (Faculty): ENG
eg. Arts and Social Sciences = ARTSC

Academic Organisation Code (Owner): COMPSC
eg. Department of French=FREN

1.6 Justification of Proposal

This course is a successor to COMP1091 *Solving Problems with Software*. It is intended for students from Science or Arts and Social Sciences programs who wish to complete a minor in Computing, as a free elective in non-computing programs, or as the second computing course for Electrical Engineering and Telecommunications students. It serves as an alternative prerequisite to COMP2011 for Level 3 Computer Science courses.

1.7 Consultation Process

The course was developed to satisfy both the needs of the School of Electrical Engineering and Telecommunications, and as the successor course foreshadowed in the approvals for COMP1091 in 2003. Content was developed in consultation with the EE&T program revision committee.

1.8 Units of credit (UOC)	**Session/s offered**	**Hours Per Week**
6 UOC	S1 or S2	5.5

1.9 Pre-requisites: COMP1091
Co-requisites: Nil
Exclusions: COMP2011, COMP2711

1.10 Proposed Entry in the Faculty Handbook

COMP2091 Computing 2
L3T2.5
Sessions offered: S1, S2
Staff contact: Dr G Whale

Abstract data types and data structures: sequential (lists, stacks, queues), dictionaries (binary trees, hashing), priority queues (heaps), graphs and networks. Implementation of associated algorithms in C. Informal analysis of efficiency. File structures: binary formats, direct access techniques, XML. Data compression, Huffman coding. Numeric representation and limitations. Conditional compilation, storage classes, memory management, function parameters, using profilers and debuggers. Interfacing to libraries. Introduction to multi-threading.

1.11 Is this course replacing an existing course?

NO

1.12 Undergraduate

1.13 Elective

1.14 Program stage

Normally taken in stage 2 of programs, or stage 1 of Electrical Engineering, Telecommunications, or Advanced Science.

1.15 Program/s in which course is be available

Available in all programs and plans except those for which COMP2011 *Data Organisation* is a core requirement.

1.16 Proposed teaching methods and assessment practices

Three hours of lectures, one hour tutorial and 1.5 hours of supervised laboratory per week. Assessment is primarily by electronically submitted assignments and a practical final examination.

1.17 Assessment grades to be used

Normal GRD grading basis (full range of grades).

1.18 Mode of delivery

Internal Yes

External

Other (specify)

1.18.1 Multi-mode Delivery Guidelines

N/A

1.19 Information Technology Requirements for students

In accordance with Academic Board resolution 99/66 relating to *Information Technology Requirements for UNSW Students* (see Secretariat website), please indicate the IT requirements for the course:

The laboratory program is undertaken using IT resources provided by the School of Computer Science and Engineering. Students will complete some assignment work outside scheduled lab classes, and will normally use their own resources for this, with supporting software supplied to students free of charge. Students who do not have access to their own computers will be able to book time in the laboratory outside scheduled lab classes to complete the work.

1.20 Textbooks

Provide full details of all set and recommended textbooks in accordance with your faculty's textbook list guidelines

Standish, T (1994). *Data Structures, Algorithms and Software Principles in C*. Addison-Wesley.
or
Whale, G (1996). *Data Structures and Abstraction Using C*. Nelson (Thomson).

Reference books:

1.21 Industrial experience component

N/A

2. RESOURCE STATEMENT

2.1 Enrolments

Estimated or proposed enrolments for the next three years.

2005:	not offered	
2006:	450	two full EE&T cohorts due to phasing in revised program
2006:	250	steady state enrolments
2007:	250	

2.2 Resource Requirements

Staffing Requirements:

Hours per week *(based on enrolment of 150 in one session and lab classes of 18)*

5	Full-time Academic Staff
18	Part-time Teaching Staff
	General Staff

Field Costs: Nil

Studio/Laboratory Requirements: See under *Computing Requirements*

Materials Requirements: Nil

Equipment Costs: Nil

Computing Requirements: The course will use existing CSE labs.

Library Requirements: Standard textbook requirements

Capital Funds Requirements: Nil

2.3 Servicing Implications:

COMP1091 and this course replace COMP1011 and COMP1021 for Electrical Engineering and Telecommunications students. It also provides the missing link between COMP1091 and the Level 3 Computer Science courses for students undertaking minor plans in Science or a major sequence in Computing in Arts.

2.4 Teaching Arrangements:

(i) Will other units contribute on a regular basis to the teaching of this course?

NO

(ii) If so, which units are involved and what proportion of the course will they teach?

N/A

2.5 Alternative Delivery Arrangements:

N/A

2.6 Details of Tuition Fees:

Fees for courses are calculated on a pro-rata basis.
Proposed fee:

Standard for Engineering courses of this type.

$ for non-award enrolment (local)

$ for non-award enrolment (international)

$ for course which forms part of full fee-paying program (for local students)

$ for course which forms part of full fee-paying program (for international students)

3. AUTHORISATION

3.1 University Librarian's Endorsement

Note: *this section of the Proposal must be signed by a Library representative, stating:*

I have examined the Library needs related to the above proposal and certify that existing Library holdings, staffing, services and accommodation are adequate / inadequate (delete one) to cover the demands that are inherent in it.

Appropriate arrangements for the use of digitised material to support this course have been made by the Course Authority with the University Librarian.

Further Comments:

University Librarian
/ /2004

3.2 Head of School's Approval

Note: *this section of the Proposal must be signed by the Head of School, stating:*

I have examined the resource implications of the above proposal in regard to staff, space, materials, equipment, capital funds, and computing, and certify that the School can cover the demands that are inherent in it.

Further Comments:

Head of School
/ /2004

3.3 Dean's Approval

Note: *this section of the Proposal must be signed by the Dean, stating:*

I have examined the resource implications of the above proposal in regard to staff, space, materials, equipment, capital funds, and computing, and certify that:

(Tick whichever is applicable)

3.3.1 (i) the proposal involves no additional resources. (A statement from the Head of School explaining how this can be achieved must be provided); or

(ii) the proposal involves additional resources and it is proposed to redeploy existing resources within the faculty. (A statement from the Head of School explaining how

this will be achieved must be provided); or

(iii) the proposal involves additional resources to be obtained as set out below; or

(iv) the additional resources essential to bring the proposal into effect cannot be found within resources available to the faculty.

3.3.2 **Fees** (delete if not applicable):

a fee will not be charged for this program (other than HECS)

a fee will be charged for this program for local fee-paying students

a fee will be charged for international students

If a fee is to be charged the Dean certifies as follows:

I have ensured that the Vice-Chancellor has been advised of the proposed fee arrangements, and note that approval of fee arrangements is needed before the new program can be implemented.

3.3.3 the proposal conforms to the University's commitment to Equal Opportunity in Education.

Statement from Head of School on Source of Additional Resources and/or Further Comments:

Dean
/ /2004

Please click on link for
DISABILITY GUIDELINES FOR ACADEMIC STAFF PREPARING COURSES