

Business Opportunity: To Change the B.Sci (Computer Science) into B Computer Science

Prepared by Brad Hall. 28th January 2015.

Preamble:

The Bachelor of Science (Computer Science) was established over 40 years ago. The degree has been the foundation of all computing degrees at UNSW.

By the 1990s, the majority of Electrical Engineering students were undertaking a double degree with Computer Science. This combination led to the establishment of our first Engineering degree, Computer Engineering in 1989. In 1991 the enrolment numbers in both of these degrees allowed for the establishment of the School of Computer Science and Engineering. Later the degrees of Software Engineering and Bioinformatics Engineering were introduced, firmly positioning the School as an Engineering School, but one that conferred a Science degree as well as the three Engineering degrees.

Issues with the Current Degree and Proposed Enhancement:

1) Control

In 2013? UNSW Science made changes to the Bachelor of Science Degree that removed Minors from the Program. Majors (i.e., streams in the Computer Science degree with a Computing focus) and Minors (i.e., streams in the Computer Science degree with a non-Computing focus) created flexibility which is the most popular features of the degree amongst the School's target Market.¹ Some of the Minors that we lost were:

- Information Systems
- Japanese
- Psychology
- Philosophy

Losing these Minors reduced Marketing opportunities and reduced students' choices, which made the degree appealing and gave the School a competitive advantage over its competitors.

Creating a Bachelor of Computer Science would break this historical dependency on the Bachelor of Science and give Computer Science and Engineering full control of the Program.

¹ Ref: CSE New Students Survey. See appendix A

The CSE New Students Survey conducted each year clearly identifies the flexibility and range of options as a major reason that students choose Computer Science at UNSW. To maintain the Program's popularity, the School should maintain (and increase) the Majors and reintroduce the Minors.

2) Specialisation listed on testamur.

Under the current system, Computer Science is a Specialisation of the Bachelor of Science and as such the students testamur states "Bachelor of Science (Computer Science)".

The proposed change means that a Computing Specialisation could be included (e.g., "Bachelor of Computer Science (Computer Security)". This would be popular with both students and Industry².

3) Confusion

The School has positioned itself as an Engineering discipline, but the current Computer Science degree is a Science degree. This causes confusion amongst students and employers.

The School's Marketing leverages its Computing degrees as an Engineering discipline as a point of differentiation against competitor universities. Having one degree as a Science degree contradicts this differentiation and to some students appears as a "lower" level degree.

Introducing the degree as a Bachelor of Computer Science creates opportunities to enforce that it is an Engineering program and is separate to the Science programs.

² Ref: CommBank agreement

Appendix A:

2015

Why did you choose your degree instead of another Computing degree at UNSW?

Bioinformatics

<i>Double Degree</i>	2	40%	<i>Previous Study</i>	1	20%
<i>Cross Discipline</i>	2	40%			

Computer Engineering

<i>Cross Discipline</i>	3	75%	<i>Double Degree</i>	1	25%
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Computer Science

<i>Flexibility</i>	17	38%	<i>Electives</i>	6	13%
<i>Course Content</i>	10	22%	<i>1 year less</i>	4	8%
<i>Double Degree options</i>	8	18%			

Software Engineering

<i>Course Content</i>	4	27%	<i>Interest</i>	1	7%
<i>Employment</i>	4	27%	<i>More Valued</i>	1	7%
<i>Direction/focus</i>	3	20%	<i>No Physics</i>	1	7%
<i>Friends</i>	1	7%			