



Scientia Education Investment Fund Grants Final Report

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“Bridging the Gap in Science between High School and Undergraduate Education”

Chemistry/Science

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1. Executive Summary

As part of the recent HSC and Australia wide curricula changes (along with the move to trimesters), UNSW Science has been presented with a unique opportunity to update and modernise via a 'digital uplift' of our existing Faculty's offerings of bridging courses (Mathematics, Physics and Chemistry). We aimed to enhance our current courses by more closely aligning them with the recent curricula changes, introducing more flexible delivery modes to reduce barriers for disadvantaged and distance students as well as allowing us the potential to offer a mid-year enrolment if needed.

We have been able to create fully updated bridging course in Chemistry, Mathematics and Physics. Each course is able to be delivered fully online if needed (Mathematics and Chemistry have optional face-to-face components). Enrolment numbers have unfortunately been below expectations and the project team will be investigating the reasons behind this unexpended outcome.

2. Outcomes and impact

Proposed Milestones

Review the current bridging course content, new HSC curricula and any changes planned for first-year courses in Mathematics, Physics and Chemistry so that the bridging course syllabi can be fixed.

ACHIEVED

Create a new Statistics course to complement the existing Mathematics course – **NOT ACHIEVED** – Due to time constraints and competing demands on staff's time this was abandoned and instead more effort/focus was placed on making the course that were created of a higher standard.

Review how the Australian Curriculum has been implemented state by state to identify and adjustments that would be needed for students coming from other states.

ACHIEVED

Identify aspects of the bridging courses that can be augmented with videos showcasing the advantages of studying at UNSW.

ACHIEVED

Map out the modules required to complete the bridging courses and identify any that can be used for micro-credentialed courses. From this a detailed plan to complete the work will be determined.

ACHIEVED

Proposed Deliverables

4 online courses that allow for a flexible delivery mode and can cater for students who were not only educated in NSW but any state/territory in Australia – **PARTIALLY ACHIEVED** (3 courses not 4)

Impact

Our current enrolments are unfortunately ~170 students in total (this is slightly lower than it has been in the past). We do not know why the numbers are lower at the moment. As far as the project team are aware the marketing was the same as in previous years (flyers etc.) but a further investigation into this will be conducted and findings from this will hopefully assist in increasing numbers in the future – **ONGOING INVESTIGATION**

Strategic Priorities Addressed

#1 Design, develop and deliver the UNSW Scientia Educational Experience

- Seamless integration of the physical and digital campuses
- Making the most of a trimester-based academic year
- Highly focused on attainment

#3 Systematically integrating technology into teaching

ALL ADDRESSED

SUMMARY – We have created 3 courses on the Openlearning platform that are completely aligned with the new HSC syllabus (as well as being compliant with the syllabi from other states/territories). These courses can be delivered to students anywhere in Australia (or indeed the world) as they are capable of being completed entirely online. The courses address some key strategic priorities that UNSW have identified, and we hope that moving forward even more students can benefit from our bridging course offerings.

3. Dissemination strategies and outputs

Flyers and other advertisement of these courses has occurred but does not seem to have had the impact that was anticipated. As mentioned, *vide supra* the project team will be investigating this further. Students currently enrolled in the courses will be surveyed and any results from this will form the basis of either a poster or presentation that can be given at a learning & teaching forum in the future.

4. Evaluation of project outcomes

Please see summary mentioned *vide supra* – courses are still in progress as is investigation of impact.