




Advanced Computer Science (Honours)

MARK AS COMPLETE

PROPOSED

Authority to Proceed					
Proposal Overview					
ATP Title *	Advanced Computer Science (Honours)				
ATP Summary * 	<p>This is a proposal to provide a Computer Science degree with an embedded Honours component. The requirements for this program will essentially be a combination of those for the existing 3-year BSc(CS) program (3778) plus the existing 1-year Computer Science Honours program (4515). But, students will have additional (and much needed) flexibility in terms of which courses are undertaken in which year. We expect that this will encourage more students (especially, high performing students) to pursue a fourth year of study rather than leaving with the 3-year degree.</p> <p>Currently CSE offers a 3 year Bachelor Pass Computer Science degree, and a stand alone 1 year Computer Science Honours program. This leads to problems where talented students complete many of the advanced honours level courses during their Bachelors degree and then encounter course availability and sequencing issues when they begin the standalone Honours degree.</p> <p>Intake numbers for the Honours degree are small; providing an integrated degree will also help by making Honours a more attractive and streamlined proposal for them.</p> <p>The Advanced Computer Science degree will also be positioned as an elite program, with a higher ATAR entry point, and with some adjustments to program options compared to the 3 year Computer Science degree to support that. For example, the School currently runs an elite students program, that allows for students to substitute more advanced and research focused courses in place of more introductory ones - those measures can be incorporated into this program. Similarly research focused project electives, industry placement courses, and the like will be considered as meaningful additions to the program structure in order to differentiate the Advanced program. The schools intention is to position the program as a flagship elite program to attract very high achieving students who are likely to go on to PhD programs.</p>				
Academic Items To Be Replaced 	<p>None, the existing Bachelor (Pass) Computer Science, and existing one year stand alone Computer Science Honours program (4515) will be retained in order to continue to serve different cohorts and markets. The standalone Honours program will allow graduated Comp Sci Bachelor students from other universities to complete Honours at UNSW. The Bachelor Pass Computer Science degree will serve the majority of students seeking a qualification in this area, as the embedded Hons version will be an 'elite' program. This arrangement will be the same as the arrangements in the Faculty of Science where they offer a Bachelor of Science, and Adv Bachelor of Science Hons, and standalone 1 year Hons program.</p>				
Proposal Contacts					
Author	Blaise Graham				
Proposal Sponsor	<table border="1"> <thead> <tr> <th>Name</th> <th>Role</th> </tr> </thead> <tbody> <tr> <td>> Alan Blair</td> <td>Senior Lecturer</td> </tr> </tbody> </table>	Name	Role	> Alan Blair	Senior Lecturer
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Collaborators	<table border="1"> <thead> <tr> <th>Name</th> <th>Role</th> </tr> </thead> <tbody> <tr> <td>> John Shepherd</td> <td>Deputy Head of School</td> </tr> </tbody> </table>	Name	Role	> John Shepherd	Deputy Head of School
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Academic Item Overview					
Academic Item Name *	Advanced Computer Science (Honours)				

Academic Item Name	Advanced Computer Science (Honours)
Academic Item Type	Program
Owning Faculty *	Faculty of Engineering
Owning Academic Unit *	School of Computer Science and Engineering
Collaborating Faculties	
Indicative Target Start *	T1, 2023
Proposed Units of Credit	192
Award Type/s *	Bachelor (Honours) (Embedded)
Career *	Undergraduate
Information on Delivery of Program	Taught using existing courses at UNSW, so offered primarily face to face or in hybrid mode, at the Kensington campus, under the standard trimester calendar, with both full time and part time options.
Eligible Cohort *	Available to both domestic and international students.
Indicative Minimum Selection Rank	97
Features and Fit	
Distinctive Features	<p>This program would particularly appeal to high achieving and research interested students who wish to undertake advanced (Level 4) Computer Science courses in 3rd year, giving them the skills to pursue a 4th year thesis on a highly advanced topic. Other courses could then be undertaken in the 4th year (for example, Level 3 courses in Computer Science or Mathematics). The structure would be broadly similar to Program 3962 Bachelor of Advanced Science (Honours) but it would be administered separately, and would be accredited by the Australian Computer Society.</p> <p>It would be positioned as an elite degree, for high achieving students, offering a pathway into research.</p>
Strategic Alignment	<p>This program forms part of the School's strategy to attract high achieving students into Computer Science, and also increase the number of talented students who go on to undertake PhD programs. It will also allow the School to compete more effectively for these students with other universities who already offer this kind of program. For example, here are links to similar programs currently being offered by USyd, UTS, UQ, Monash, Adelaide, UWA and ANU:</p> <p> https://www.sydney.edu.au/courses/courses/uc/bachelor-of-advanced-computing.html https://www.uts.edu.au/study/find-a-course/bachelor-computing-science-honours https://my.uq.edu.au/programs-courses/plan.html?acad_plan=COSCIC2516 https://www.monash.edu/study/courses/find-a-course/2022/computer-science-advanced-c3001 https://www.adelaide.edu.au/degree-finder/bcmsa_bcmppscadv.html https://www.uwa.edu.au/study/courses/bachelor-of-advanced-computer-science https://cecs.anu.edu.au/study/undergraduate/bachelor-advanced-computing-honours </p>
Market Demand	
Market Demand Indicators Summary	<p>The School has consistently received feedback from undergraduates and prospective Honours year students that our suite of offerings does not meet their needs, and that our program structure is prohibitively restrictive compared to the flexibility offered in similar programs at other Australian universities. Our expectation is that the advanced computer science (Hons) degree will draw its intake in part from students who would otherwise apply for the three year program, while also bringing in high achieving students who would otherwise accept offers at other institutions. Our goal is to reach a comparatively small (against our other programs) intake of 30-50 students per year for the program. A full market analysis will be prepared as part of the business case for the full proposal.</p>
Employability and/or Industry	Our 3 year graduates are already highly employable. The 4-year program aims to provide

Needs	elite students with a research trajectory towards PhD, or to prepare them for senior IT roles in industry, or positions in top IT companies like Google, Amazon, Atlassian, etc.
Consultation	
Information on Impacted UNSW Parties	
Third Party Arrangements	
Information on Third Parties Arrangements 	N/A