

Years 9-12 Project

Modularisation

Options Paper

February 2020

A paper to discuss areas for consideration in the Years 9 to 12 Curriculum Framework.

This Paper Includes:

[Rationale](#)

[Evidence Base](#)

[Current State](#)

[Definitions](#)

[Questions for Tasmanian Stakeholders](#)

[Options for Tasmania – Module Size](#)

[Appendix A – Modular Combinations for Option 1](#)

[Appendix B – Modular Combinations for Option 2](#)

Rationale

A generic modular structure breaks courses into distinct modules of learning and allows for units/modules of learning to be recognised. This allows for the development of trans-disciplinary investigations and the allocation of micro-credentials for the successful completion of learning or acquisition of skills. There are a number of practical advantages to modularising the curriculum.

These include:

- **Personalised learning** – students have choice and flexibility in designing a learning program that is suited to their needs, interests or aspirations
- **Customisation** – schools and systems are able to modify, adapt or build programs of learning from sub-components and according to individual learning needs, specifications or interests
- **Progressive assessment** – learners can accrue academic credit throughout the school year which can serve as an incentive for those who work well when given short-term goals. Progressive assessment provides a 'safety net' for students who might otherwise complete a full year of study, fail at the end of a course/subject, and have no recognition of skills developed or knowledge acquired throughout the year
- **Micro-credentialing** – modularisation lends itself well to the recognition of learning through micro-credentials, again providing learners with a short-term incentive to stay engaged in learning and complete course/subject modules. Micro-credentials are mini-qualifications that demonstrate skills, knowledge, and/or experience in a given subject area or capability. Micro-credentials can be awarded for a

range of skills and combinations of micro-credentials can be collected to develop an individualised portfolio of achievement

- **Trans-disciplinary projects** – modules from a range of disciplines can be used in combination to design rich tasks with learners engaging in finding solutions to complex and dynamic problems
- **Alignment with the school year** – a modularised approach ensures that the volume of learning aligns with the structure of the teaching and learning calendar e.g. terms or semesters
- **Flexible timetable structures** – patterns of learning can be adapted to suit the needs of learners and schools. Short-term 'boot camps', for example, offer intensive training in a particular skill area. A Copernican timetable allows learners to undertake fewer studies in more depth over a shorter block of time (e.g. a semester or term)
- **Equal weighting of courses/subjects** – a consistent modularised structure across all courses/subjects ensures equivalent weighting of learning outcomes, content, work requirements and assessment processes at each level of complexity
- **Learning in depth** – course/subject units requiring a significant duration of study (e.g. 50 to 60 hours) ensure that concept-based content can be taught in depth. Chunking courses/subjects into concept-based units ensures deep learning, allowing time for effective student inquiry into a course topic
- **National comparability** – interstate jurisdictions develop senior secondary courses using a consistent modularised structure, typically units of 55 to 60 hour duration.

Evidence Base

The Executive Summary of the NSW Curriculum Review, completed by the Australian Council for Education Review (ACER), provides a compelling case for the modularisation of courses in the senior years of schooling. Modularisation is linked to defined achievement standards across attainment levels, with students developing progressively more sophisticated knowledge, skills and understandings as they move through a modularised course.

Consistent with the intention that every advanced course should promote rigorous, high-quality learning, a common structure of progress and attainment is proposed for all courses. This structure would be consistent with the structure in the earlier years of school – that is, a sequence of attainment levels defined for each course. For advanced courses based on existing HSC subjects, the set of attainment levels would replace current achievement ‘bands’.

The significant difference would be that in most, if not all, advanced courses, there would be a syllabus associated with each attainment level. In this sense, each advanced course would be ‘modularised’. It would be structured so that students worked their way through the attainment levels (modules) with teachers assessing and recording the achievement of each level. In some advanced courses, it may be possible for students to choose to complete only some modules, introducing the possibility of recognising the achievement of individual modules in the form of ‘micro-credentials’ based on teachers’ assessments of student achievement.

This proposal is underpinned by a belief that learning in the senior years of school also should be a process through which students develop progressively more sophisticated knowledge, deeper understandings and higher levels of skill over time. Teaching and learning in these years should be structured to promote such progress, rather than being focused on preparing students in these years to answer questions on a final examination. To the extent possible, modules (of which there might be between four and six) in each advanced course should be designed to build on learning in earlier modules. This would encourage reflection on the nature of the progress students are expected to make in an area of learning during the final years of school and also provide a framework for monitoring this progress¹.

The NSW Curriculum Review also identifies the need to simplify content to ensure deep understanding. This key principle supports the necessity to develop consistent course/subject structures that identify essential knowledge, concepts and principles – in large concept-based units.

The Review’s first set of proposals address the content of the curriculum, including concerns that many syllabuses are currently overcrowded. They propose a reduction in the content of most syllabuses by prioritising what is central to each subject. The intention is to promote deep learning of core disciplinary knowledge. Although depth and breadth of learning are both important, the proposed changes preference deeper conceptual understanding over shallower coverage of extensive factual and procedural detail. The intended outcome is not quantitatively less teaching or learning, but teaching and learning refocused to develop deeper understandings and higher levels of skill.

The reduction of syllabus content should begin with the identification of what is essential to a subject – the core knowledge, concepts and principles at the heart of the discipline. These include disciplinary ways of thinking and working and the ‘big ideas’ around which less central detail can be organised and understood. In some subjects there may be relatively few of these. An indicator of the centrality of a concept or principle is likely to be its sustained relevance across the years of school and the fact that students develop deeper understandings of that concept or principle as they revisit it in different contexts.

Deep understanding includes being able to recognise how learning is relevant to, and can be applied in, different contexts. The mere acquisition of knowledge and skills is insufficient; opportunities to transfer and apply learning to new contexts should be an integral part of every subject throughout the years of school. Applications of learning, including to meaningful challenges and problems and through projects that students undertake, also provide opportunities to build students’ skills in knowledge application – such as critical and creative thinking, using technologies, interpreting information/data, collaborating and communicatingⁱⁱ.

A note about Volume of Learning

Volume of learning is a key concept that underpins modularisation. The volume of learning is included as an integral part of the descriptor for each course/unit/module. The volume identifies the notional duration of all activities required for the achievement of the learning outcomes specified. The volume of learning is a dimension of the complexity of a course/subject. It is used with course outcomes, content, work requirements and criteria determine the depth and breadth of the learning outcomes of a course/subject.

Current State

TASC accredited courses include 50, 100 and 150 hour courses attracting credit points of 5, 10 and 15 respectively.

Under the current system a student who successfully undertakes 50 hours of learning in a 100 or 150 hour course but does not complete the course is at risk of not gaining appropriate recognition of the learning they have undertaken or the skills, knowledge, understanding and capabilities they have attained.

Definitions

For the purposes of the next section of the paper:

a **'module'** is considered to be the smallest 'chunk' of learning that can be accredited and recognised and

a **'unit'** is a curriculum construct that may be made up of one or more modules.

Future State - Options for Tasmania

Tasmania's current commitment to 150 hour courses in senior secondary provides a small range of options for modularisation, based on a full-time load definition of 600 hours per student per school year:

- Option 1 - 60:60:30 model
- Option 2 - 50:50:50 model
- Option 3 - Telescopic model

In all cases modularisation would require smaller 'chunks' of learning to be recognised.

The following discusses the relative advantages of these three options.



Questions for Tasmanian Education Stakeholders

The practical advantages of having a modularised curriculum create a compelling argument for this work to proceed. Questions for Tasmanian education stakeholders in progressing this work include:

- How can a modularised approach improve student participation, engagement and achievement?
- How can modularisation support a diverse range of student interests, aspirations and pathways?
- How can a modularised approach support schools to deliver highly targeted programs of study?
- Of the options available for creating a modularised curriculum, which one will best serve the needs of Tasmanian students and educators?
- What are some potential challenges for Tasmania in developing a modularised curriculum?



Option 1 - 60:60:30 model

Courses are divided into two major units (60 hours) and a minor unit (30 hours). Course can be constructed to reflect the balance of theory and practical application appropriate to delivering course outcomes.

See Appendix A for examples



Advantages

- 60 hour units reflect the structure used in the senior secondary Australian Curriculum and used across all other states and territories (55-60 hours). This is useful when designing courses for national comparability
- 60 hour units can be further broken into 30 hour modules, creating up to five content/process modules within a 150 hour course
- 30 hour units can be 'activating units' i.e. practical, coursework or applied units that allow students to demonstrate their understanding through projects suited to the area of study
- 60 hour units align with semesters, mid-year assessments etc.

Disadvantages

- 'Building blocks' are not of a uniform size
- A 30 hour unit may not be sizeable enough to be accredited
- 30 hour units may be perceived as having less of an influence on a student's final award and may be devalued by students and others.

Option 2 - 50:50:50 model

Courses are divided into three equally weighted modules of 50 hours each. These are of a consistent 'building block' size, allowing for the delivery of various combinations of units from available courses.

See Appendix B for examples



Advantages

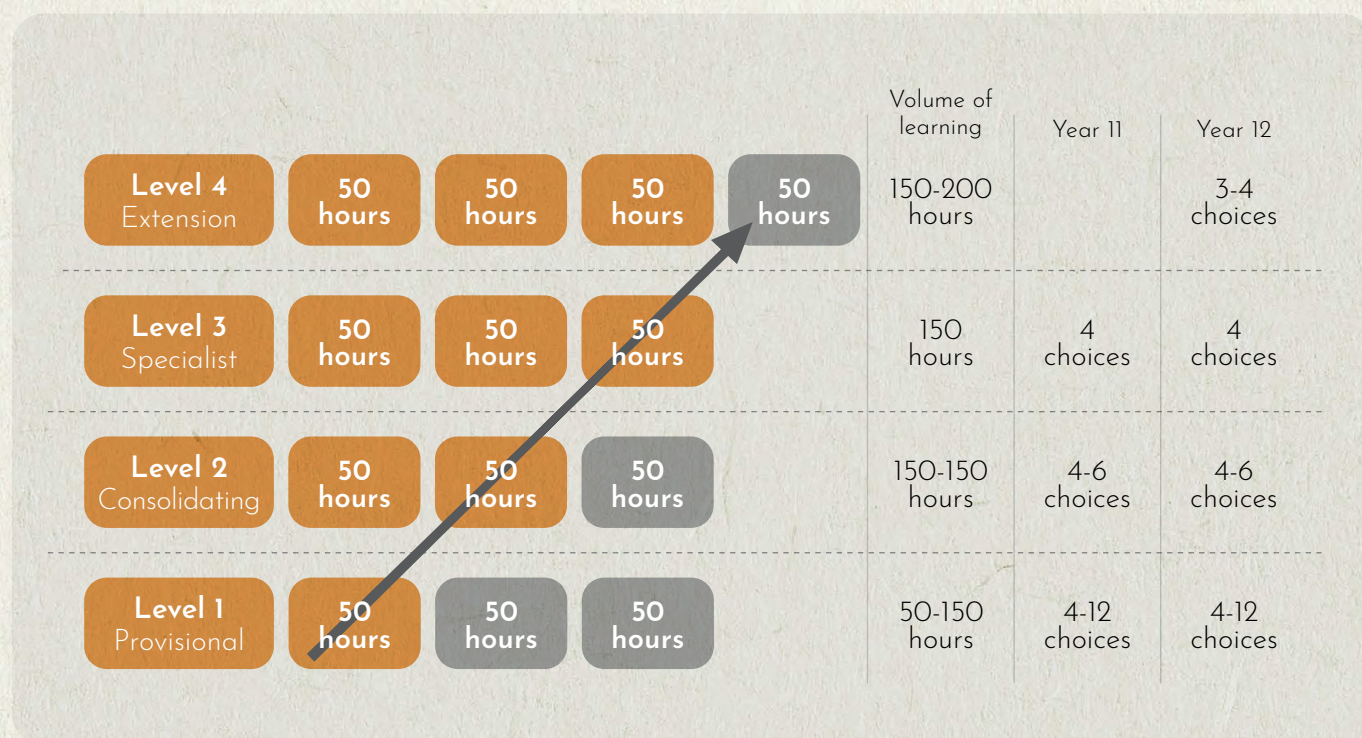
- 50 hour units are close to the structure used in the senior secondary Australian Curriculum and used across all other states and territories (55-60 hours). This is useful when designing courses for national comparability
- 50 hour units offer a consistent 'building block' sized module across all courses, allowing for the construction of trans-disciplinary courses
- 2 x 50 hour units align approximately with subject time allocations for the Years 9 and 10 school year
- 50 hour units align with current TASC systems design and the college school year with courses currently designed around 50, 100 or 150 hours of learning.

Disadvantage

- 50 hours of content per unit is slightly less than interstate courses (55 to 60 hours).

Option 3 - Telescopic model

Core content is condensed into a minimum duration of learning at level e.g. 50 hours at level 1, 100 hours at level 2, 150 hours at level 3 or 4. Once learners have satisfactorily completed core content they can move to the next level of complexity.



Advantages

- Level 1 courses offer a breadth of opportunities for learners i.e. up to 12 modules per year
- Level 1 courses can be offered in program bundles e.g. a core studies bundle (English, Maths, ICT), a health and wellbeing bundle, a technologies bundle, a humanities bundle, an arts bundle, a life skills bundle etc
- The minimum yearly volume of learning for Level 2 courses (i.e. 100 hours) replicates that of Years 9 and 10, allowing for a similar time allocation to the Australian Curriculum (Years 9 and 10)
- Learning in levels 1 and 2 can continue to the end of the school year with learners accruing extra units of study in Term 4
- Learners can either move rapidly between levels or take longer to achieve within a level, particularly at Level 1 and 2
- Levels 3 represents the status quo i.e. 150 hours per course

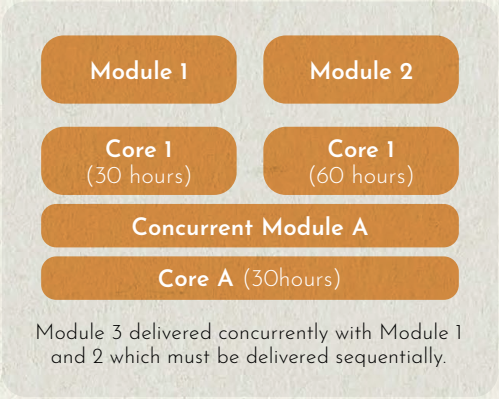
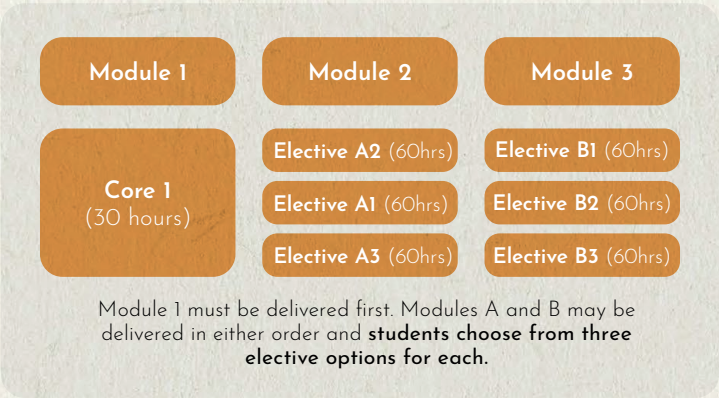
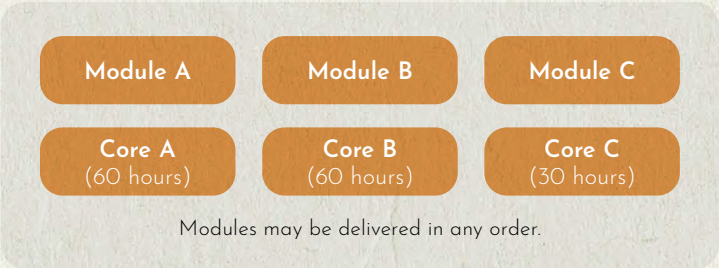
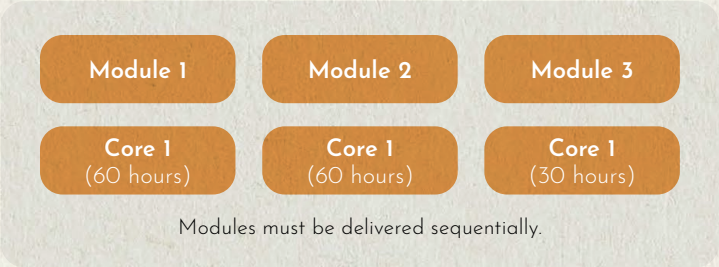
- As with Option 2, 50 hour modules allow for courses to be combined in a multiplicity of ways
- As with Option 2, 50 hour units align with school terms
- Learners are on a growth continuum that reflects task complexity, time undertaken and developing skills, knowledge and understanding
- A block timetable allows for students to accumulate more Level 1 and 2 courses over a four-term year.

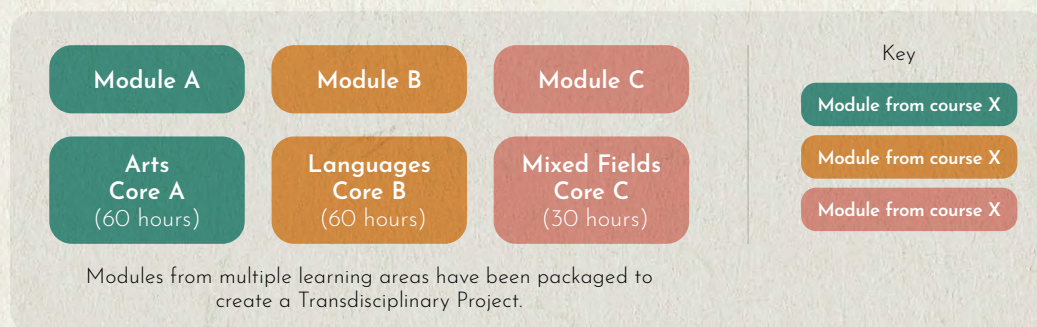
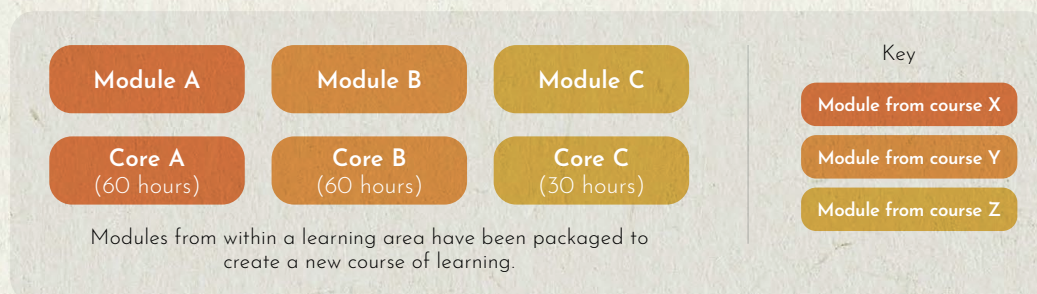
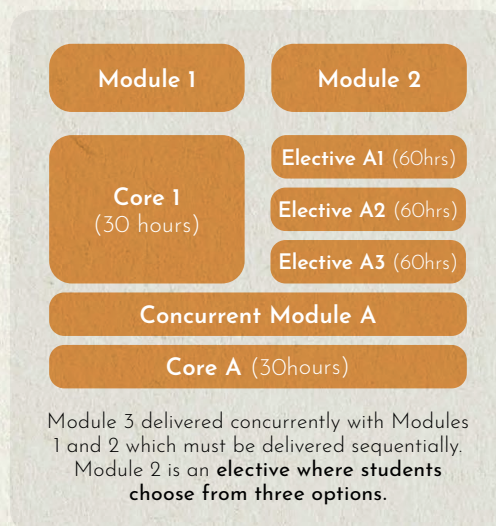
Disadvantage

- Challenging for TASC to have oversight of a student's credit point accrual in levels 1 and 2.

Appendix A: Modular Combinations for Option 1

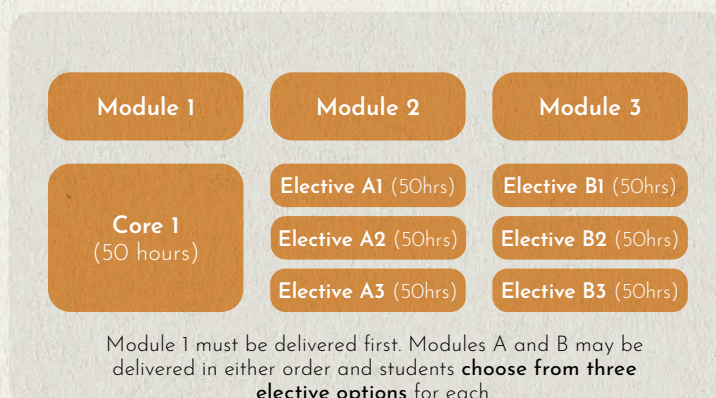
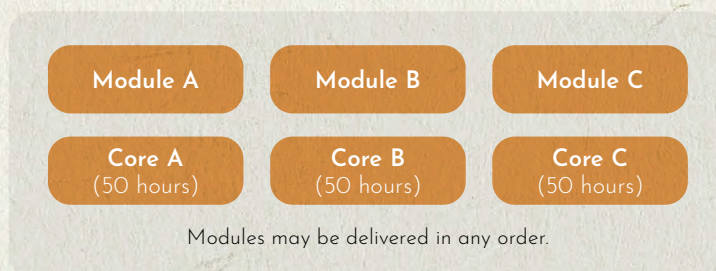
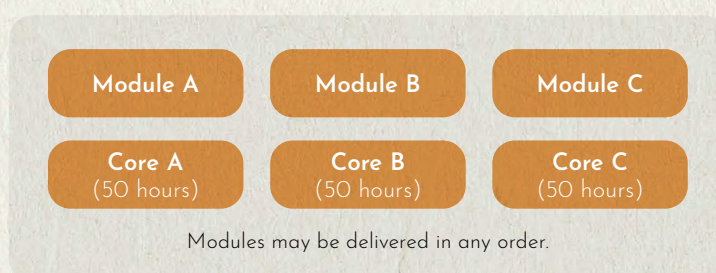
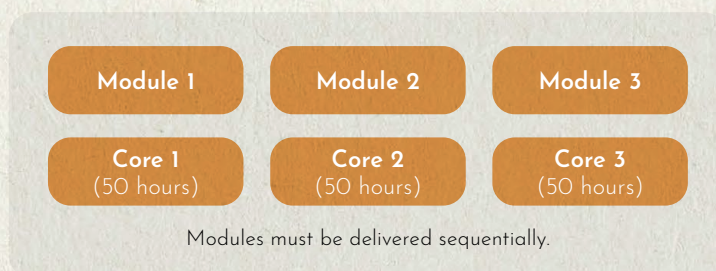
Examples of modularisation in a single 150hr Course using a 60:60:30 Module Structure

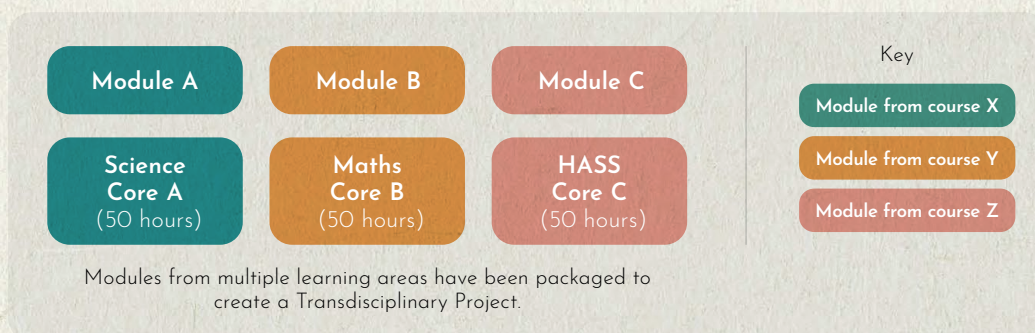
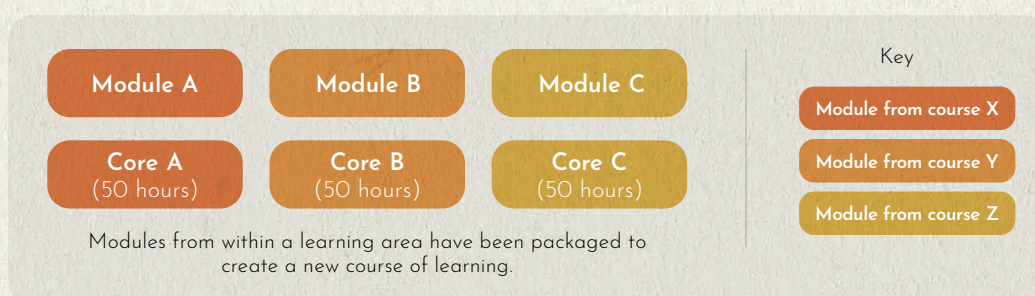
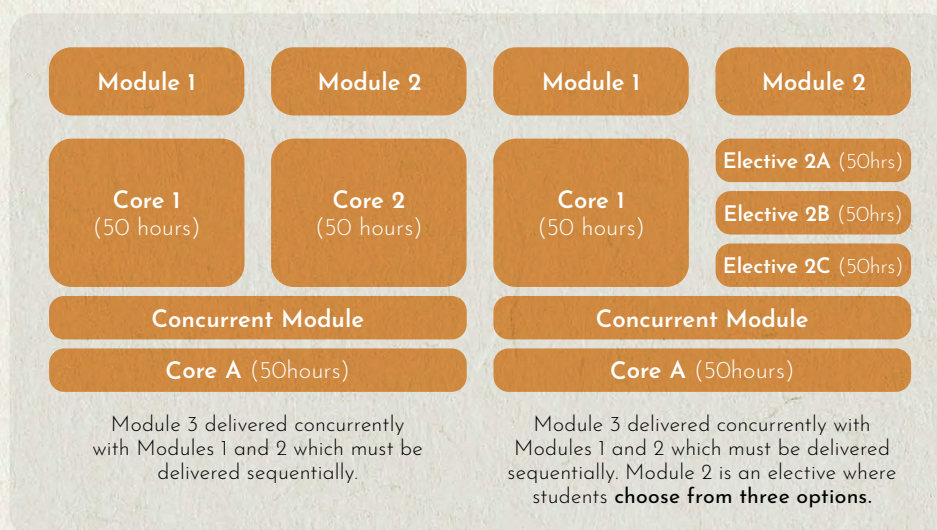
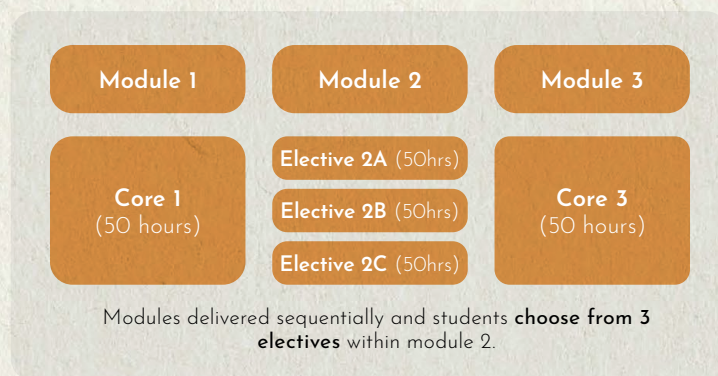




Appendix B: Modular Combinations for Option 2

Examples of modularisation in a single 150hr Course using a 50:50:50 Module Structure





i NSW Curriculum Review, October 2019, p 95
ii NSW Curriculum Review, October 2019, p xi-xii