

HKU Summer Institute 2021

Undergraduate Programmes

Course Details													
Course Code	MATH1011												
Course Title	University Mathematics I												
Credit Bearing Programme	6 credits												
Course Description	Calculus is a branch of mathematics that finds wide applications in science, economics and finance, engineering and many other areas. This is a first course in one-variable calculus.												
Course Outline	<ul style="list-style-type: none"> ▪ Pre-calculus topics (set theory, combinations and permutations, mathematical induction, binomial theorem, exponential, logarithmic and trigonometric functions) ▪ Limits and Differentiation with Applications ▪ Indefinite and Definite Integrals with Applications 												
Learning Outcomes	<p>On successful completion of this course, students should be able to:</p> <table border="1"> <thead> <tr> <th colspan="2">Course Learning Outcomes (CLO)</th> </tr> </thead> <tbody> <tr> <td>CLO 1</td> <td>use the set notations; calculate probabilities; and prove by induction</td> </tr> <tr> <td>CLO 2</td> <td>solve problems involving exponential, logarithmic and trigonometric functions</td> </tr> <tr> <td>CLO 3</td> <td>evaluate limits and derivatives</td> </tr> <tr> <td>CLO 4</td> <td>compute simple definite and indefinite integrals</td> </tr> <tr> <td>CLO 5</td> <td>solve practical problems such as determining maxima and minima; finding area</td> </tr> </tbody> </table>	Course Learning Outcomes (CLO)		CLO 1	use the set notations; calculate probabilities; and prove by induction	CLO 2	solve problems involving exponential, logarithmic and trigonometric functions	CLO 3	evaluate limits and derivatives	CLO 4	compute simple definite and indefinite integrals	CLO 5	solve practical problems such as determining maxima and minima; finding area
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Study Load	36 contact hours + 120 learning hours												
Assessments	<ul style="list-style-type: none"> ▪ Assignments and in-class activities (10%) ▪ Two tests (40%) ▪ Final examination (50%) <p>No supplementary examination will be offered.</p>												
Language of Instruction	English												

Class Schedule	
Course Period	June 21 - July 9, 2021
Class Day & Time	Monday, Wednesday & Friday Lecture 09:00 - 12:00; Tutorial 12:00 - 13:00 (Some live lectures and tutorials via Zoom + some pre-recording lectures and tutorials. All the live lectures and tutorials will be recorded and uploaded on the Moodle after class. No problem if students cannot attend some of the lectures or tutorials. Tests and exam will be arranged in the evening via Moodle. Test 1: June 30, 2021 (Wed) 19:30 - 20:10 Test 2: July 7, 2021 (Wed) 19:30 - 20:10 Final exam: July 9, 2021 (Fri) 19:30 - 21:00)
Venue	This course will be conducted via Zoom or other platforms (to be announced).

Application	
Target Students	Non HKU Postgraduate Students, Non HKU Undergraduates
Pre-requisite	Applicants should provide a list of current courses and past exam result sheets or transcripts.
Remarks	Accommodation: Not Applicable
Online Application	Please visit the <u>webpage of "MATH1011 University Mathematics I" for Online Application.</u>
Course Fee	HK\$11,600
Early Bird Offer	Apply on or before February 28, 2021 <ul style="list-style-type: none"> ▪ 5% discount on course fee
Partnership Discount*	10% discount on course fee (HKU Exchange Partners' students) * This discount is not in conjunction with other discounts
Deadline for Application	May 31, 2021

Enquiries
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Last updated: March 4, 2021