

**YISHUN SECONDARY SCHOOL
ADDITIONAL MATHEMATICS
SECONDARY 4 EXPRESS 2024**

Mathematics Curriculum		Key Programmes
In line with the requirements of the Mathematics Syllabus, teaching of Math at YSS focuses on developing thinking, reasoning and problem-solving skills using Math Modelling, investigations and making connections among mathematical concepts.		
Term 1	Chapter	Assessment
Week 1	(Tue - Thurs) Back to School Programme	
Week 2	Chapter 10: Trigonometric Equations & Identities 10.1 Trigonometric Equations	
Week 3	10.1 Trigonometric Equations	
Week 4	10.2 Trigonometric identities 10.3 Addition Formulae	
Week 5	10.4 Double Angle Formulae Revision for WA1	
Week 6	10.5 Proving of identities 10.6 R-Formulae	WA1: Ch 9, 10.1 - 10.5
Week 7 (12 -13 Feb Mon Tue – CNY)	Chapter 11- Gradients, Derivatives & Differentiation Techniques 11.1 Derivatives and gradient functions 11.2 Five rules of differentiation	
Week 8	11.2 Five rules of differentiation 11.3 Higher derivatives	
Week 9	11.4 Increasing and decreasing functions Chapter 12: Applications of Differentiation 12.1 Equations of tangent and normal Go through WA1 paper	
Week 10	12.2 Rates of change	
March Holiday Assignment (YSS Mid-Year 2022 paper)		
Term 2	Chapter	Assessment
Week 1	12.3 Stationary points	
Week 2 (29 Mar Fri – Good Fri)	12.4 Maximisation and minimisation problems	

Week 3	Chapter 14-Integration 14.1 Integration as reverse of differentiation 14.2 Two rules of integration 14.3 Integration of power functions	
Week 4 (10 Apr Wed – Hari Raya Puasa)	Chapter 13: Differentiation of Trigonometric, Exponential & Logarithmic Functions and their Applications 13.1 Derivatives of trigonometric functions	
Week 5	Student Learning Fest	
Week 6	13.2 Derivatives of exponential functions 13.3 Derivatives of logarithmic functions	
Week 7 (1 May Wed - Labour Day)	13.4 Further applications of differentiation 14.4 Integration of trigonometric functions	
Week 8	14.5 Integration of exponential functions 14.6 Integration of functions of the form $\frac{1}{x}$ and $\frac{1}{ax+b}$ 14.7 Further examples of integration	WA2 (1.5h) Ch 10.6, 11 – 12, 14.1 – 14.3, 2, 3, 4
Week 9	14.7 Further examples of integration Chapter 15: Applications of Integration 15.1 Definite Integrals Go through WA2	
Week 10 (22 May Wed – Vesak Day)	Mother Tongue Intensive Programme	
June Holiday Assignment (2019 P2 O level paper)		
Term 3	Chapter	Assessment
Week 1	Chapter 15: Applications of Integration 15.2 Further examples of definite integrals 15.3 Area under a curve	
Week 2 1 Jul Mon – Youth Day	Chapter 16- Kinematics 16.1 Key concepts in kinematics 16.2 Application of differentiation in kinematics	
Week 3	16.3 Application of integration in kinematics	Practice 1 (P1)

	Chapter 17 - Proofs in Plane Geometry 17.1 Basic proofs in plane geometry 17.2 Proofs using congruent and similar triangles	
Week 4	17.3 Proofs using quadrilateral properties 17.4 Tangent-Chord Theorem (Alternate Segment Theorem)	
Week 5 (National Oral Exam: Tue – Thu) HBL 23-25 Jul	Topical Revision	
Week 6	Revision (O Level 2021)	
Week 7 (9 th Aug Fri – National Day)	Revision (O Level 2022)	Timed-Practice (P2)
Week 8	Revision (O Level 2023) Preliminary Examination (15 to 28 Aug)	Prelim All Sec 3 to 4 topics
Week 9	Preliminary Examination	
Week 10 (29 th Aug Thu - Teachers' Day celeb) (30 th Aug Fri -Teachers' Day Celebration)	Preliminary Examination	
September Holiday Assignment (2019 P1 O level papers)		
Term 4	Chapter	Assessment
Week 1	Sec 4E5N Script Check and Review of Exam scripts	
Week 2	Intensive Revision	
Week 3	Intensive Revision	
Week 4	Intensive Revision	
Week 5	Study leave	
Week 6 -10	GCE O Level Written Examination	