Te Tāhuhu o te Mātauranga
Ministry of Education

Report: Curriculum – Mandatory and core Phase 5 subjects

To:	Hon Erica Stanford, Minister of Education		
Date:	27 May 2025	Deadline:	4 June 2025
Security Level:	In-Confidence	Priority:	High
From:	Pauline Cleaver Acting Hautū | Deputy Secretary, Te Poutāhū	Phone:	9(2)(a) [redacted]
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Why are we sending this to you?

- This paper builds on advice on curriculum changes that complement proposals for strengthening NCEA [METIS 1342670]. It provides further advice on potential mandatory and core curriculum subject requirements in Years 11 to 13 (Phase 5 of the curriculum).

What action do we need, by when?

- We are seeking your direction on the proposals you wish to proceed with so they can be included as part of consultation on options for changes to NCEA.
- Please return the signed paper by 4 June 2025.

Key facts, issues and questions

- Following further analysis and input from the Coherence Group, alongside engagment with the NCEA PAG, we have updated our advice on mandatory and core curriculum subjects.
- We now recommend constraining mandatory subjects to Year 11 only (English or Te Reo Rangatira and Mathematics & Statistics or Pāngarau). We no longer recommend introducing a category of subjects called 'core subjects' into the curriculum, nor constraining student subject choices in Years 12 and 13.
- 9(2)(f)(iv) [redacted].

Alignment with Government priorities

1. This report helps to progress actions in the delivery plan for the Achievement Target under the 'clearer curriculum' and 'smarter assessment and reporting' priorities.

Background

2. Currently there are no national requirements that specify what students must study in Years 11, 12, and 13, although teaching and learning programmes must be underpinned by the national curriculum. To complement proposals to strengthen NCEA, you are considering setting curriculum requirements in relation to what students can study, via the identification of mandatory and core subjects [METIS 1342670 refers]. 9(2)(f)(iv) [redacted]

3. The table below sets out direction provided to date, and where you are still considering some matters. Further advice on the **bolded** potential curriculum subject requirements is provided in this paper. Your direction is sought on the proposals you wish to proceed with so they can be included as part of consultation on options for changes to NCEA.

Table 1: Summary of advice and decisions to date on curriculum subject and qualification attainment requirements [METIS 1342670 refers]

	Curriculum subject requirements	Qualification attainment requirements
Year 11	• Students must study 2 mandatory curriculum subjects (English and mathematics or Te Reo Rangatira and Pāngarau). **TBC whether English and Te Reo Rangatira requirement would be extended to include 'literacy or te reo matatini-rich' subjects.** • Students also must study 1 other subject from an approved core subject list. **TBC approach to the core subject list.**	• TBC Y9-11 Foundational skills award focussed on literacy and numeracy or te reo matatini and pāngarau (similar to current NCEA Co-requisite).
Year 12 X?	• **TBC Students must study 1 mandatory curriculum subject (English or Te Reo Rangatira). English and Te Reo Rangatira requirement (if proceeded with) could be extended to include 'literacy or te reo matatini-rich' subjects.** • **TBC Students must study 1-2 other subjects from an approved core subject list (depending on mandating decision).**	• TBC Students must attain 1 subject from an approved core subject list. • TBC Students must attain another 2-3 subjects or subject packages[1] (don't have to be on the core list).
Year 13	• No mandatory subjects. • **TBC Students must study 2 subjects from an approved core subject list.**	• TBC Students must attain 1 subject from an approved core subject list. • TBC Students must attain another 2-3 subjects or subject packages (don't have to be on the core list).

[1]The remaining subjects required for attainment can be any subject or approved subject package, including vocational subject packages. 'Subject packages' are based on defined sets of Unit and/or Skills Standards that make up a coherent teaching and learning course of study.

	Curriculum subject requirements	Qualification attainment requirements
Programme design	• Schools and kura must offer the opportunity for all students to take subjects that will lead to University Entrance (UE), including the option to take at least 3 UE subjects in Year 13. • Schools and kura must make sure that each individual student's learning programmes in Years 11-13 will develop a coherent set of skills, knowledge, and experiences that will support a pathway to further (post-school) education and/or employment.	-

General considerations for setting curriculum requirements

4. 9(2)(f)(iv) [redacted]

5. Given curriculum requirements need to work for all students in all settings, we anticipate that any requirements set for students to study certain subjects (or which significantly constrains choices) will need to provide flexibility for schools and kura to meet the identified needs of some students. If meeting requirements would be a significant barrier to engagement and success for an individual student due to their specific circumstances[2], then the curriculum requirements need to provide for a different approach. This should only be done in partnership with the student and/or their family as part of a student's individual education plan where appropriate and agreed to by themselves and their family as being in that student's best interests.

Implementation considerations in kaupapa Māori schooling

6. There is a specific context for the kaupapa Māori schooling sector, and you will want to carefully consider the approach to senior secondary curriculum requirements for these settings. Before adding requirements, we recommended that you work with the kaupapa Māori schooling sector on its own terms. Kaupapa Māori education providers through their representative bodies expect the Crown to engage with them in advance of any decisions affecting their kura. Note there is currently no ability to have different implementation dates

[2] Examples of potential circumstances include: when a student's learning trajectory and what will best support them to a good life post school is significantly different; English language learners who are new to New Zealand and would be better engaging in the English as an Additional Language subject; students who are disengaged (not currently attending or chronically absent) and being supported to transition back to school or kura, or to full time attendance – for these students requiring them to take particular subjects (or to return to particular subjects first) may not be the right thing to do for positive outcomes (this will be individual, for some students the required subjects could well be the ones they are most engaged in or where they have the best learning relationship with a teacher).

for kaupapa Māori schools for these requirements to create more time for those discussions.[3]

7. As part of consultation on proposed changes, the Ministry will run targeted engagements with the two main representative bodies of kaupapa Māori movements: Te Rūnanga Nui o Ngā Kura Kaupapa Māori o Aotearoa and Ngā Kura ā Iwi o Aotearoa. This will provide an opportunity to fully understand their views on proposed requirements and consider their desired approach. Consulting with these representative bodies also reduces the risk of judicial review and/or a claim being brought before the Waitangi Tribunal.

and Kura math specialists like [redacted] has really great

8. 9(2)(f)(iv) [redacted]

International comparison

9. Internationally, the terms core, compulsory, and mandatory are often interchangeable in some of the examined jurisdictions. In nearly all OECD countries, upper secondary[4] curriculum requirements include that students must study the mother-tongue/official language(s) of the nation and mathematics.[5] Annex 1 provides information on selected international upper secondary subject and qualification attainment requirements, breaking it into pre-16 and post-16 where appropriate to give an indication of equivalent requirements to our Year 11 and Year 12/13.[6]

10. Across those looked at, there is more constraint on subject choice in prior to 16 (via curriculum subject requirements) than there is post-16 (mostly qualification attainment requirements). Mostly commonly, requirements pre-16 (Years 9–11) include English, mathematics, and science. Beyond this, there is variation among the jurisdictions with most requiring social studies or humanities, physical education, and languages (mother tongue or foreign). If there are subject requirements post-16, they are more likely to relate to the types of subjects (e.g. requiring a mix of general and applied) or be focussed on students taking a range of subjects (e.g. requiring a subject from each of several areas of learning).

[3] This is because requirements for students to study certain subjects in Phase 5 need to be set using a foundation curriculum policy statement issued under section 90 of the Education and Training Act 2020. Unlike national curriculum statements, different commencement dates cannot be set for foundation curriculum policy statements.

[4] The typical starting age of upper secondary programmes internationally is 15 and it is the equivalent of our Year 11 to 13.

[5] Stronati, C. (2023), "The design of upper secondary education across OECD countries: Managing choice, coherence and specialisation", *OECD Education Working Papers*, No. 288, OECD Publishing, Paris, https://doi.org/10.1787/158101f0-en, page 45.

[6] England, Singapore, British Columbia, New South Wales (NSW), and Queensland (QLD) were the jurisdictions selected based on their recent education reforms and the chance for us to learn from their core subject list and system settings. We have also explored subject and qualification attainment requirements for the International Baccalaureate (Middle Years Programme and Diploma Programme) and Cambridge Assessment International Education (International General Certificate of Secondary Education and Cambridge International AS & A Levels).

Mandatory subject requirements

11. In earlier advice [METIS 1342670 refers] we provided you with the following principles we considered to identify mandatory subjects:

    11.1. **Essential learning**: What skills and knowledge will support all students post-school, regardless of their pathway?

    11.2. **Engagement**: How do we maintain engagement? As we know having a choice helps to keep students engaged.

    11.3. **Capacity**: Would there be capacity to deliver that subject to all students in that year level?

12. Building on your previous decisions set out in Table 1 at the start of this paper, we are now seeking to confirm whether you wish to:

    12.1. at Year 11, enable students to take one of a choice of literacy-rich subjects (rather than requiring either English or Te Reo Rangatira (in addition to requiring maths or pāngarau) – *this was provided as an option in the earlier advice, but you have not yet made a decision*

    12.2. at Year 12, make English and Te Reo Rangatira (and/or potentially other literacy-rich subjects) mandatory – *this was provided as an option in the earlier advice, but you have not yet made a decision*

    12.3. at Year 12, make a maths or pāngarau subject mandatory – *this was not previously provided as an option due to likely capacity constraints but, if you agree with our updated recommendation to not proceed with creating a core subject list (discussed later in the paper), then you may wish to consider this.*

13. To support you consideration of options at Year 12, NZQA have analysed data for the 2024 year to understand current participation rates. This is set out in Annex 2. In summary, it shows that 49.8% of Year 12 NCEA participants were assessed in 14 or more credits in both English and maths or both Te Reo Rangatira and maths in 2024. A higher percentage of participants were assessed in English or Te Reo Rangatira than maths, and the percentages are significantly lower for schools with more socio-economic barriers to achievement than for schools with fewer barriers.

14. This data provides an argument for mandating these subjects at Year 12 to support greater consistency and equity. However, given participation at Year 12 will reflect prior success (and noting current achievement rates for the co-requisites), our advice is that the need for requirements to study English, maths, Te Reo Rangatira and pāngarau at Year 12 would be better considered in the future once the impacts of the new curricula, investment in structured literacy and maths, and mandating of English, Te Reo Rangatira, maths and pāngarau at Year 11 are understood.

15. Options for setting requirements at Year 11 and 12 are provided in Table 2 for your decision.

Table 2: Options for approach to Phase 5 mandatory subjects

Option	How this option works	Summary of analysis
Year 11 — English + maths		
Option A: *English OR Te Reo Rangatira only at Year 11* +maths **Agree / Disagree**	All students would have to take either English or Te Reo Rangatira as a subject in Year 11.	**Recommended** • Supports students to develop essential literacy skills relevant for all pathways through a consistent curriculum.
Option B: *A choice of literacy-rich and te reo matatini-rich subjects[7] at Year 11* **Agree / Disagree**	All students would have to take a literacy or te reo matatini - rich subject, choosing from a nationally set list.[8]	• Provides more choice and therefore may better support student engagement and success in their learning, but there are risks of variability in what is covered due to discipline-specific learning.
Requirements to study maths and pāngarau at Year 11 are already agreed		
Year 12		
Option C: No mandatory subjects at Year 12 (status quo) **Agree / Disagree**	Whether or not students have to study any specific subjects at Year 12 will be at the discretion of schools and kura, who may choose to leave it to student choice.	**Recommended**[9] • Supports student flexibility and recognises that at Year 12 many students are beginning to focus on subjects that align to their future pathways. All students should have foundational skills from their studies through to Year 11 to at least the level credentialed by the Foundational Award.
Option D: An English or Te Reo Rangatira subject is mandatory at Year 12[10] **Agree / Disagree**	All students would have to take either English Language or English Literature or Te Reo Rangatira as a subject in Year 12	• May be perceived as privileging these subjects given that higher level literacy and te reo matatini can also be taught in other subjects, and that those may provide more engaging or relevant contexts for some students.
Option E: A maths or pāngarau subject is mandatory at Year 12 **Agree / Disagree**	All students would have to take either Mathematics OR Statistics OR Applied Mathematics & Statistics OR Further/Advanced Maths in Year 12.	• Maths provides skills that are relevant for a very wide range of future pathways and qualifications, so if you decide to require an English or Te Reo Rangatira subject at Year 12 it would make sense to also require a maths subject. • May create workforce pressures due to constraints in the supply of specialist teachers.

[7] In the context of this paper, te reo matatini-rich refers to subjects that have high levels of pānui (reading), tuhituhi (writing), and reo ā-waha (speaking) competencies required in TMoA.
[8] The list would be based on an assessment of the Phase 5 subjects' content to make sure the design includes an explicit focus on reading and writing or pānui, tuhituhi, and reo ā-waha (speaking).
[9] Previously we had recommended requiring English and Te Reo Rangatira at Year 12. We have amended our recommendation based on further analysis and input from the Coherence Group.
[10] Given our recommended approach at Year 11 we have not separately analysed a literacy and te reo matatini rich approach at Year 12.

Potential approaches to creating a core subject list

16. As set out in earlier advice [METIS 1342670 refers], the intent is that core subjects would be those that provide students **more general, transferable learning**. Setting requirements in relation to a core subjects list could help strengthen the "common core" you selected as a feature of changes to NCEA [METIS refers 1341831] beyond what is provided by any mandatory subjects set at Year 12 and the foundational skills award, while still allowing flexibility for students to tailor their individual learning programmes (including integrating industry-based learning). However, it would place limits on students' ability to make choices about their subjects and focus on those most relevant to their interest and future pathways.

17. Further analysis has now been undertaken with input from the Coherence Group. We have also engaged with the NCEA Professional Advisory Group (PAG). As a result of this further work, we no longer recommend introducing a category of subjects called 'core subjects' into the curriculum. 9(2)(f)(iv) [redacted]

18. In discussions with the Coherence Group, they advised that using 'general, transferable learning' as a criterion was unlikely to be a workable approach if the desire was to create a short list. This is because they consider that general and transferable learning will be a feature of most curricula subjects (particularly those which replace the existing curricula-aligned NCEA Achievement Standards subjects).[11] They also observed that 'general and transferable' was similar to aspects of the existing UE criteria[12] and that almost all current curricula-aligned Level 3 achievement standard subjects are UE-approved.

19. This view is reinforced by Tertiary Education Commission (TEC) information on the connection between subjects and pathways that we looked at when developing options. In addition, in the context of university pathways, research on the impact of secondary school subject choice on university level study outcomes suggests that core skills can be gained in many ways. Higher performance at university is more closely related to how well students performed at school, rather than to the particular subjects they studied at school.[13]

20. The Coherence Group also sought stronger justification of the need for a core subjects list, particularly if it was to go beyond maths and English subjects. There was a preference for flexible specialisation so students could choose subjects that were most relevant to their intended pathway, with advice from their school or kura. They noted that:

[11] Subjects that appear by their name to be quite focussed on specific areas are still incorporating general and transferable knowledge and skills that are relevant to a wide range of pathways.

[12] Decision-making criteria includes that a subject will equip students with the skills and knowledge that would contribute substantially to their general ability to undertake a programme of degree-level study.

[13] *Are particular school subjects associated with better performance at university?* Ministry of Education. July 2010. https://www.educationcounts.govt.nz/publications/80898/79296. The general finding was that higher performance at university is more closely related to how well students performed at school, rather than to the particular subjects they studied at school. There are some skills and knowledge that do appear to be important to performance at university in specific areas of study, which highlights the importance of good advice on subject choices to support intended pathways. Mathematics at school is associated with better performance in mathematical science, chemistry with chemical science, English with studies in law. The strongest effect was for accounting students taking courses in accountancy.

20.1. the curricula through to Year 10 is being significantly strengthened, and this means that most students will be entering senior secondary with a strong core of foundational knowledge across the learning areas and wāhanga ako

20.2. the shift to having a knowledge-rich curriculum for each Phase 5 subject and the changes proposed to NCEA will help address some of the current problems with some students' programmes being incoherent and/or limiting pathways too soon, noting that you have also agreed to set requirements for schools and kura to make sure that each student's learning programme will develop a coherent set of skills, knowledge, and experiences that supports a pathway to further (post-school) education and/or employment

20.3. the rationale for constraining choice diminishes as students' progress through senior secondary schooling, and that advice on good subject choices for each student is best provided schools and kura rather than through national level requirements.

21. PAG members did not engage as strongly in the approach to core subjects or express strong views, other than being concerned about what would be on the list (which they expected to be short) in order to understand impacts for their students.

22. Informed by the Coherence Group input and further analysis, we have developed several options for how the setting of core subjects could be approached – these are set out in Table 3 on the next page for your decision.

23. Those options which create a small list of subjects carry teacher availability risks, particularly in kaupapa Māori and Māori medium settings. This means some students may not to be able to access all the choices on the list at their school or kura.[14] Note also that most schools and kura generate their timetables to minimise clashes in student's intended subjects while also taking into account teacher expertise and availability. Requiring all students to choose from a short list of subjects may lead to timetabling challenges that further constrain each student's choice. In addition, requiring students to take a particular subject over one they consider more relevant to their future pathway could impact on engagement and motivation to do well. It could also be perceived as working against their future success, rather than supporting it.

Next steps

24. Requirements for secondary school teaching and learning programmes will be set using a foundation curriculum policy statement, which you can issue under section 90 of the Education and Training Act 2020. Proposals to set requirements would be consulted on as part of the package of NCEA changes, and then the draft statements which set the requirements would be consulted on as part of the process for the Phase 5 subject curricula.

25. 9(2)(f)(iv) [redacted]

[14] We explored whether all schools and kura should be required to offer all subjects on the core list, i.e. that it could also act as a list of the minimum range of subjects all students should be able to access regardless of which school or kura they were attending. While this would vary depending on the core list subjects, it was felt it would be highly unlikely to be practicable for all schools and kura to offer the whole core subject list. If you wished for core subjects to be available to all students, further work would be required on how to support access from any school and kura (e.g. via Te Kura or other online provision).

Table 3: Options for approach to creating a core list of Phase 5 curriculum subjects

Option	How this would work	Summary of analysis
Option A: Status quo – no core subjects **Agree / Disagree**	Requirements for students to study anything beyond the mandatory subjects would be at the discretion of schools and kura, who may choose to leave it to student choice.	**Recommended[15]** Supports student flexibility and specialisation towards their own interests and future pathways. Recognises that through other changes that are being made, future students will be well equipped with a core of general knowledge and skills by the time they reach senior secondary.
Option B: Define core subjects as English, Mathematics & Statistics and Science, Te Reo Rangatira, Pāngarau and Pūtaiao **Agree / Disagree**	At Year 11, mandatory subject requirements would be extended to include Science or Pūtaiao. At Years 12 and 13, students would need to pick two subjects derived from the English, Mathematics & Statistics and Science, Te Reo Rangatira, Pāngarau and Pūtaiao learning areas and wāhanga ako. Annex 3 provides an indicative list.	Reflects advice generally given to students who aren't sure about what they want to do but may be perceived as a values-based judgement given other subjects also provide learning relevant to a wider range of pathways.[16]
Option C: Keep pathways open by requiring students to take two subjects from a list of core subjects that data indicates support access to a wide range of pathways **Agree / Disagree**	A data-driven approach would be used to identify the number of pathways (employment and/or further study) that subjects are associated with. A 'number of pathways' threshold would be set to determine a small list of subjects that students would have to choose from. Annex 4 gives an indication of potential lists at different thresholds.	A small list is likely to be perceived as valuing some types of knowledge more than others. This risk is mitigated by the data-driven approach, noting the list would need to be reviewed and updated periodically to reflect the latest data.
Option D: Support well-rounded development of core skills and knowledge and avoid over-specialisation by requiring a humanities subject and a STEM subject **Agree / Disagree**	There would be two lists of subjects that together provide a 'core'. One list would be humanities subjects (like English, Te Reo Rangatira and Social Sciences), and one would be STEM subjects (Science, Technology, Pūtaiao, Hangarau). Students would be required to study one subject from each list.	Supports well-rounded development, which is a feature of some of the requirements in international examples examined. Recognises that while all subjects provide general and transferable learning, that there are differences and there is value in maintaining exposure to different types of knowledge.

[15] Previously we had recommended requiring core subjects at Years 11 to 13. We have amended our recommendation based on further analysis and input from the Coherence Group.

[16] There is a stronger case for English and maths being relevant to a very wide range of pathways than for science. The TEC dataset which underpins the indicative lists for Option D links English and Mathematics & Statistics with over 300 qualifications. This drops to 128 for Biology, 87 for Chemistry and 76 for Physics. At 72 linked qualifications, Physical Education is associated with a similar number of qualifications to Physics. Agriculture & Horticulture and Earth & Space Science are much lower and there is a wide range of subjects associated with a higher number of qualifications than those particular science subjects.

Annexes

The following are annexed to this paper:

Annex 1: International comparison of core subject lists and qualification attainment requirements

Annex 2: Year 12 participants in 2024 who have been assessed in 14+ credits in English, Te Reo Rangatira, mathematics and pāngarau

Annex 3: Example core subject list if core subjects defined as those derived from English, Maths and Science, Te Reo Rangatira, Pāngarau and Pūtaiao (option B)

Annex 4: Example core subject list if core subjects identified through a data-driven 'supports access to a wide range of pathways' approach (option C)

Recommended Actions

The Ministry of Education recommends you:

a. **indicate** on *Table 2* which option(s) you want to progress in relation to setting *mandatory* curriculum subjects

wish to review Y12 core subjects @ future time

Agree / Disagree

b. **indicate** on *Table 3* which option you want to progress in relation to the approach to creating a *core list* of Phase 5 curriculum subjects

Agree / Disagree

Proactive Release:

c. **agree** that the Ministry of Education release this paper once Cabinet decisions are made on NCEA changes due to the interconnected nature of the advice, with any information needing to be withheld done so in line with the provisions of the Official Information Act 1982.

Agree / Disagree

Pauline Cleaver
Acting Hautū | Deputy Secretary
Te Poutāhū

27/05/2025

Hon Erica Stanford
Minister of Education

30/5/25

Julia – we need urgent decisions on Maths @ Y12/13 + need to consult with Maths associations.

Annex 1: International comparison of core subject lists and qualification attainment requirements

International qualification or jurisdiction	Pre-16 education core subjects or qualification attainment requirements	Post-16 education core subjects or qualification attainment requirements
International Baccalaureate (IB)	**Middle Years Programme (MYP) – NZ Years 7-11** The IB MYP requires at least 50 hours of teaching time for each subject group in each year of the programme. The 8 subject groups include: • language acquisition • language and literature • individuals and society • sciences • mathematics • arts • physical and health education • design.[17]	**Diploma Programme (DP) – NZ Years 12-13** The IB DP is presented as 6 academic areas enclosing a central core. Students study 2 modern languages (or a modern and classical language), a humanities or social science subject, an experimental science, mathematics, and one of the creative arts. Students may opt to study an additional sciences, individuals and societies, or languages subject, instead of a subject in the arts. Normally, 3 subjects (and not more than 4) are taken at higher level (HL), and the others are taken at standard level (SL). The IB recommends 240 teaching hours for HL subjects and 150 hours for SL. Subjects at HL are studied in greater depth and breadth than at SL.[18]
Cambridge Assessment International Education	**International General Certificate of Secondary Education (IGCSE) – NZ Years 10-11** Cambridge IGCSE offers a flexible curriculum, with a choice of over 70 subjects in any combination. There are no compulsory subjects and students are free to study a range of subjects.[19] The Cambridge IGCSE Curriculum Areas include: • Languages • Mathematics • Science • Humanities • Creative, Technical and Vocational.	**Cambridge International AS & A Levels – NZ Years 12-13** A wide choice of over 50 subjects is available and schools have the freedom to offer them in almost any combination. There are no compulsory subjects and students are free to specialise or study a range of subjects. Students typically study 4 subjects at AS Level and 3 subjects at A Level. The standard admission requirement for UK universities is 3 A Levels. The Cambridge International AS and A Level subject groups include: • English • Mathematics • Science • Languages • Humanities • Technology • Social Studies • The Arts • General Studies.[20]
England	**GCSE (NZ Year 10-11)** The core subjects all students must take for their GCSE are Maths, English, and Science. In addition to English language, English literature is also compulsory in the majority of schools. Some schools also require students to take a modern foreign language. Although, choices for the remaining subject differ across schools.[21]	**A-Levels and T-Levels** There are no core subjects in A-Levels or T-Levels, however T-Levels have a core component relevant to the industry. Students are also required to work towards the attainment of maths and English if they have not already achieved grade 4 at GCSE. However, T Level students are no longer required to achieve either a grade 4 in English and maths GCSE or level 2 in functional skills to pass their programme.[22] **Advanced British Standard (ABS)** The proposed Advanced British Standard of the previous government which is no longer going ahead proposed that technical and academic education be placed on an equal footing, with every student also studying some form of maths and English to age 18.[23]
Singapore	**Pre-16 (secondary school)** Compulsory subjects at upper secondary are: English Language, Mother Tongue Languages, Humanities[24], Mathematics, and Science[25]. Subject levels have their own syllabi to cater to the different needs, interests, and abilities of students (e.g., G1-G3 Maths and G2-G3 Additional Maths).	**Post secondary school** This depends on the students' post-secondary pathway (e.g. Junior College, Polytechnic, or Institute of Technical Education). Most junior colleges (JC) and Millennia Institute (MI) offer the A-Level curriculum.[26] There are 2 JC that offer the International Baccalaureate (IB) diploma programme. For the A-Level curriculum, no core subjects were found but There is a norm subject combination. The norm combination of subjects includes 3 H2 subjects and 1 H1 subject[27] (with at least 1 H1 or H2 subject from a contrasting discipline), H1 Mother Tongue Language, H1 General Paper, and Project Work.[28]

[17] MYP curriculum - International Baccalaureate®
[18] Studying a classical language - International Baccalaureate®
[19] 321030-cambridge-igcse-guide-for-universities-factsheet-a.pdf
[20] 502996-as-a-level-factsheet-english.pdf
[21] GCSE options 2024: What GCSE options are there? - BBC Bitesize
[22] Introduction of T Levels - GOV.UK
[23] The Advanced British Standard - House of Commons Library (parliament.uk)
[24] The Lower Secondary G1 Humanities comprises Social Studies and three Humanities Exposure Modules (HEMs) in Geography, History and Literature in English. 2024-lower-secondary-g1-humanities-syllabus-social-studies-and-humanities-exposure-modules.pdf
[25] The lower secondary G2-G3 Science syllabus can be found online. 2021-g2g3-lower-secondary-science-syllabus-updated-apr-2024.pdf
[26] A-Level curriculum and subject syllabuses | MOE
[27] To provide flexibility for students to offer subjects at different levels of depth and breadth, junior colleges and Millennia Institute offer a variety of subjects at Higher 1 (H1), Higher 2 (H2) and Higher 3 (H3), and different subject combinations for the Pre-U Course.
[28] important-notes-on-subjects-offered-for-pre-u-course.pdf

International qualification or jurisdiction	**Pre-16** education core subjects or qualification attainment requirements	**Post-16** education core subjects or qualification attainment requirements

British Columbia	B.C. graduates[29] must successfully complete the provincial graduation requirements.
	Minimum of 80 credits to graduate[30]:
	• At least 16 credits must be at Grade 12 level, including a required Language Arts 12 and Career Life Connections
	• At least 28 credits must be elective course credits
	• 52 credits from the following:
	  o Career-Life Education (4 credits), and Career-Life Connections (4 credits)
	  o Physical and Health Education 10 (4 credits)
	  o Science 10 (4 credits), and a Science 11 or 12 (4 credits)
	  o Social Studies 10 (4 credits), and a Social Studies 11 or 12 (4 credits)
	  o A Math 10 (4 credits), and a Math 11 or 12 (4 credits)
	  o A Language Arts 10, 11 and a required 12 (12 credits total)
	  o An Arts Education 10, 11, or 12 and/or an Applied Design, Skills, and Technologies 10, 11, or 12 (4 credits total)
	• Indigenous-focused (4 credits)
	In addition, students must complete three provincial graduation assessments in numeracy and literacy. However, these results do not impact on ability to graduate.[31]	

NSW	NSW Higher School Certificate Students must complete at least 12 units of preliminary courses and 10 units of HSC courses, including English, to receive the HSC.[32] To meet HSC requirements, you must complete the following patterns of study: • preliminary pattern – must include at least 12 units • HSC pattern – must include at least 10 units. Both patterns of study must include at least: • 6 units of Board Developed Courses • 2 units of a Board Developed Course in English • 3 courses with 2 or more units, either Board Developed or Board Endorsed Courses • 4 subjects.[33] There is a compulsory English requirement for the HSC, and there are 4 options to fulfil this: • English Studies • English Standard English Advanced • English as an Additional Language or Dialect (EAL/D).	
QLD	There are no core subjects, but there are 8 core learning areas of the Australia Curriculum as they provide a strong foundation for every learning experience. In Queensland, the 8 cores are English, mathematics, science, humanities and social sciences, health and physical education, technologies, the arts and languages. At least 12 credits must come from completed Core courses of study. This includes a wide range of courses of study approved to be in the qualification e.g. traditionally academic or vocational courses of study that are required to deliver 200–300 hours of learning.[34] Contributing studies must meet the set standard to contribute credit to the QCE. The set standard depends on the type of learning and may include satisfactory completion, a final result of C or above, or a pass or qualification completion. Partially completed Core courses may accrue credit however do not contribute to *completed* Core credits. To receive a QCE, students must achieve the set amount of learning, at the set standard, in a set pattern, while meeting literacy and numeracy requirements.[35] 20 credits from learning options, including: • QCAA subjects or courses • Vocational education and training (VET) qualifications • Non-Queensland studies • Recognised studies. 12 credits from completed Core courses of study, and 8 credits from any combination of core courses of study, preparatory courses of study (max 4) or complementary courses of study (max 8).[36] Course and QCE credits per course: • QCAA General subjects and Applied subjects (up to 4 QCE credits per course) • QCAA General Extension subjects (up to 2 credits) • QCAA General Senior External Examination subjects (4 credits) • Certificate II qualifications (up to 4 credits) • Certificate III and IV qualifications (includes traineeships) (up to 8 credits) • School-based apprenticeships (up to 6 credits) • Recognised studies categorised as Core (as recognised by QCAA).	

[29] Secondary schools in most school districts enrol students in Grades 8 to 12, or in Grades 9 to 12 (ages 13-17). Most students finish secondary school by age 18.
[30] The credit requirements design shows that British Columbia students receive a broad education and don't specialise too soon.
[31] Certificates of Graduation - Province of British Columbia
[32] About the HSC | NSW Government
[33] Choosing HSC subjects | NSW Government
[34] 2.1 Eligibility for a QCE | Queensland Curriculum and Assessment Authority
[35] QCE eligibility and requirements | Queensland Curriculum and Assessment Authority (qcaa.qld.edu.au)
[36] Queensland Certificate of Education (QCE) | Education and training | Queensland Government (www.qld.gov.au)

Annex 2: Year 12 participants in 2024 who have been assessed in 14+ credits in English, Te Reo Rangatira, maths and pāngarau

In 2024, there were 63,435 students enrolled in Year 12, and 53,546 were participating in NCEA Level 2 (i.e. were entered for 60 or more Level 2 credits). Of those 53,546, 26,657 were assessed in 14 or more credits in credits in English and maths or Te Reo Rangatira and maths. No students were assessed in 14 or more Pāngarau credits at Level 2.

	Individual Subjects				Combinations	
Socio-Economic Barriers to Achievement (School EQI Group)	English	Mathematics - Statistics	Te Reo Rangatira	Pāngarau	English & Mathematics - Statistics	Te Reo Rangatira & Mathematics - Statistics
Total	**68.1%**	**58.2%**	**0.5%**	**0.0%**	**49.6%**	**0.2%**
Fewer barriers	82.2%	73.8%	0.3%	0.0%	65.9%	0.1%
Moderate barriers	65.8%	55.6%	0.2%	0.0%	46.4%	0.1%
More barriers	44.6%	31.9%	1.9%	0.0%	22.7%	0.4%
Unassigned	85.0%	79.4%	0.1%	0.0%	75.1%	0.1%

Annex 3: Example core subject list if core subjects defined as those derived from English, Maths and Science, Te Reo Rangatira, Pāngarau and Pūtaiao (option B)

These are indicative lists only, based on those Year 12 and 13 subjects which strongly align to these learning areas and wāhanga ako, plus some connected language learning subjects. Once the subject curricula content is drafted, further work would be done to consider whether there are any other subjects which should be added to the list because they significantly draw on those learning areas and wāhanga ako (alongside other learning areas and wāhanga ako).[37] This could double the size of the core subject list, increasing its flexibility in enabling student choice but potentially heightening concerns that the list reflects values-based judgements about relative worth and raising questions about the grounds on which those judgements have been made.

- English Literature (NZC-derived)
- English Language (NZC-derived)
- Te Reo Rangatira (TMoA-derived)
- English as an Additional Language (NZC-derived)
- Te Reo Pākehā (TMoA-derived)
- Te Reo Māori (NZC-derived)
- New Zealand Sign Language (designed for both pathways)[38]
- Applied Mathematics & Statistics (designed for both pathways)
- Mathematics (designed for both pathways)
- Statistics (designed for both pathways)
- Agriculture & Horticulture Science (designed for both pathways)
- Biology (designed for both pathways)
- Chemistry (designed for both pathways)
- Earth & Space Science (designed for both pathways)
- Physics (designed for both pathways)
- Tātai Arorangi (Māori traditional system of astronomy) (TMoA-derived)

[37] Examples of such subjects include Health & Nutrition, Health Studies, Physical Education, Accounting, Agribusiness, Business Studies, Commerce, Economics, Geography, Matawhenua (environment & society), Media Studies, Psychology, Computer Science, Digital Solutions, Electronics & Mechatronics, Hangarau and Drama.
[38] This is indicatively included given it is an official language.

Annex 4: Example core subject list if core subjects identified through a data-driven 'supports access to a wide range of pathways' approach (option C)

These examples are indicative only to give a sense of what this option could look like. There are significant limitations due to the nature of the methodology[39] and intended purpose of the dataset used. It was designed to inform future qualifications guidance on the Tertiary Education Commission (TEC) Tahatū Career Navigator website, not for the purpose of identifying the range of pathways a subject could lead to. Analysis looked at qualifications that have been completed by a set of learners and what NCEA subjects were most associated with these learners. Subjects analysed do not all directly align with the planned Phase 5 subjects.

If you wish to proceed with this option, further work will be undertaken to determine the most appropriate methodology for identifying core subjects that lead to a wide range of pathways, in the context of producing a list that would constrain students' subject choices.[40] The approach will need to provide parity of esteem for TMoA derived subjects.

Setting a threshold of a subject being associated with **forty or more qualifications** in this dataset would indicatively create a list of:

- English
- Mathematics and statistics
- Biology
- Chemistry
- Physics
- Physical education
- History
- Visual arts

If the threshold was lowered to **twenty or more qualifications** in this dataset, it would indicatively add the following subjects to the above list:

- Health
- Geography
- Digital technologies
- Drama
- Home economics
- Design and visual communication
- Media studies
- Business studies
- Classical studies

At 18 linked qualifications, Economics just misses out on making this threshold and is followed by Agriculture & Horticulture at 16.

[39] This model links TEC qualification completions data and NZQA data on NCEA achievement standards aligned to the NZC. The modelling looks at what subject area is most unique to that group of learners with the same qualification. If there are less than five subjects that have a strong enough association for any qualification, the model then looks at the same group of people and counts the number of credits in each subject and adds in the necessary number so there are five recommendations. The results are curated by people to try and remove spurious correlations.

[40] Note that available datasets will still be based on the existing subjects, so some assumptions will need to be made where there have been changes or new subjects added. The methodology is likely to need to assume that pathways from subjects to occupations and qualifications are linear when the general and transferable skills attained in subjects can be indirectly valuable for multiple pathways even if analysis of data does not make a direct lin. This means there are risks that this approach will underestimate the transferability of specific subjects.