

# PROPOSAL TO INTRODUCE A NEW COURSE

(formerly known as subject)

## 1. COURSE DETAILS

**1.1 Course ID** COMP3171

**1.2 Course name - Long**

Analysis of Algorithms

**1.3 Course name - Abbreviated**

Analysis of Algorithms

**1.4 Course Authority**

Toby Walsh

**ext/email**

56929 / tw@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

This proposed course is intended to provide students with core mathematical skills necessary to study and analyse computational problems, especially algorithms. Emphasis will be on teaching problem solving skills as opposed to mathematical theory. The course will present material between that covered in MATH1081 and in courses COMP3121 and COMP9101. The necessary background materials from these courses will be briefly covered before moving on to the course goals of teaching students how to solve such problems in practice.

### 1.7 Consultation Process

Consultation has been undertaken with members of the Teaching Committee of the school of Computer Science and Engineering, representatives from the School of Mathematics, and students, industrial representatives and other academics via the Computer Science Co-op Steering Committee.

**1.8 Units of credit (UOC)**

6

**Session/s offered**

S2

**Hours Per Week**

5

**1.9 Pre-requisites:** MATH1081, COMP2011/2711

**Co-requisites:** NIL

**Exclusions:** NIL

### 1.10 Proposed Entry in the Faculty Handbook

This course will provide students with core mathematical skills necessary to study and analyse computational problems, especially algorithms. Emphasis will be on teaching problem solving skills as opposed to mathematical theory. Topics covered will include: summation, recurrences, asymptotic analysis, complexity analysis and optimisation.

**1.11 Is this course replacing an existing course?**

YES



## 2. RESOURCE STATEMENT

### 2.1 Enrolments

Estimated or proposed enrolments for the next three years.

2005: 8

2006: 10

2007: 15

### 2.2 Resource Requirements

#### Staffing Requirements:

Hours per week

Full-time Academic Staff 3 hours of lectures and 2 hours of tutorial / practical classes, given the course enrolment remains small

Part-time Teaching Staff NIL

General Staff NIL

**Field Costs:** NIL

**Studio/Laboratory Requirements:** NIL

**Materials Requirements:** NIL

**Equipment Costs:** Maple classroom (teaching) licence — \$130/user x 10 = \$1300 (using the School of Mathematics licence and dependent on them being able to partition their licence server)

Matlab classroom licence — \$1452 + \$ 329/year for maintenance = \$1781

**Computing Requirements:** NIL – to use existing computer laboratory equipment

**Library Requirements:** See reading list (1.20 above)

**Capital Funds Requirements:** NIL

**2.3 Servicing Implications:** N/A

**2.4 Teaching Arrangements:**

YES X

NO

Guest speakers from National ICT Australia will present sessions on an as required basis.

**2.5 Alternative Delivery Arrangements:**

N/A

**2.6 Details of Tuition Fees:**

Proposed fee: Standard for Faculty of Engineering

### **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  
/ /2005

#### **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  
/ /2005

#### **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  
/ /2005

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