Tranche 1 – Phase 4 – Draft Course

General Mathematics Level 3

Total Responses = 10

Organisations represented	Group	Individual
9	6 (representing 24 individuals)	4

Content

Summary of feedback regarding implementation of course in relation to content

Key themes	Years 9 to 12 Learning Response
A number of respondents queried the sizing of the modules in this version of the course. There were also many suggestions that the balance placed greater emphasis on some topics than others. Additionally, a number of respondents indicated that teaching of problem-solving and reasoning should be made more explicit in the content. A group of respondents were concerned about the applications of trigonometry in 3D situations. Similarly, they were concerned about the inclusion of 'without technology' for fitting a least-squares line. Another group shared this concern. The first group also wondered whether a 'table of interest factors' would be included in the information sheet for external examinations.	These concerns have been accepted and as such the course has been restructured to enable more balanced weighting of content in Modules 2 and 3, supported by the applications of problem solving and reasoning in Module 1. To address the concerns regarding overall size of the content, there is now an elective choice between two topics: • graphs, networks and decision mathematics, or • trigonometry and Earth geometry.

Key themes	Years 9 to 12 Learning Response
One group questioned the inclusion of Earth Geometry into the course as it sits outside the AC: Framework for General Mathematics. Another group of respondents agreed, despite the fact that they like the content and the way it is presented. An individual stated they believe the criteria and standards are well written but can't understand the inclusion of world geometry. Another individual believes the content is all well written and clear, but perhaps a little dense. A group of respondents were concerned that overall, the course was just too full by approximately 4 weeks. Another two groups agreed that there was too much content to get through in the proposed course.	
Itemised small revisions of content were proposed including: • UTC to replace GMT in Earth Geometry • Inclusion of Geometric sum to infinity	The restructuring enables the small itemised revisions of content to be accepted and actioned.

Work Requirements

Summary of feedback regarding implementation of course in relation to Work Requirements

Key themes	Years 9 to 12 Learning Response
Two groups were concerned that the folio requirements would be hard to assess, as there is no way of knowing if it is a student's own work. An additional group queried whether the folio would be the 'best' style of external assessment, particularly feeling students with low literacy would be disadvantaged. An individual is in favour of the work requirements and the folio component of the	The restructuring of the course also enables rewriting of the External Assessment Specifications to revert to a 3-hour examination that will assess four 'content criteria' and the new Criterion 2 (amalgamated C2 and C3). This should allay many of the concerns that providers mentioned including: • verification of student work • low literacy students disadvantaged

EAS. They would like to see more structured guidelines for development of extended tasks.

Another individual likes the concept of the folio but believes there is too much content to get through along with a folio. They were in favour of retaining a three-hour examination but retaining work requirements that expect students to engage in the problem solving and investigation tasks as outlined.

A group of respondents believe that three extended application work requirements is excessive and will take away from the time required to teach the fundamental mathematical skills and concepts. They believe the problem solving and reasoning skills are important but would be developed as effectively through a smaller number of extended tasks supported by smaller investigations. They also stated their desire is for the investigative work to be internally assessed and externally to assess five criteria through an examination.

- too much time needed for three extended responses and preparation of folio
- teachers workload and ability to find markers for the folios
- students choosing to opt into other courses.

Support for Implementation

Summary of feedback regarding support desired for implementation and delivery

Key themes	Years 9 to 12 Learning Response
A number of respondents suggested that resources and exemplars to support the investigations and extended questions will be required. Similarly, many respondents asked for the development of annotated work samples. Two groups of respondents also asked for a guide for teachers on Statistical Investigations and best practice.	A set of baseline resources, including a sample scope and sequence, a curriculum implementation guide and example learning activities will be developed and made available prior to implementation in 2023. Additionally, communities of practice through Microsoft Teams will provide opportunities for teachers to collaborate with one another, share ideas and resources and build collective understanding and expertise in the delivery of the course.

Further Feedback and General Comments

Summary of other feedback

Key themes	Years 9 to 12 Learning Response
Two groups of respondents queried the algorithm for award requirements and asked for more information as to how these were developed.	The algorithm for all courses with 8 criteria has been developed by the Office of TASC after consultation with stakeholders including Years 9-12 Learning. The balance between 'content' criteria and 'process' criteria is now more closely representative of the existing course whilst encouraging opportunities to assess mathematical reasoning and problem solving. Eight out of 13 criteria will specifically assess mathematical competence of topics, while a further two will specifically address the ability to solve extended problems.
A group of respondents claimed that students 'shop for courses' based on the assessment requirements. They were concerned that the folio requirements would cause many students to choose a different course. The same group claimed that General Mathematics 3 students 'generally do not enjoy writing' and requiring them to do so is an expectation beyond the current cohort.	Whilst the external assessment specifications are going to be changed to remove a folio, it must be noted that claims such as General Mathematics 3 students 'generally do not enjoy writing' are not substantiated. In order to test these claims, more detailed candidature data to investigate which, if any other Level 3 TASC courses and/or English courses are undertaken by students who complete General Mathematics 3. I suspect that there is a very small proportion of students who do not engage in other courses where they are required to write extensively.
A group queried whether there was a need for both Criteria 3 and 4, or whether they could be amalgamated, and an additional content criterion enabled. This was supported by an individual.	This query has been investigated and the two criteria have been amalgamated.