# HKU Summer Institute 2017

## Undergraduate Programmes

<table>
<tr><th colspan="2">Course Details</th></tr>
<tr><td>Course Code</td><td>MATH1011</td></tr>
<tr><td>Course Title</td><td>University Mathematics I</td></tr>
<tr><td>Credit Bearing Programme</td><td>6 credits</td></tr>
<tr><td>Course Description</td><td>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.</td></tr>
<tr><td>Course Outline</td><td>▪ Pre-calculus topics (set theory, combinations and permutations, mathematical induction, binomial theorem, exponential, logarithmic and trigonometric functions)<br>▪ Limits and Differentiation with Applications<br>▪ Indefinite and Definite Integrals with Applications</td></tr>
<tr><td>Learning Outcomes</td><td>On successful completion of this course, students should be able to:<br><br><table><tr><td colspan="2">Course Learning Outcomes (CLO)</td></tr><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></table></td></tr>
<tr><td>Study Load</td><td>36 contact hours + 120 learning hours</td></tr>
<tr><td>Assessments</td><td>▪ Assignments and in-class activities (10%)<br>▪ Two tests (40%)<br>▪ Final examination (50%)<br>No supplementary examination will be offered.</td></tr>
<tr><td>Language of Instruction</td><td>English</td></tr>
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| Class Schedule | |
|---|---|
| **Date** | July 3 - July 14, 2017 (Monday, Wednesday & Friday)<br><br>(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** | Non HKU Undergraduates |
| **Pre-requisite** | N/A |
| **Remark** | Students without Permanent HK Identity Cards may require visas to study in HKU. For student visa, please visit **Here**.<br><br>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$13,000 and HK$350 Application Fee |
| **Additional Supporting Documents** | Applicants should provide a list of current courses, plus past exam result sheets or transcripts. |
| **Deadline for Application** | ▪ March 15, 2017 for Non-local Applicants;<br><br>▪ May 31, 2017 for Local Applicants |

## Enquiries

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