

HKU Summer Institute 2017

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

Date	July 3 - July 14, 2017 (Monday, Wednesday & Friday) (An optional preparatory class would be held on June 30, 2017. Review on logarithm, trigonometry, combinations/permutations and other pre-calculus topics)
Time	09:30 - 12:30 and 14:00 - 17:00
Venue	The University of Hong Kong

Application

Target Students	Secondary school students aged 16 or above <ul style="list-style-type: none">▪ Local▪ Non-local
Pre-requisite	Pass the screening test. Remote screening test for non-local applicants would be held in March, 2017. The screening test for local applicants will be held on June 10, 2017 (Saturday) .
Remark	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 Online Application .
Programme Fee	HK\$4,260 and HK\$350 Application Fee
Deadline for Application	<ul style="list-style-type: none">▪ March 15, 2017 for Non-local Applicants;▪ May 31, 2017 for Local Applicants

Enquiries

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