

PROPOSAL TO INTRODUCE A NEW COURSE

(formerly known as subject)

1. COURSE DETAILS

This is a generic proposal that describes a large number of proposed new courses, one for most of the courses currently offered by the School of Computer Science and Engineering. The next subsection shows the current courses affected followed by the name of the corresponding proposed new course

1.1 Course ID

| <i>Existing</i> | <i>Proposed code and long name</i> | <i>Abbreviated name where different</i> |
|-----------------|---|---|
| BINF1001 | BINF1801 Extended Bioinformatics 1 | |
| BINF2001 | BINF2801 Extended Bioinformatics 2 | |
| BINF3001 | BINF3801 Extended Bioinformatics 3 | |
| COMP1011 | COMP1911 Extended Computing 1A | |
| COMP1021 | COMP1921 Extended Computing 1B | |
| COMP2011 | COMP2911 Extended Data Organisation | |
| COMP2021 | COMP2821 Extended Digital Systems Structures | |
| COMP2041 | COMP2841 Extended Software Construction | |
| COMP9041 | COMP9481 Extended Software Construction | |
| COMP2411 | COMP2831 Extended Logic and Logic Programming | |
| COMP3111 | COMP3811 Extended Software Engineering | |
| COMP9008 | COMP9708 Extended Software Engineering | |
| COMP3121 | COMP3821 Extended Algorithms & Programming Techniques | Ext Algorithms & Prog Techniques |
| COMP9101 | COMP9701 Extended Algorithms & Programming Techniques | Ext Algorithms & Prog Techniques |
| COMP3131 | COMP3831 Extended Programming Languages and Compilers | Ext Prog Languages & Compilers |
| COMP9102 | COMP9812 Extended Programming Languages and Compilers | Ext Prog Languages & Compilers |
| COMP3141 | COMP3841 Extended Software Systems Design & Specification | Ext Software Systems Design & Spec |
| COMP3151 | COMP3851 Extended Foundations of Concurrency | |
| COMP9151 | COMP9851 Extended Foundations of Concurrency | |
| COMP3161 | COMP3861 Extended Concepts of Programming Languages | Ext Concepts of Prog Languages |
| COMP9161 | COMP9861 Extended Concepts of Programming Languages | Ext Concepts of Prog Languages |
| COMP3211 | COMP3871 Extended Computer Architecture | |
| COMP9211 | COMP9281 Extended Computer Architecture | |
| COMP3221 | COMP3881 Extended Microprocessors & Embedded Systems | Ext Microprocessors & Embedded Systems |
| COMP9221 | COMP9822 Extended Microprocessors & Embedded Systems | Ext Microprocessors & Embedded Systems |
| COMP3231 | COMP3891 Extended Operating Systems | |
| COMP9201 | COMP9283 Extended Operating Systems | |
| COMP3311 | COMP3911 Extended Database Systems | |

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| COMP9311 | COMP9381 Extended Database Systems | |
| COMP3331 | COMP3931 Extended Computer Networks & Applications | Ext Computer Networks & Applications |
| COMP9331 | COMP9833 Extended Computer Networks & Applications | Ext Computer Networks & Applications |
| COMP3411 | COMP3941 Extended Artificial Intelligence | |
| COMP3421 | COMP3921 Extended Computer Graphics | |
| COMP9415 | COMP9485 Extended Computer Graphics | |
| COMP3441 | COMP3961 Extended Cryptography & Security | |
| COMP9441 | COMP9841 Extended Cryptography & Security | |
| COMP3511 | COMP3951 Extended Human Computer Interaction | |
| COMP9511 | COMP9581 Extended Human Computer Interaction | |
| COMP4001 | COMP4801 Extended Object-oriented System Development | Ext Object-oriented System Development |
| COMP9021 | COMP9821 Extended Principles of Programming | |
| COMP9022 | COMP9282 Extended Digital Systems Structures | |
| COMP9024 | COMP9824 Extended Data Structures and Algorithms | |
| COMP9031 | COMP9831 Extended Internet Programming | |
| COMP9315 | COMP9815 Extended Database Systems Implementation | |
| COMP9316 | COMP9816 Extended eCommerce Implementation | |
| COMP9318 | COMP9818 Extended Data Warehousing and Data Mining | Ext Data Warehousing & Data Mining |
| COMP9332 | COMP9832 Extended Network Routing and Switching | |
| COMP9334 | COMP9834 Extended Systems Capacity Planning | |
| COMP9414 | COMP9814 Extended Artificial Intelligence | |
| COMP9416 | COMP9486 Extended Knowledge-based Systems | |
| COMP9417 | COMP9817 Extended Machine Learning & Data Mining | |
| COMP9444 | COMP9844 Extended Neural Networks | |

1.2 Course name - Long

See table above.

1.3 Course name - Abbreviated

Shown in table above where different from long name

1.4 Course Authority

ext/email

The course authority for each of the courses above will be the same as for the corresponding regular course.

A contact person for the purpose of this application is

A/Prof. W.H. Wilson

56876/billw@cse.unsw.edu.au

1.5 Organisational Unit responsible for course

School: Computer Science and Engineering

Faculty: Engineering

Academic Group Code (Faculty): ENG

Academic Organisation Code (Owner): COMPSC

1.6 Justification of Proposal

The aim of the proposal is to provide extension material to gifted and talented students in our programs. At present CSE provides this by: (a) mounting “Higher” versions of Computing 1A, Computing 1B, and COMP2011 Data Organisation; and (b) having advanced elective courses. The Higher courses impose a cost in mounting them, which becomes less justifiable as enrolment numbers fall, as they are currently doing for us. When our enrolment in Computing 1A / Higher Computing 1A in some sessions was over 900, it made a lot of sense to mount a separate course for the top students. In 2004 S1, we have 220 + 100 students in Computing 1A / Higher Computing 1A.

It is also not possible to duplicate all our courses in this way, so that bright students experience frustration when they emerge from the Higher courses part way through second year.

Our proposed solution to these problems is to offer “Extended” versions of relevant courses: these would share lectures with the corresponding regular course, but would have:

- separate tutorials, in which extension material would be offered;
- different or extended programming assignments or projects;
- a different final examination (with some overlap with the regular version of the course to allow a common distribution of marks)

In many cases the extension tutorial would be taken by the lecturer, and where the number of students in the extension course was large, this class might take on the character of an extra lecture.

Courses of this nature are currently offered at Sydney University, and the current proposal is in part a reaction to market forces. It also, of course, serves a genuine need of bright students, and we expect that it will also make teaching more rewarding for academic staff, by giving them time with an undiluted class of bright students.

1.7 Consultation Process

The need for consultation with other academic units is less relevant in this case, as the material in the proposed new courses is a minor extension of material already approved in the regular versions of these courses. The proposal emerged from School Teaching Committee discussions; this committee includes student representatives among its members.

We recognise that introduction of this scheme by the School of CSE might create pressure from students for the introduction of such courses in other parts of the Faculty.

The School of CSE is organised into “teaching clusters” each of which includes the academics involved in teaching in a group of related courses – for example, there are teaching clusters for Software Engineering, Databases, Computer Networks, and Artificial Intelligence. The responsibilities of each cluster includes syllabus development in its area, and the clusters will supervise detailed development of the content to be included in the extension tutorials and assignments.

1.8 Units of credit (UOC) Session/s offered Hours Per Week

As for the corresponding regular course.

1.9 Pre-requisites: As for the corresponding regular course, but requiring a grade in the prerequisite course(s) of at least 70 CR. However, it is proposed that this cutoff should be adjustable in the light of demand and experience.

Co-requisites: As for the corresponding regular course

Exclusions: As for the corresponding regular course

1.10 Proposed Entry in the Faculty Handbook

The “proposed entry” will be presented by means of the example of COMP3811 Extended Software Engineering:

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| COMP3811 Extended Software Engineering |
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| UC 6 HPW 5 |
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| Prerequisites: Mark of at least 70 in (COMP2011 or COMP2711 or COMP2781) |
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Note/s: Excluded COMP9008.

As for COMP3111 but in greater depth and breadth.

More generically:

COMPxxxx Extended yyyy

UC 6 HPW 5

Prerequisites: Mark of at least 70 in (prerequisite(s) of <corresponding regular course> or in the extended equivalent of those prerequisites)

Note/s: Excluded (exclusions of <corresponding regular course> or the extended equivalent of those extensions).

As for <corresponding regular course> but in greater depth and breadth.

As mentioned elsewhere, we would expect to vary the mark cutoff (shown as 70, above) in the light of demand and experience.

1.11 Is this course replacing an existing course? No

1.12 Undergraduate / Postgraduate As for corresponding regular course

1.13 Core / Elective: As for corresponding regular course

1.14 Program stage

Stage varies, but will be as for the regular version of each course. We plan to begin to implement Extended courses in 2004 s2, subject to approval.

1.15 Program/s in which course is be available

As for the corresponding regular course

1.16 Proposed teaching methods and assessment practices

As for the corresponding regular course, but see notes in section 1.6.

Final examinations will include some overlap with the exam for the regular version of the course to allow a common distribution of marks.

1.17 Assessment grades to be used

As for the corresponding regular course

1.18 Mode of delivery: Internal

1.18.1 Multi-mode Delivery Guidelines: Not applicable

1.19 Information Technology Requirements for students

As for the corresponding regular course.

1.20 Textbooks

As for the corresponding regular course. It is likely that a small amount of additional reading, or a different textbook, might be prescribed for some Extended courses.

1.21 Industrial experience component: Not applicable

2. RESOURCE STATEMENT

2.1 Enrolments

It seems likely that around 30% of students will take the extended version of courses

2.2 Resource Requirements

Staffing Requirements:

Lectures will be shared with the corresponding regular course, so no additional staffing required for this purpose. In cases where a single tutorial accommodates the "Extended" students, there will be no increased teaching load there, either. In cases where there are more "Extended" students than will fit in a single tutorial, the plan is to convert these tutorials to a lecture format. This is likely to reduce the number of staff hours required, but may shift the load from part-time staff to full-time academic staff.

Field Costs: none

Laboratory Requirements: As for corresponding regular course – no extra requirements

Materials Requirements: none

Equipment Costs: No extra requirements

Computing Requirements: No extra requirements

Library Requirements: Possibly extra textbook holdings in cases where a second or different textbook is used by "Extended" students.

Capital Funds Requirements: none

2.3 Servicing Implications: None

2.4 Teaching Arrangements:

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

NO

2.5 Alternative Delivery Arrangements: Not applicable

2.6 Details of Tuition Fees:

As for the corresponding regular course.

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

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