

HKU Summer Institute 2019

High School Programmes

Course Details													
Course Code	MATH1011												
Course Title	University Mathematics I												
Credit Bearing Programme	6 credits Upon satisfactory completion of the course, students would be awarded 6 credits. These credits would be counted towards the students' studies in the Faculty of Science at HKU (by applying for an advanced standing of the course). Recognition by other HKU Faculties would be subject to the approval of individual Faculties.												
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 24 - July 12, 2019
Class Day & Time	Monday, Wednesday & Friday 09:00 - 13:00 & 14:30 - 16:30 <ul style="list-style-type: none"> ▪ There will be no lesson on July 8, 2019 (Monday) ▪ Examination: July 12, 2019 (Friday)
Venue	The University of Hong Kong

Application	
Pre-requisite	Form 4 or above, or Equivalent. Applicants should provide a list of current courses plus the examination results of the first, second and third most recent semesters.
Remarks	Students without Permanent HK Identity Cards may require visas to study in HKU. For student visa, please visit Here . HKU accommodation is also available, with priority given to students not residing in Hong Kong. For details, please visit Here .
Online Application	Please visit the <u>webpage of "MATH1011 University Mathematics I" for Online Application.</u>
Course Fee	HK\$4,400
Early Bird Offer	Apply on or before February 28, 2019: 5% discount on course fee (the early bird offer is not valid in conjunction with other discounts)
Deadline for Application	<ul style="list-style-type: none"> ▪ Non-local Applicants: April 7, 2019 ▪ Local Applicants: May 31, 2019

Enquiries
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