# VCE HIGH PERFORMANCE TUTORING
## Exam Preparation Program (EPP)

## VCE Mathematical Methods Units 3 & 4: Timetable

**Dear Parents & Guardians,**

The VCE Mathematical Methods Unit 3 & 4 EPP is structured, practical and exam-focused, while covering the key areas, including functions, algebra, calculus, probability and statistics.

The program design balances the subjects heavy content with conceptual understanding, by-hand skills, technology use, modelling and exam preparation. The program prioritises the highest-yield concepts, builds skills progressively, and includes revision and exam-style application throughout the program. Weekly tutorials are very important supplements to each workshop to enable necessary systemic revision.

The timetable herein contains a macro summary of each workshop and tutorial focus. The structure is intentionally flexible; to enable adjustment once the lead educator understands student strengths, weaknesses and school progress in more detail.

Across the program, the lead educator and tutor incorporate proven study techniques and strategies of high performing ATAR students, including active recall, spaced repetition, error analysis, timed practice, worked example comparison, and exam response scaffolding.

The overarching objective of the VCE EPP is to build the students' confidence, accuracy and exam readiness over time, so that by the final weeks they are not just revising content but performing strongly under VCE exam conditions.

Please direct enquiries to vceepp@shortcoursesau.edu.au or phone 1300 747 430 or enrol online following the QR code.

Yours sincerely,

Jonathon Ainscough
Chief Executive Officer

## STUDY
**FACE TO FACE OR ONLINE**
**Evening and weekend classes available Sunday to Friday.**

## COST
**$35.00 PER HOUR**
**Flexible payment options, $105.00 per week for 16 weeks.**

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# Course Timetable: VCE Mathematical Methods 3/4

## Week 1

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 2 July 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Introduce students to the structure of VCE Mathematical Methods 3 & 4 exam preparation program, including exam, technology expectations, and the difference between by-hand and CAS-supported work.<br>• Begin content immediately with revision of key algebra and graphing foundations needed for Unit 3 success.<br>• Re-establish accurate use of function notation, domain, range, intercepts, and graph sketching conventions.<br>• Review algebraic manipulation skills that underpin the course, including factorisation, solving equations, rearranging formulas and working with literal equations.<br>• Introduce the language of transformations and function families so students are ready for Unit 3 function work.<br>• Cover prerequisite Methods skills including function notation, domain and range, sketching basic graphs, solving polynomial equations, algebraic manipulation, interval notation and introductory transformations.<br>• Learning strategies: retrieval practice, worked examples, scaffolded algebra drills, exam response scaffolding. |
| 07.05 PM to 07.55 PM | Sunday 5 July 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 2

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 9 July 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Begin Unit 3 focus upon Functions, relations and graphs by studying polynomial and power functions in more detail.<br>• Explore key graph features including stationary points, points of inflection, intercepts, symmetry and end behaviour.<br>• Teach transformations from y=f(x) to y=Af(ax+b)+B, including vertical and horizontal shifts, reflections and dilations.<br>• Show how transformed families of graphs relate back to the original function.<br>• Practice graph sketching and interpretation using both by-hand methods and technology.<br>• Cover polynomial and power functions, transformations, domain, range, intercepts, stationary points, simple piecewise functions and graph sketching.<br>• Learning strategies: active recall, graph-feature tables, dual coding, timed short-answer practice. |
| 07.05 PM to 07.55 PM | Sunday 12 July 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 3

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 16 July 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Extend Unit 3 function study to exponential, logarithmic and circular functions.<br>• Teach the key features of exponential, natural log, sin, cos and tan functions, including domain, range, asymptotes, intercepts and symmetry where relevant.<br>• Explore transformations of these functions and how they behave under changes in parameters.<br>• Introduce modelling with elementary functions in practical situations.<br>• Practice interpreting graphs and connecting algebraic form to visual behaviour.<br>• Exponential functions, logarithmic functions, circular functions, trigonometric functions, transformed exponential, logarithmic and circular graphs, graph features and asymptotic behaviour, simple function modelling in context.<br>• Learning strategies: graph interpretation drills, pattern recognition, worked-example comparison, retrieval practice. |

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|---|---|---|---|
| 07.05 PM to 07.55 PM | Sunday 19 July 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 4

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 23 July 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Move into Algebra, number and structure by focusing on inverse functions, composite functions and solving equations.<br>• Teach conditions for the existence of an inverse function and the relationship between the domain and range of a function and its inverse.<br>• Explore composition of functions and how combined functions affect domain and range.<br>• Solve equations involving polynomial, exponential, logarithmic, power and circular functions using algebraic, graphical and numerical methods.<br>• Introduce the idea of exact versus approximate solutions and when each is appropriate.<br>• Inverse functions and conditions for existence, domain and range of inverse relations, composite functions, domain and range of composite functions, solution of equations of the form f(x)=g(x), algebraic, graphical and numerical methods, exact and approximate solutions, solving equations over a specified interval.<br>• Learning strategies: scaffold fading, active recall, algebra-graph matching, error analysis. |
| 07.05 PM to 07.55 PM | Sunday 26 July 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 5

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 30 July 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Continue algebra and function work with a stronger focus on equation solving and systems.<br>• Practice polynomial equations of degree n with up to n real solutions.<br>• Revise logarithm laws, exponent laws and circular function properties for solving equations by hand.<br>• Introduce simple simultaneous linear equations and interpret when there is one solution, no solution or infinitely many solutions.<br>• Use numerical methods, including an introduction to Newton's method where appropriate, for equations not easily solved exactly.<br>• Polynomial equations with real coefficients, numerical solutions, exponent laws and logarithm laws, solving exponential, logarithmic and circular equations, general solution and interval restrictions, simple simultaneous linear equations, geometric interpretation in two variables, Newton's method introduction.<br>• Learning strategies: worked examples, timed algebra drills, exact-versus-approximate comparison, error correction. |
| 07.05 PM to 07.55 PM | Sunday 2 August 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 6

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|

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|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 6 August 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Begin the main Unit 3 calculus sequence.<br>• Introduce the derivative concept graphically and numerically through gradient, tangent and instantaneous rate of change.<br>• Deduce information about the graph of a derivative from the graph of the original function.<br>• Teach basic derivatives.<br>• Connect derivative signs and magnitude to increasing/decreasing behaviour and graph shape.<br>• Gradient and tangent interpretation, graphical treatment of limits, continuity and differentiability, graph of derivative from graph of function, derivative notation, sign of derivative and graph behaviour.<br>• Learning strategies: graph-to-calculus links, active recall, stepwise modelling, visual reasoning. |
| 07.05 PM to 07.55 PM | Sunday 9 August 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 7

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 13 August 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Extend differentiation to transformed and combined functions.<br>• Teach sum, difference, product, quotient and chain rules.<br>• Apply differentiation to sketching graphs and identifying stationary points, points of inflection and intervals of increase/decrease.<br>• Solve local maximum/minimum problems and optimisation questions in context.<br>• Strengthen by-hand differentiation for Exam 1 while also checking results with technology for Exam 2.<br>• Derivatives of transformed functions, product rule, quotient rule, chain rule, graph sketching from derivatives, stationary points, points of inflection, optimisation over intervals, including endpoint values.<br>• Learning strategies: deliberate practice, worked-example comparison, timed differentiation practice, error analysis. |
| 07.05 PM to 07.55 PM | Sunday 16 August 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 8

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 20 August 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Run a structured middle-of-program revision session to consolidate all Unit 3 content covered so far.<br>• Use a mixed set of historical VCE-style questions spanning functions, transformations, algebra and differentiation.<br>• Focus on helping students identify whether a question is best approached algebraically, graphically, numerically or with calculus.<br>• Review common errors in graph sketching, composite/inverse functions, equation solving and derivative rules.<br>• Begin a personalised improvement profile for each student before moving further into advanced Unit 3 and then Unit 4 material.<br>• Learning strategies: interleaving, timed retrieval, exam wrappers, metacognitive reflection, targeted feedback. |
| 07.05 PM to 07.55 PM | Sunday 23 August 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 9

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|

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|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 27 August 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Complete Unit 3 by deepening graph-calculus connections and preparing students for SAC-style application tasks.<br>• Emphasise modelling and problem-solving in practical and theoretical contexts involving functions and calculus.<br>• Use multi-step tasks where students must define variables, interpret constraints and justify conclusions mathematically.<br>• Strengthen students' communication of mathematical reasoning in words as well as symbolic form.<br>• Reinforce technology use for checking, visualising and supporting mathematical analysis.<br>• Modelling with polynomial, power, circular, exponential and logarithmic functions, simple piecewise/hybrid functions, using derivatives in context, optimisation and interpretation, mixed graph, algebra and calculus problems, preparation for SAC-style application tasks.<br>• Learning strategies: modelling practice, computational thinking, problem decomposition, interpretation scaffolds. |
| 07.05 PM to 07.55 PM | Sunday 30 August 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 10

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 3 September 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Begin Unit 4 calculus with anti-differentiation.<br>• Introduce anti-derivatives by recognition and connect them to families of functions.<br>• Deduce the graph of an anti-derivative from the graph of a given function.<br>• Teach anti-derivatives of polynomial functions and functions of the form f(ax+b) for the required elementary functions.<br>• Apply anti-differentiation to find a function from a known rate of change and a boundary condition.<br>• Concept of anti-derivative, graph of anti-derivative from graph of function, anti-derivatives of polynomial and power functions, anti-derivatives of exponential functions, sinx, cosx and simple linear combinations, constants of integration, finding a function from rate of change and boundary condition.<br>• Learning strategies: worked-example comparison, concept linking, retrieval practice, graph interpretation. |
| 07.05 PM to 07.55 PM | Sunday 6 September 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 11

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 10 September 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Develop the definite integral and its interpretation.<br>• Introduce the definite integral informally as a limiting value of a sum and as area under a curve.<br>• Teach the Fundamental Theorem of Calculus informally and apply it to evaluate definite integrals.<br>• Explore properties of definite integrals and anti-derivatives.<br>• Use integration in practical contexts involving area, average value of a function and simple areas between curves.<br>• Definite integrals, area under a curve, signed area, simple areas between curves, Fundamental Theorem of Calculus, properties of definite integrals, average value of a function, applications of integration in context.<br>• Learning strategies: graphical reasoning, stepwise integration practice, error analysis. |
| 07.05 PM to 07.55 PM | Sunday 13 September 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 12

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 17 September 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Extend integration work and include approximation techniques.<br>• Teach the trapezium rule and use it to approximate areas and definite integrals.<br>• Compare exact integration with approximate numerical methods.<br>• Combine differentiation and integration in mixed calculus problems.<br>• Strengthen interpretation of calculus results in context, especially for modelling and rates.<br>• Trapezium rule, approximation to area under a curve, exact versus approximate results, mixed differentiation and integration, interpreting accumulation and area, checking results with technology.<br>• Learning strategies: CAS-supported checking, approximation comparison, timed practice, metacognitive reflection. |
| 07.05 PM to 07.55 PM | Sunday 20 September 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 13

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 24 September 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Begin Unit 4 Data analysis, probability and statistics.<br>• Introduce the concept of a random variable as a real-valued function on a sample space.<br>• Distinguish between discrete and continuous random variables.<br>• Teach discrete random variables using probability mass functions, tables and graphs.<br>• Calculate and interpret mean, variance and standard deviation for discrete distributions.<br>• Concept of a random variable, discrete vs continuous random variables, probability mass functions, tables and graphs of discrete distributions, mean, variance and standard deviation of a discrete random variable, interpretation of parameters and spread.<br>• Learning strategies: retrieval practice, worked examples, distribution-feature mapping, context interpretation. |
| 07.05 PM to 07.55 PM | Sunday 27 September 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 14

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 8 October 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Continue probability with Bernoulli trials and the binomial distribution.<br>• Teach the conditions for a Bernoulli trial and when the binomial model is appropriate.<br>• Calculate probabilities for exact values and intervals, including simple conditional probability.<br>• Analyse how parameter changes affect the shape of a probability mass function.<br>• Use modelling questions to connect distributions to real contexts.<br>• Bernoulli trials, binomial distribution, probabilities for exact values and intervals, conditional probability in distribution contexts, mean and variance of binomial distributions, effect of parameter variation on the graph, modelling with discrete distributions.<br>• Learning strategies: formula-structure mapping, problem classification, worked examples, timed probability drills. |
| 07.05 PM to 07.55 PM | Sunday 11 October 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## Week 15

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 15 October 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Move to continuous random variables and normal distributions.<br>• Teach probability density functions and how they differ from probability mass functions.<br>• Introduce the standard normal distribution and transformed normal distributions.<br>• Calculate probabilities for intervals and interpret areas under density curves.<br>• Compare how different parameter values affect the shape and spread of the distribution.<br>• Continuous random variables, construction and interpretation of probability density functions, mean, variance and standard deviation of continuous random variables, standard normal distribution, transformed normal distributions, interval probabilities, conditional probability where appropriate, parameter effects on graph shape.<br>• Learning strategies: visual reasoning, CAS/statistical calculator fluency, distribution comparison, exam-style interpretation. |
| 07.05 PM to 07.55 PM | Sunday 18 October 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

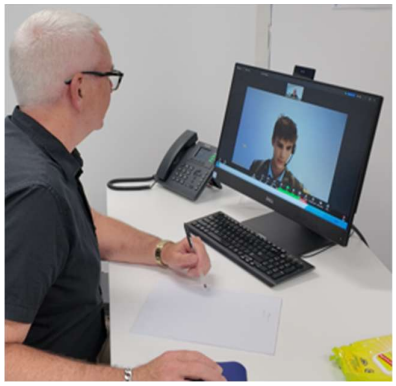
## Week 16

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.20 PM to 06.10 PM | Thursday 22 October 2026 | Room L1R1 Level 1, 350 Collins St, Melbourne or Google Meet | **Workshop**<br>(1 Tutor:10 Student Ratio)<br>• Conclude Unit 4 with sample proportions, statistical inference and final exam preparation.<br>• Distinguish between a population parameter and a sample statistic.<br>• Teach sample proportion as a random variable, approximate normality for large samples, and confidence intervals for proportions.<br>• Simulate repeated random sampling and interpret how sample size affects variability and interval width.<br>• Finish with a final mixed revision of Units 3 and 4, including Exam 1 and Exam 2 strategy, calculator use, working-out standards and common traps.<br>• Population parameter vs sample statistic, sample proportions, approximate normality for large samples, confidence intervals for population proportions, simulation of repeated sampling, interpretation of confidence intervals, final mixed revision of functions, algebra, calculus, probability and statistics.<br>• Learning strategies: simulation, metacognitive reflection, final exam checklist, interleaving, targeted feedback. |
| 07.05 PM to 07.55 PM | Sunday 25 October 2026 | Google Meet | **Tutorial**<br>(1 Tutor:5 Student Ratio)<br>• Review responses, ask questions and practice exam techniques |

## VCE Examination

| Time | Date | Delivery Details | Session Summary |
|---|---|---|---|
| 04.30 PM to 06.30 PM | Thursday 29 October 2026 | Date & Time not Confirmed | The 2026 VCE examination timetable will be published by VCAA in May. Written examinations will be completed between Monday 26 October 2026 and Wednesday 18 November 2026 |

# LEARN MORE


# VCE TUTORING
# HIGH PERFORMANCE

## Exam Preparation Program (EPP)

Short Courses Australia offer Year 12 students a **16 Week** Exam Preparation Program (EPP) for select VCE Unit 3 & 4 subjects.

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## Exam Preparation Program

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**VCE Specialist Mathematics 3 / 4**

**VCE Mathematical Methods 3 / 4**

**VCE English 3 / 4**

- ➢ **Commencing 29 June 2026**
- ➢ **Study face to face or online**
- ➢ **Evening and weekend classes**
- ➢ **Weekly workshop and tutorial**

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