

HKU Summer Institute 2018

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
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												
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 25, 2018 - July 12, 2018
Class Day & Time	Tuesday & Thursday 09:00 - 13:00 & 14:00 - 16:00 (An optional preparatory class would be held on June 25, 2018 (Monday) 09:00 - 13:00 & 14:00 - 16:00. Review on logarithm, trigonometry, combinations/permutations and other pre-calculus topics)
Venue	The University of Hong Kong

Application	
Pre-requisite	Form 4 or above, or Equivalent. Applicants should provide a list of current courses and recent exam result sheets or transcripts.
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 webpage of "MATH1011 University Mathematics I" for <u>Online Application</u> .
Programme Fee	HK\$4,400
Early Bird Offer	Apply before March 2, 2018: 5% Discount on course fee
Deadline for Application	<ul style="list-style-type: none"> ▪ Non-local Applicants: March 16, 2018 ▪ Local Applicants: May 31, 2018

Enquiries
<p>Tel: 2241 5199 / 2859 2250 Email: AMGS@maths.hku.hk Url: http://www.math.hku.hk/ Department of Mathematics, The University of Hong Kong</p>