

Strengthening Senior Secondary Pathways

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Introduction

Victoria has a strong reputation for offering academically robust, diverse and flexible programs of study for students in the senior years of schooling.

Both the VCE and VCAL are highly successful, world-recognised senior secondary certificates. In 2012 there were approximately 59,000 Victorian students who completed a senior secondary certificate. Of these, 83 per cent completed the VCE, 16 per cent completed a VCAL and 1 per cent completed the International Baccalaureate.

The VCE has developed into one of the world's leading senior secondary education programs. Since it was first piloted in 1987, the VCE has become respected around the world, influencing development of senior secondary programs in a number of international and Australian jurisdictions.

The VCE now provides Victorian students with over 90 VCE studies and 30 VCE VET programs. The VCE has an international profile, being delivered at a number of schools overseas. Victorian students regularly use their VCE certificate as their entry credential for a wide range of universities, both across and beyond Australia.

One of the reasons the VCE is a success is because the certification framework allows for a robust common measurement of student learning across a wide range of disciplines. Students studying within the VCE model are guaranteed an accurate and widely acknowledged assessment of their learning during senior secondary years, without being forced into a narrow range of limited subjects. Within this model, the Victorian Government has consistently worked with experts across the education sector to ensure the content, standards and structure of individual subject areas are always updated to reflect the best available evidence of student learning from around the world.

The VCAL was introduced in 2002 in response to the Kirby Report (2000) that recommended a set of reforms to ensure that all students were able to access a senior secondary program of study. As an alternative to the VCE, the VCAL has proved over the last ten years to be highly successful, with enrolments steadily growing from 12,000 in 2006 to nearly 23,000 in 2013. As with the VCE, the VCAL is now attracting significant interest from other Australian states and territories and other international jurisdictions that recognise the need for a pathway such as that provided by VCAL.

Between 2008 and 2013, the number of students enrolled in the senior secondary certificates has steadily increased. There are more than 170,000 students participating in the VCE or VCAL, an increase of 6 per cent from 2008.

But this figure does not indicate the number of students who have left school early without completing their senior secondary certificate, or who completed without having a clear sense of where their credential could take them. Approximately 10 per cent of students still do not complete a senior secondary qualification or a vocational certificate. This is not a good outcome.

There are also students who do not reach their full potential in their senior secondary years. The latest PISA results indicate that the top performing Victorian students are slipping behind in levels of achievement. We need to strengthen a culture of high achievement.

This paper sets out a series of reforms designed to further strengthen senior secondary pathways. Some of these activities will strengthen the current offerings within the VCE, for example, the review of a large number of VCE studies, while others will create new opportunities for students to realise their potential. All have been the subject of extensive consultation with students, teachers and the broader education community.

Summary of initiatives

1. Introduce the VCE (Baccalaureate) and Industry Pathways as new forms of recognition of achievement within the current senior secondary qualifications of VCE and VCAL.
2. Investigate new specialist pathways within the VCE.
3. Implement the new VCE Extended Investigation study.
4. Introduce new measures to encourage the study of Chinese at the senior secondary level.
5. Introduce new Higher Education VCE scored studies.
6. Undertake the review and development of VCE studies in the learning areas of English, Mathematics, Science and History, incorporating content from the Australian Curriculum as appropriate.

1. Introduce VCE (Baccalaureate) and Industry Pathways

The VCE (Baccalaureate) will support the Government's objectives to encourage more students to include languages and higher level mathematics in their senior secondary program of study.

To be eligible for the award of the VCE (Baccalaureate), students will be required to meet the requirements of satisfactory completion of the VCE and:

- satisfactorily complete a Units 3 and 4 sequence from English or Literature or English Language with a minimum study score of 30 or English as an Additional Language (EAL) with a minimum study score of 33
- satisfactorily complete a Units 3 and 4 sequence in either Mathematics Methods or Specialist Mathematics
- satisfactorily complete a Units 3 and 4 sequence in a VCE Language.

The introduction of this new form of recognition is not a new or alternative instrument for tertiary selection. Rather, it is designed to provide recognition of and a further incentive for students to make the choice to undertake the demands of studying both a higher level of Mathematics and a language in addition to English as part of their senior secondary program.

As an initiative to strengthen enrolment in Languages and intermediate and advanced level calculus-based Mathematics, it has been widely welcomed by Victorian higher education institutions.

Victoria's future economic growth will depend on our capacity for innovation. The study of intermediate and advanced level calculus-based Mathematics equips students with both higher-order thinking skills and the technical knowledge of Mathematics needed to enable innovation in science and technology. The study of languages provides students with deep intercultural understanding and the capacity to communicate with ease and efficiency across language divides. At present, while Victoria has the highest participation rate in languages education of any state or territory in Australia, less than 20 per cent of senior secondary students currently include the study of a language in addition to English in their program of study.

The award of the VCE (Baccalaureate) will recognise that students have chosen to undertake a course of study that includes both these elements.

The VCE (Baccalaureate) will be awarded to eligible students from 2014.

Despite the growing emphasis on university education, for some students a particular focus on a vocational area at secondary education level is the right decision, and can be the foundation for a lifetime of study and learning. For these students, it is important that senior secondary education provides opportunities to begin targeted preparation for work and further study, including opportunities for skills acquisition that reflect industry experience and that can be recognised in a way that is meaningful to employers. Industry pathways continue to be an important part of the senior secondary years of schooling. In 2012, 40.4 per cent of students who graduated with their VCE or VCAL included vocational education and training components in their program of study.

The Industry Pathways (IP) program will provide a new form of recognition for students who complete a program of study designed to prepare them well for further study or direct employment in a specific vocational area. Initially, the IPs will be available through both the VCE and VCAL in the following industries: Building and Construction, Manufacturing and Engineering, Community Services and Health, and Sport and Recreation. Development of the IPs will occur in consultation with the relevant industry to determine the best mix of industry-based learning and academic studies.

Each IP will include nationally recognised Vocational Education and Training (VET) units, some of which may be scored VCE VET units, and structured work placements in the relevant industry. Partnerships between schools and industry will assist with the provision of work placement opportunities and will include the involvement of industry in the design and delivery of the program offered by schools. The IPs will include elements of study-based learning contextualised to particular industries.

Students meeting the requirements of an Industry Pathway will receive a testamur indicating they have been awarded the VCE or VCAL and have successfully completed an Industry Pathway in the relevant industry area.

Schools will continue to be able to offer Themed VCAL programs that can include a specific industry focus. School-based Apprenticeships and Traineeships (SBATs) will also continue to be available. SBATs offer students enrolled in the VCE or VCAL the opportunity to combine employment, school and training. These programs will continue to be delivered under a training plan signed by the school and a training contract with an employer.

Industry Pathways will be awarded to eligible students from 2015.

The VCAA will also investigate new forms of recognition for students who choose to pursue specialist programs of study in areas such as science, the arts and the humanities.

2. Implement the new VCE Extended Investigation study

The VCE Extended Investigation is a new study that has been piloted this year. This is a ground-breaking study that will enable students to pursue deep learning in a specific area.

The VCE Extended Investigation develops students' understanding of what constitutes both a good research question and an ethical, robust, disciplined and rational approach to gathering, interpreting and evaluating evidence in order to answer such questions.

In this study, students consider how research questions are developed and refined to enable the researcher to address the key issues proposed by the research within the limits that time and resources impose. Students conduct a review of relevant literature and develop research project management knowledge and skills and ways of effectively presenting and communicating research findings.

Students are introduced to a broad range of research methods and explore their comparative suitability for the investigation of particular questions.

The skills that students develop in this study are transferable to any higher education course or vocational education and training program.

Students complete a 4000-word essay as part of their study. The study also includes new forms of assessment through an on-line test in critical thinking and an interactive oral examination. These provide both robust authentication measures and ensure the validity and reliability of assessment of student performance in this study.

As the next step in a staged implementation process, the Extended Investigation will be available for students enrolled in schools that meet specified requirements in 2014. This is to ensure that schools and teachers are well prepared to enable students who enrol in this demanding study to meet its unique requirements. This implementation process will continue in subsequent years and will ensure the number of schools that offer this study can be expanded while ensuring appropriate professional development is provided.

3. Encourage the study of Chinese at the senior secondary level

Chinese language is currently offered at three different levels within the Victorian Certificate of Education (VCE): Chinese First Language (CFL), Chinese Second Language (CSL) and Chinese Second Language Advanced (CSLA).

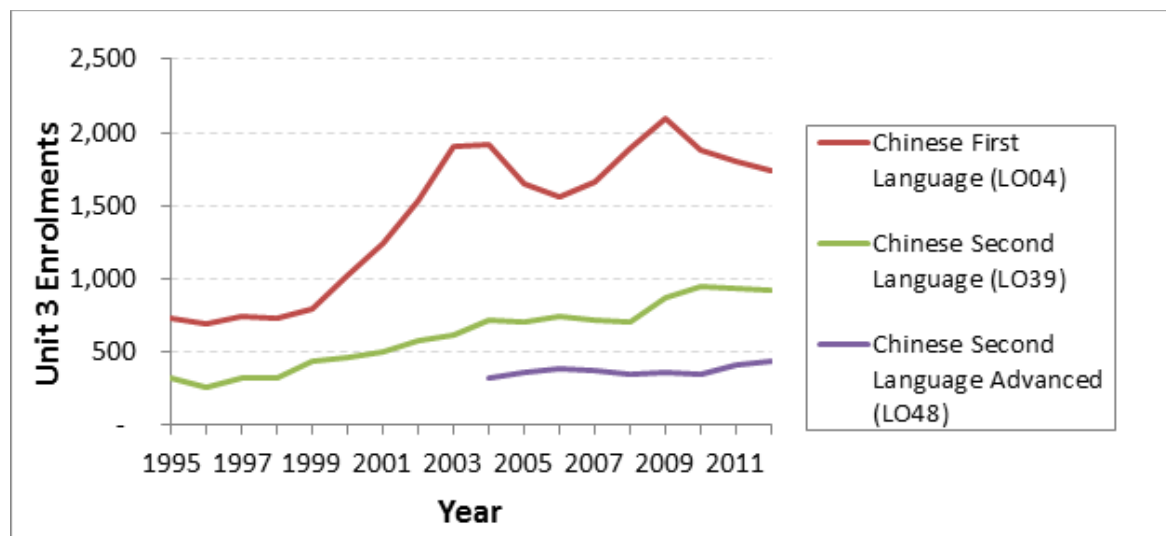
CFL is designed for students who have spent significant time as a resident and/or had significant experience of studying Chinese in a country in which Chinese is a major language of communication and medium of instruction. Students who have a Chinese language background and who are eligible for English as an Additional Language (EAL) are typically enrolled in CFL.

CSL is designed for students who have studied the language for at least 200 hours prior to the commencement of Unit 1. Some students with less formal experience are also able to successfully meet the requirements of the course.

CSLA is designed for students who typically have had more experience of learning Chinese than those undertaking CSL, but not as much exposure to Chinese language as those eligible for CFL.

Each of these levels provides the same level of credit towards the VCE, each can be used to contribute to a student's Australian Tertiary Admissions Rank (ATAR) and each attracts the same current ATAR languages bonus.

The number of students undertaking the study of Chinese Second Language at Year 12 level has increased steadily over the past decade as the graph following illustrates.



There is, however, a common perception that, despite the different levels of Chinese language courses that are available, students who do not have a Chinese language background are currently discouraged from continuing with their study of Chinese language as part of their senior secondary program of study. This, it is argued, is because of concerns they will not be able to compete on an equal level with those who do have a background in Chinese language.

The following initiatives are designed to encourage more non-background speakers of Chinese to include the study of Chinese in their senior secondary program of study.

1. Subject to further discussions with the Victorian Tertiary Admissions Centre, the possible introduction of a bilingual ATAR bonus that will recognise and reward students for having achieved a level of communicative competence in both English and Mandarin.
2. Introduction of a new VCE Chinese study, which will include conversational Chinese and the study of Chinese culture and society. The component of cultural studies in this study would be undertaken and assessed in English.
3. Expansion of the current VET Applied Language (Mandarin) study based on the two current VET Certificates in Chinese language.

Bilingual bonus

This initiative, subject to further discussions with universities and the Victorian Tertiary Admissions Centre, will explore whether a new bonus can be provided where students have undertaken the highest levels of both Chinese and English or elect to undertake a level of Chinese and/or English that is higher than the level for which they are eligible. Under this proposal, students would receive a bilingual bonus where the current bonus applied to a Language will also apply to the result students achieve for their English study.

The intent of this initiative is to provide an incentive for more capable students to enrol in the more difficult levels of Chinese. Many of these students, it is argued, are currently eligible for and therefore enrol in Chinese Second Language (CSL) rather than Chinese Second Language Advanced (CSLA). If these students enrol in CSLA, this will enable more non-background students to achieve the higher range of scores in CSL. More non-background students will then be attracted to enrol in CSL because they will no longer perceive that they are competing with such large numbers of Chinese background students.

A further benefit of this initiative is that students of Chinese-speaking background will be recognised and rewarded for the extra work undertaken to increase their proficiency in both their first language and English. This will recognise that while language background can be an advantage, language proficiency still demands a high level of application and concerted study. Bilingualism will be acknowledged as an important and valued community resource.

New Chinese study

A new VCE study will be developed that focuses on the study of Chinese culture and society and enables students to maintain their study of Chinese language, with an emphasis on conversational Chinese. The elements of this course that focus on culture and society will be taught and assessed in English. The provision of this study supports the broader Victorian government's goal of developing a more 'Asia-literate' population.

This study is intended to attract students who wish to continue their study of Chinese language as part of their senior secondary program but do not feel confident in their ability to meet the demands of the current suite of Chinese language studies.

It is expected this new study will be available from 2016.

Applied Languages

Two nationally recognised VET Chinese language certificates are already available as part of the VCE through Block Credit Recognition: the Certificate III in Mandarin and Certificate III in Applied Language (Mandarin).

These courses are growing in popularity in some schools. Under this initiative, the availability of these courses will be promoted to schools and students and schools will be supported through cluster arrangements to provide access for more students to these courses.

These two VET courses provide an alternative pathway allowing students to undertake a course in Chinese language that has a greater focus on spoken language and a more specific vocational orientation.

Because these courses are unscored they cannot be used as one of the 'best four' studies in the calculation of the ATAR. However, as with other unscored VET studies, they attract block credit and therefore an increment as a fifth or sixth VCE study that does count in the calculation of the ATAR.

As no scores are awarded, there is no need for eligibility criteria and any student may enrol.

The expansion of these courses will encourage more non-background students to include Chinese in their VCE program of study as they will receive an increment for successful completion of the course and will not necessarily be competing with other students for high scores.

Promotion of and support for the applied languages courses will commence in 2014.

4. Introduce new Higher Education VCE scored studies

The VCAA will expand the current Higher Education studies program to include two new studies that will be available as fully scored VCE studies known as Higher Education Scored Studies, or HES Studies. HES Studies will be assessed under VCAA conditions and regulations for school-based assessment and examinations. The VCAA will manage the examination setting and marking process. It is expected that the examination setting and marking panels for the studies will consist largely of higher education academic staff, subject to compliance with VCAA requirements.

The opportunity for students to undertake an advanced level of study as part of their senior secondary program has been part of the VCE for many years. At present, these studies are provided under the Higher Education Studies program offered by higher education institutions. Two types of study, Extension and Advanced Standing, are offered through this program.

An Extension study is a first-year Higher Education study that is:

- equivalent in content and assessment in every respect to one or more of current first-year Higher Education studies and constitutes at least 20 per cent of a full-time first-year university course
- of a level for a high-achieving student and therefore is a clear advance on an identified VCE Unit 3 and 4 study and commensurate in workload with an additional VCE study
- of a level that will normally allow the student, on successful completion, to proceed to second-year study at the Higher Education institution in that discipline.

Normally, students enrolling in Extension studies will have demonstrated high achievement across all studies and have a VCE study score of 40 or more in the preparatory study, where applicable. In some instances, however, students are allowed to enrol in the prerequisite VCE study concurrently with the Higher Education study.

An Advanced Standing study is a first-year Higher Education study that:

- is equivalent in content and assessment in every respect to a first-year subject of an undergraduate degree and constitutes at least 20 per cent of a full-time first-year course
- comprises curriculum not available in any current VCE studies and therefore is not linked to any current VCE Unit 3 and 4 study
- is of a level that will normally allow the student, on successful completion, to proceed to second-year study at the higher education institution in that discipline.

Advanced Standing studies do not necessarily have a prerequisite or co-requisite structure in relation to current VCE studies.

Involvement in the Higher Education Studies program currently offers students access to a range of potential benefits, including academic challenge in a broader range of studies and credit towards an undergraduate qualification at the institution where the study was satisfactorily completed.

To help students include Higher Education Studies within their VCE, universities deliver programs in a variety of ways. They may be delivered on a university campus, through schools or through distance education and tutorials, depending on the institution.

At present, however, while completion of a Higher Education study contributes towards satisfactory completion of the VCE, Higher Education studies are not fully scored VCE studies and therefore students can only gain an increment toward their ATAR for a fifth or sixth study as the contribution from their Higher Education study.

Further, it is often difficult for students who cannot travel regularly to the host institutions to enrol in higher education studies.

Like the current Higher Education Studies program, the new HES Studies will be pitched at the level of the first year of an undergraduate degree. However, host higher-education institutions will be required to ensure that enrolment is available to all students, irrespective of location, through a range of delivery modalities, including the extensive use of digital technologies.

The first new study is provisionally titled Computational Logic, and the second is a cross-disciplinary study in Philosophy, Politics and Economics. They are being developed in partnership with the University of Melbourne and Monash University.

Computational logic has been selected as the focus of one of the new studies because it meets a growing industry need for students who are able to use digital technologies and algorithmic logic to design solutions to a wide range of problems. It goes beyond most current senior secondary IT studies that focus on computer programming, software applications and the use of productivity tools. Computational logic is a growing interdisciplinary field that draws on studies in artificial intelligence, computer science, logic and applied mathematics. It has applications in medicine, engineering, law, language studies and emerging areas of study such as cognitive science.

Philosophy, Politics and Economics has been selected as the second of the new studies because it provides an opportunity for students to engage in a cross-disciplinary study that enables them to make connections between the disciplines of philosophy, politics and economics and to explore some of the challenges facing contemporary societies. The study will focus on the big questions and issues such as political legitimacy, the nature and morality of the free market, the exercise of power, citizens' rights and happiness and global justice in a way that enables students to understand the distinctive approach taken by each discipline to these issues.

It is expected that Computational Logic will be available in 2015 and Philosophy, Politics and Economics in 2016.

The VCAA intends to explore the development of a third HES Study, a new Interdisciplinary Science study, following the review of the current VCE Science studies (see the following section).

5. Review VCE studies in English, Mathematics, Science and History learning areas

Since its inception, the Victorian Certificate of Education (VCE) has become one of the most robust and respected senior secondary education certificates in the world. This is a result of the regular and rigorous review and assessment of the structure, content, standards and integrity of all studies within a three to five year cycle by expert panels of teachers, academics and subject matter specialists. Central to this work has been the regular benchmarking of VCE studies against similar studies in other leading international jurisdictions.

Studies in the learning areas of English, History, Mathematics and Science would, in normal circumstances, have all been reviewed within the last three to five years. This process has been suspended during the development of the Australian Curriculum to avoid duplication with that process and to enable the next VCE study reviews to include consideration of work completed under the auspices of the Australian Curriculum.

Work on the development of the Australian Curriculum has, to date, included the development of 14 senior secondary subjects in the learning areas of English, History, Mathematics and Science. These subjects were endorsed by Ministers for Education in December 2012 as the 'common base for development of state and territory senior secondary courses.' Ministers also agreed that the Australian Curriculum, Assessment and Reporting Authority (ACARA) would 'work with states and territories during 2013 to explore the curriculum content that will be integrated into their respective courses [and] the timelines and processes for this integration'.

As a result of the completion of this process, the regular review process for the VCE studies in the four learning areas of English, History, Mathematics and Science, can now recommence.

Study review panels have been convened for 19 studies in the learning areas of English, History, Mathematics and Science, as well as Geography and Information and Communication Technologies.

In the English learning area, English/EAL, English Language and Literature will be maintained as VCE studies, and a new study, English as an Additional Language Bridging Units, will be introduced at Units 1 and 2. This study will support students who commence senior secondary study with very limited English literacy.

As part of the review of studies within the English learning area, further investigation will be undertaken into the question of whether a more explicit measure of the literacy attainment levels of students should be introduced as part of senior secondary certification.

In the History learning area, two new studies, VCE Ancient History Units 1–4 and Early Modern History Units 1–2, will be developed. The current VCE Twentieth Century History Units 1–2 will be maintained. All other current History Units 1–2 will be discontinued, as will the current VCE Renaissance Italy Units 3–4. The current VCE Australian History Units 3–4 and VCE Revolutions Units 3–4 will be maintained.

In the Mathematics learning area, all current VCE Mathematics studies (VCE Foundation Mathematics, VCE General Mathematics, VCE Further Mathematics, VCE Mathematical Methods and VCE Specialist Mathematics) will be maintained. A new study, VCE Specialist Mathematics Units 1–2 will be developed, based on the current structure of VCE General Mathematics Units 1–2. As part of the review of studies within the Mathematics learning area, further investigation will be undertaken into the question of whether a more explicit measure of the numeracy attainment levels of students should be introduced as part of senior secondary certification.

In the Science learning area, the current VCE Biology, VCE Chemistry, VCE Environmental Science, VCE Physics and VCE Psychology studies will be maintained and reviewed, with VCE Environmental Science renamed as VCE Environmental Sciences.

The review of all these studies will be informed by like studies from international jurisdictions as well as proposed related Australian Curriculum subjects, where applicable.

The reviews will be completed in 2014, with professional development for the new studies provided in 2015 and implementation of the new studies commencing in 2016.