

# PROPOSAL TO INTRODUCE A NEW COURSE

(formerly known as subject)

## 1. COURSE DETAILS

**1.1 Course ID** COMP9041

**1.2 Course name – Long** Software Construction: Techniques & Tools

**1.3 Course name - Abbreviated** Software Construction

**1.4 Course Authority** Dr J.A. Shepherd **ext/email** 56494/jas@cse.unsw.edu.au

**1.5 Organisational Unit responsible for course**

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

Academic Group Code (Faculty): ENG

Academic Organisation Code (Owner): COMPSC

## 1.6 Justification of Proposal

The aim of this proposal is to make the material currently available in COMP2041 available to postgraduates in our re-training degrees (McompSc, MinfSc, and associated GradDips). COMP2041 was introduced as a compulsory part of the BSc(Computer Science) in 1999, and subsequently made core for BE Bioinformatics. Significant numbers of students in other programs also take it as an elective (about 50, or 34%, in 2004 s1). Until now, re-training postgraduates have not had access to a course providing this material. It is proposed that COMP9041 will be available, as an elective, to coursework postgraduates except those enrolled in the MengSc program.

## 1.7 Consultation Process

This proposal provides an extra elective, and will potentially solve timetabling problems for those entering our re-training degrees. It is introduced at the request of CSE's postgraduate coursework coordinator, John Shepherd, whose awareness of the need for it arises from interactions with students over several years.

**1.8 Units of credit (UoC) Session/s offered Hours Per Week**  
6 UoC Available S1 and S2 5 hours per week

**1.9 Pre-requisites:** COMP9021  
**Exclusions:** COMP2041

## 1.10 Proposed Entry in the Faculty Handbook

UC 6 HPW 5

Prerequisites: COMP9021

Exclusions: COMP2041

Software system decomposition and design. Overview of the software development life-cycle. Command languages. Version control and configuration management. programming for reliability. Testing and debugging techniques. Profiling and code improvement techniques. Practical work involving programming-in-the-large.

**1.11 Is this course replacing an existing course?** NO

**1.12 Undergraduate / Postgraduate / Other (delete what is not applicable)**

**1.13 Elective**

**1.14 Program stage**

Stage 1. First offered 2004s1 if possible, otherwise 2004s2

**1.15 Program/s in which course is be available**

5452,5453,8508,8680

**1.16 Proposed teaching methods and assessment practices**

Examinable, with programming assignments, written exam and lab exam.

**1.17 Assessment grades to be used**

Full range of grades

**1.18 Mode of delivery** Internal

**1.18.1 Multi-mode Delivery Guidelines**

Not applicable

**1.19 Information Technology Requirements for students**

Standard resources available in the school

**1.19 Textbooks**

*Text:* Kernighan & Pike, The Practice of Programming, Addison-Wesley, 1998.

*Recommended:*

McConnell, Code Complete, Microsoft Press, 1993.

Peek, O'Reilly, Loukides, Unix Power Tools (2nd ed), O'Reilly, 1997.

Robbins, Unix in a Nutshell: System V Edition (3rd ed), O'Reilly, 1999.

Loukides & Oram, Programming with GNU Software, O'Reilly, 1997.

Wall et al., Programming Perl (3rd ed), O'Reilly, 2000.

Sebesta, A Little Book on Perl, Prentice Hall, 1999.

Christiansen et al., Perl Cookbook, O'Reilly, 1998.

Kernighan & Pike, The Unix Programming Environment, Prentice Hall, 1984.

**1.21 Industrial experience component:** not applicable

## **2. RESOURCE STATEMENT**

**2.1 Enrolments**

Estimated or proposed enrolments for the next three years.

2004: 20

2005: 20

2006: 20

## 2.2 Resource Requirements

Note that this course will be co-taught with COMP2041 for the most part, so extra resource requirements are few.

### Staffing Requirements:

Hours per week

0 Full-time Academic Staff

2 Part-time Teaching Staff

0 General Staff

**Field Costs:** N/A

**Studio/Laboratory Requirements:** N/A

**Materials Requirements:** N/A

**Equipment Costs:** N/A

**Computing Requirements:** Standard for CSE courses, and already available

**Library Requirements:** Standard textbook requirements for a course of this size

**Capital Funds Requirements:** N/A

**2.3 Servicing Implications:** Not applicable

### 2.4 Teaching Arrangements:

**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:

Proposed fee: standard for an Engineering course of this type

### **3. AUTHORISATION**

#### **3.1 University Librarian's Endorsement**

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**

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

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

- 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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