

PROPOSAL TO INTRODUCE A NEW COURSE

(formerly known as subject)

1. COURSE DETAILS

1.1 Course ID COMP9009

1.2 Course name – Long

Advanced Topics in Software Engineering

1.3 Course name - Abbreviated

Adv Topics in Software Eng

1.4 Course Authority

Prof. Ross Jeffery

ext/email

8374 5512/rossj@cse.unsw.edu.au

1.5 Organisational Unit responsible for course

School: Faculty:

Computer Science and Engineering

Engineering

1.6 Justification of Proposal

CSE and NICTA Empirical Software Engineering conducts internationally leading research into Software Engineering which could be packaged into a course for graduate students. The course will be designed for students who are Software Engineering practitioners who see a need to improve their development techniques or move up into management.

Existing courses do not cover the material involved at the depth offered and do not provide students access to the research outcomes from NICTA Empirical Software Engineering.

This is intended for students with a focus on software engineering, as opposed to computer engineering or computer science generally. It will provide details on specialist areas of research in management and processes and will assume a thorough background in software. The course will be offered as a Group D course to all postgraduates in Computer Science and Engineering.

The course will be focused on providing an advanced and in depth treatment of specialist topics in selected areas of Software Engineering .

1.7 Consultation Process

NICTA ESE staff who will be teaching the course, CSE staff who are teaching software engineering courses at undergraduate level. Also discussed and accepted at the School Teaching Committee on 17/9/04.

1.8 Units of credit (UOC) Session/s offered

6UOC

S1

Hours Per Week

3hr/week

1.9 Pre-requisites: 2yr IT Industrial Experience in Software Development or 18months IT experience and COMP3111/9008

Co-requisites:

Exclusions:

1.10 Proposed Entry in the Faculty Handbook

COMP9009 Advanced Topics in Software Engineering. The course focuses on topical aspects of Software Engineering (Science) in practice. The subject will provide an in depth treatment of specialist topics in areas selected from the following: Software Engineering Lifecycle Models, Software Engineering Project Management, Risk management, Estimation and Scheduling, Software Requirements Management, Software Configuration Management, Release Management, Product Line Development and Reuse, plus other topics as deemed topical by the course development group. The web page each session will provide more detailed information of the course to

be run that session. The topics will only be relevant to those with experience in Software Engineering practices.

1.11 Is this course replacing an existing course?

YES

NO X

1.12 Postgraduate

1.13 Elective

1.14 Program stage

Group D (advanced) elective in PG programs

1.15 1.15 Program/s in which course is be available

5432 GradDip CompIT

8682 MCompIT -

7344 GradCert

8684 MIT

1650 PhD in CSE

2665 ME in CSE

2765 MSc in CSE

1.16 Proposed teaching methods and assessment practices

Three hour Lecture/tutorial. The first hour of lecture will probably become mostly post mortem on the previous weeks exercises, or this can be done in tutorial. Alternatively the second hour could be more practical case study approach to the topic.

There will be lectures and laboratory or tutorials held each week. The course assessment may be based around a single project in which they will look at specific aspects, or it may be around separate projects for different focuses of the course. The projects will be group projects if appropriate, or individual projects.

A final short answer exam will be conducted

1.17 Assessment grades to be used

Full range of grades: HD, DN, CR, PS, FL

1.18 Mode of delivery

Internal X

External

Other (specify)

1.18.1 Multi-mode Delivery Guidelines

Not applicable

1.19 Information Technology Requirements for students

Computer lab access for up to 2 hours/week. Can be catered for using existing facilities.

1.20 Textbooks

Study Kit of journal papers to be produced electronically by NICTA staff.

McConnell, S., Rapid Development, Microsoft Press, 1996, ISBN 1-55615-900-5

Jackson, M., Software Requirements and Specifications, Addison-Wesley and ACM Press, 1996.

Jackson, M., Problem Frames: Analysing and Structuring Software Development Problems, Addison-Wesley, 2001.

Gause, D. and Weinberg, G., Exploring Requirements: Quality Before Design, Dorset House Publishing Co. Inc. NY, 1989. ISBN:0932633137

Bays, M.E., Software Release Methodology, Pearson Education, 1999, ISBN 0136365647
Clements P. and Northrop L.M., Software Product Lines: Practices and Patterns, Addison-Wesley ,
2001, ISBN 0201703327

1.21 Industrial experience component
NA

2. RESOURCE STATEMENT

2.1 Enrolments

Estimated or proposed enrolments for the next three years.

2003: 30-45

2004: 45

2005: 45

2.2 Resource Requirements

Staffing Requirements:

Hours per week

3 Staff Full-time Academic Staff

2 per tutorial group of 17 students Part-time Teaching Staff

Nil General Staff

Field Costs: Nil

Studio/Laboratory Requirements: Will use standard School of CSE labs

Materials Requirements: Nil

Equipment Costs: Nil

Computing Requirements: Lab access

Library Requirements: See 1.20, above

Capital Funds Requirements: Nil

2.3 Servicing Implications:

NA

2.4 Teaching Arrangements:

YES

NO X

2.5 Alternative Delivery Arrangements: not applicable

2.6 Details of Tuition Fees:
Standard for Engineering courses 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

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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[DISABILITY GUIDELINES FOR ACADEMIC STAFF PREPARING COURSES](#)