

PROPOSAL TO INTRODUCE A NEW COURSE

(formerly known as subject)

1. COURSE DETAILS

1.1 Course ID

1.2 Course name - Long

Concepts of Programming Languages

1.3 Course name - Abbreviated

Concepts of Programming Languages

1.4 Course Authority

Gabriele Keller

ext/email

6032/keller@cseunsw.edu.au

1.5 Organisational Unit responsible for course

School: Computer Science & Engineering

Faculty: Engineering

Academic Group Code (Faculty): ENG

Academic Organisation Code (Owner): COMPSC

1.6 Justification of Proposal

The proposed course will study the fundamental concepts of programming languages, provide students with the tools necessary to critically evaluate the suitability of a programming language for a certain task, and discuss the semantics of various common language constructs. The course leads to an understanding of the foundations and concepts of programming languages and how they affect applications. As such it is a starting point for more advanced courses in the area. The practical component of the course will include the implementation of substantial parts of an interpreter for a language with the language features discussed in the class.

1.7 Consultation Process

1.8	Units of credit (UOC)	Session/s offered	Hours Per Week
	6	S2	3

1.9 **Pre-requisites:**COMP2011

Co-requisites: None

Exclusions: None

1.10 Proposed Entry in the Faculty Handbook

Programming language paradigms: imperative, object oriented, declarative (i.e., functional and logic). Theoretical foundations of programming languages: syntax, operational, axiomatic and denotational semantics. Implementation aspects of central language features, such as dynamic and strong typing, polymorphism, overloading and automatic memory management. Abstracting over programming languages and architectures: byte code approach, component software.

1.11 Is this course replacing an existing course?

YES

NO X

1.12 Undergraduate / Postgraduate

1.13 Elective

1.14 Program stage

Usually taken in Stage III (first offered in S2 2003)

1.15 Program/s in which course is available

BE (CE 3645, SE 3648, Biolnf 3647), BSc (CS 3978), and the following postgraduate programs: MEngSc 8685, MCompSc 8680, MInfSc 8508, MSc 2665, ME 2765, PhD 1650

1.16 Proposed teaching methods and assessment practices

examinable (formal) and assignments

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)

**1.19 Information Technology Requirements for students
Standard for Computer Science & Engineering**

1.20 Textbooks

Set textbooks: Concepts of Programming Languages, Robert W. Sebesta

Recommended textbooks:

- .

1.21 Industrial experience component

n/a

2. RESOURCE STATEMENT

2.1 Enrolments

Estimated or proposed enrolments for the next three years.

2003 50

2004 60

2005 60

2.2 Resource Requirements

Staffing Requirements:

Hours per week

Full-time Academic Staff 4 hours/week (one session only)
Part-time Teaching Staff n/a
General Staff Covered by standard support of the Computer Support Group

Field Costs: n/a
Studio/Laboratory n/a
Requirements:
Materials Requirements: n/a
Equipment Costs: n/a
Computing Requirements: **Use of existing facilities in the School**
Library Requirements: Standard textbooks, conference proceedings, and journals
Capital Funds Requirements: n/a

2.3 Servicing Implications:
n/a

2.4 Teaching Arrangements:

YES
NO

X

2.5 Alternative Delivery Arrangements:
n/a

2.6 Details of Tuition Fees:
Proposed fee:

Standard for 6 uoc Engineering courses

\$ 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 Principal 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 Principal Librarian.

Further Comments:

Principal Librarian
/ /2001

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
/ /2001

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 a fee will / will not (delete one) be charged for this course. 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 a new course 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

/ /2001