

Executive Summary

A review of Mathematics as a requirement of the ACT Senior Secondary Certificate

The ACT Senior Secondary Certificate (SSC) marks a pivotal moment in a student's life, signifying the culmination of secondary education and paving the way for future endeavours. While the current system offers flexibility and choice, for the consideration of stakeholders, this discussion paper argues that requiring a course in mathematics for the ACT SSC is essential to ensure equity, enhance educational outcomes, and better prepare students for a rapidly changing world.

The ACT is the only Australian jurisdiction without a mandated numeracy or mathematics requirement for its senior secondary certificate. Although most students choose to enrol in mathematics, this indicates a lack of alignment with similar equivalent Australian Senior Secondary Certificates.

While 90-95% of ACT students currently enrol in mathematics, this voluntary participation may mask underlying issues of equity and access. The flexibility of the current system, while advantageous in many ways, may also inadvertently perpetuate social inequalities. Subject choices hold significant weight in shaping future trajectories, influencing access to tertiary education, career prospects, and an informed readiness to participate in society. Without a foundational understanding of mathematics, students may find themselves limited in their options, unable to pursue certain fields or fully participate in an increasingly data-driven society.

Furthermore, the overall integrity of the ACT SSC can be strengthened by the inclusion of a mathematics requirement. Senior secondary certificates should guarantee a baseline level of knowledge and skills essential for navigating the complexities of modern life. Mathematics, with its emphasis on logical reasoning, problem-solving, and critical thinking, is fundamental to this core competency. It equips students with the tools to interpret data, make informed decisions, and adapt to evolving circumstances.

Mandating mathematics aligns with the broader goals of education outlined in the Alice Springs (Mparntwe) Education Declaration. This declaration emphasises the development of successful lifelong learners and active, informed citizens. Mathematical literacy is crucial for both, enabling individuals to engage critically with information, analyse data, and participate meaningfully in societal discourse.

Moreover, requiring mathematics strengthens the alignment between the ACT SSC and the Australian Qualifications Framework (AQF). The AQF emphasises diverse learning pathways and the development of literacy skills, including numeracy, for effective civic participation. By incorporating mathematics, the ACT SSC would more accurately reflect these national standards and ACT policy statements such as the Future of ACT Education: An ACT education strategy for the next ten years (2018).

The BSSS provides ACT senior secondary students with a range of possibilities for individualisation within the mathematics learning area. Courses written under the BSSS Mathematics Framework include *Specialist Mathematics*, *Specialist Methods*, *Mathematical Methods*, *Mathematical Applications*, *Essential Mathematics* and *Bridging Numeracy*.

Concerns about restricting student choice are understandable. However, it is important to recognise that true choice stems from opportunity, not simply the absence of requirements. Ensuring all students possess a foundational understanding of mathematics expands their opportunities, rather than limiting them. It opens doors to a wider range of educational and career pathways, fosters personal development, and promotes lifelong learning.

The discussion paper proposes that requiring all ACT senior secondary students to undertake a course in mathematics for the ACT SSC is an appropriate step to ensure equity, enhance the quality and integrity of the certificate, and better prepare students for the challenges and opportunities of the 21st century. By providing all students with this essential foundation, we empower them to become informed, enabled, and adaptable participants in and contributors to society.

The proposed recommendation is provided in order to initiate discussion on a model of a Senior Secondary Certificate that requires Mathematics. All stakeholders are invited to consider the issues raised in this discussion paper and participate in the public consultation events.

