

# Faculty of Engineering

## MINOR COURSE REVISION PROPOSAL

### 1. COURSE DETAILS

#### 1.1 Course ID

#### 1.2 Course name - Long

COMP1911	Computing 1
COMP1917	Higher Computing 1
COMP1921	Data Structures and Algorithms
COMP1927	Higher Data Structures and Algorithms

#### 1.3 Course name – Abbreviated

COMP1911	Computing 1
COMP1917	Higher Computing 1
COMP1921	Data Structures and Algorithms
COMP1927	Higher Data Str. & Algos

#### 1.4 Undergraduate / ~~Postgraduate~~ / ~~Other~~

1.5 Course Contact: Richard Buckland ext/email: richardb@cse.unsw.edu.au  
x54063

#### 1.6 Minor Revision(s) and Justification(s)

COMP1911 and COMP1921 are gentle courses offered to Information Systems, Electrical Engineering, Telecommunications, Mechanical Engineering and Mechatronic Engineering students and combined are roughly equivalent to COMP1917.

Students are permitted to replace COMP1911 and COMP1921 with COMP1917 and COMP1927 if they wish to be extended and plan on studying more computing as part of their future study.

Students who do not choose to complete COMP1917 and COMP1927 but who still wish to study more computing are required to take three first year computing instead of two: COMP1911, COMP1921, and COMP1927.

This has caused some difficulties with students who do not have room in their program for three first year computing courses, and also those students who take COMP1917 and then choose not to complete COMP1927. The overlapping material between COMP1917 and COMP1921 makes this combination undesirable, however many students are left with no alternative but to enrol in these two courses.

All students in a Computing major, and any other student who has an interest in studying further computing and who wish to be extended should take COMP1917 and COMP1927.

The current naming convention confuses students, and does not accurately portray the role these courses play in programs at UNSW. The first year computing courses have never run in the higher/lower format, and the use of the word “higher” has discouraged many CSE students from enrolling in these compulsory CSE courses leading to significant enrolment problems.

Our proposed revision is to re-name the first year computing courses to remove this confusion amongst students and to more clearly define the role these courses play in programs that contain first year computing. The new names are similar to the names used prior to the 2006 course revisions:


COMP1911	Computing 1A
COMP1917	Computing 1B
COMP1921	Computing 1
COMP1927	Computing 2

### 1.7 Consultation (if applicable)

Revision circulated to School of EET, Mech and Manf Eng, and Info Sys for comment.

### 1.8 Session/s offered S1, S2

### 1.9 Current Handbook Entry



## Computing 1 - COMP1911

**Faculty:** Faculty of Engineering  
**School:** School of Computer Science and Engineering  
**Course Outline:** [www.cse.unsw.edu.au/~cs1911](http://www.cse.unsw.edu.au/~cs1911)  
**Campus:** Kensington Campus  
**Career:** Undergraduate  
**Units of Credit:** 6  
**EFTSL:** 0.12500 ([more info](#))  
**Indicative Contact Hours per Week:** 6  
**Fee Band:** 2 ([more info](#))  
**Further Information:** [See Class Timetable](#)  
**Available for General Education:** Yes ([more info](#))

#### Description

**note:** An exclusion exists between COMP1911 and COMP1917.

The objective of this course is for students to develop proficiency in programming using a high level language. Topics covered include: fundamental programming concepts, program testing and debugging, the underlying memory representation of data, programming style. Practical experience of these topics is supplied by laboratory programming exercises and assignments.

#### Additional Information

This course is designed for non-computing majors who want a solid introduction to programming, with the aim of using computers as part of some other discipline.

Electrical Engineering, Telecommunications, Mechanical Engineering, and Mechatronic Engineering specify this as the standard first year computing course. COMP1911 and the following course COMP1921 are gentle courses and combined are roughly equivalent to the single course COMP1917.

Students with an interest in computing or who wish to be extended might want to consider COMP1917 as an alternative, especially if they plan to study a more computing as part of their future study. Students from all degrees are permitted to take 1917 instead of 1911, and 1927 instead of 1921.



## Higher Computing 1 - COMP1917

**Faculty:** Faculty of Engineering  
**School:** School of Computer Science and Engineering  
**Course Outline:** [www.cse.unsw.edu.au/~cs1917](http://www.cse.unsw.edu.au/~cs1917)  
**Campus:** Kensington Campus  
**Career:** Undergraduate  
**Units of Credit:** 6  
**EFTSL:** 0.12500 ([more info](#))  
**Indicative Contact Hours per Week:** 6  
**Excluded:** COMP1921  
**Fee Band:** 2 ([more info](#))  
**Further Information:** [See Class Timetable](#)  
**Available for General Education:** Yes ([more info](#))

### Description

The objective of this course is for students to develop proficiency in programming using a high level language. Topics covered include: fundamental programming concepts, program testing and debugging, the underlying memory representation of data, programming style. Practical experience of these topics is supplied by laboratory programming exercises and assignments.

### Additional Information

This course should be taken by all CSE majors, and any other students who have an interest in computing or who wish to be extended. It does not require any prior computing knowledge or experience.

COMP1917 leads directly to COMP1927 and COMP2911, which are the pre-requisites for the full range of further computing courses.



## Data Structures and Algorithms - COMP1921

**Faculty:** Faculty of Engineering  
**School:** School of Computer Science and Engineering  
**Course Outline:** [www.cse.unsw.edu.au/~cs1921](http://www.cse.unsw.edu.au/~cs1921)  
**Campus:** Kensington Campus  
**Career:** Undergraduate  
**Units of Credit:** 6  
**EFTSL:** 0.12500 ([more info](#))  
**Indicative Contact Hours per Week:** 6  
**Enrolment Requirements:**  
Prerequisite: COMP1911.  
**Excluded:** COMP1917  
**Fee Band:** 2 ([more info](#))  
**Further Information:** [See Class Timetable](#)  
**Available for General Education:** Yes ([more info](#))

### Description

Covers the topics of COMP1917 not covered in COMP1911. Including: approaches to problem solving, abstraction, low level structure of memory, memory allocation, stack frames, secure coding practice, recursion, linked lists.

Introduction to ADTs. Introduction to simple binary trees. Also reinforces concepts introduced in COMP1911: style, unit testing, team programming, groupwork.



## Higher Data Structures and Algorithms - COMP1927

**Faculty:** Faculty of Engineering  
**School:** School of Computer Science and Engineering  
**Course Outline:** [www.cse.unsw.edu.au/~cs1927](http://www.cse.unsw.edu.au/~cs1927)  
**Campus:** Kensington Campus  
**Career:** Undergraduate  
**Units of Credit:** 6  
**EFTSL:** 0.12500 ([more info](#))  
**Indicative Contact Hours per Week:** 6  
**Enrolment Requirements:**  
Prerequisite: COMP1917 or COMP1921.  
**Fee Band:** 2 ([more info](#))  
**Further Information:** [See Class Timetable](#)  
**Available for General Education:** Yes ([more info](#))

### Description

Programming in the large, abstraction and ADTs, interfaces, complexity. Data types and data structures: lists, trees, graphs; and associated algorithms. Programming assignments, laboratory exercises, formal examination. Preparation work may be available for interested students before the course starts (see course outline for details).

### 1.10 New Handbook Entry (if any changes)

No change to course content or descriptions.

**Add** an exclusion between COMP1917 and COMP1921.

**Minor change** to “Additional Information” in COMP1911:

Replace: Students from all degrees are permitted to take 1917 instead of 1911, and 1927 instead of 1921.

With: Students from all degrees are permitted to take 1917 instead of 1911, and 1927 instead of 1921, but due to overlapping material may not take COMP1917 and COMP1921.

## **2. AUTHORISATION**

### **2.1 School Education Committee Chairman's Approval**

The School Education Committee has 1) approved the academic aspects of this proposal, 2) considered the resource implications in regard to staff, space, materials, equipment, capital funds, and computing, and 3) certifies that the School can cover any demands that are inherent in it.

Further Comments:

School Education Committee  
Chairman  
/ /2008