

HKU Summer Institute 2017

Undergraduate Programmes

Course Details													
Course Code	MATH2101												
Course Title	Linear Algebra I												
Credit Bearing Programme	6 credits												
Course Description	Linear algebra has wide applications to diverse areas in natural science, engineering, management and social science. Instructed by university teachers, this course will provide students with the basic concept of linear structure through many concrete examples in the Euclidean spaces.												
Course Outline	It will cover basic theory of linear algebra in the following areas: 1. Linear Equations and Matrices 2. Vector Geometry 3. Vector Spaces and Linear Transformations												
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>handle matrix operations and use them in some practical problems</td> </tr> <tr> <td>CLO 2</td> <td>solve systems of linear equations by Gauss-Jordan elimination and also compute inverses of square matrices</td> </tr> <tr> <td>CLO 3</td> <td>understand the concept of vector spaces, basis, dimension, and linear transformations and compute the matrix representations of some linear transformations</td> </tr> <tr> <td>CLO 4</td> <td>solve some simple eigenvalue problems and apply the theory to some practical problems</td> </tr> <tr> <td>CLO 5</td> <td>solve some minimization problems by the least squares method</td> </tr> </tbody> </table>	Course Learning Outcomes (CLO)		CLO 1	handle matrix operations and use them in some practical problems	CLO 2	solve systems of linear equations by Gauss-Jordan elimination and also compute inverses of square matrices	CLO 3	understand the concept of vector spaces, basis, dimension, and linear transformations and compute the matrix representations of some linear transformations	CLO 4	solve some simple eigenvalue problems and apply the theory to some practical problems	CLO 5	solve some minimization problems by the least squares method
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Study Load	36 contact hours + 120 learning hours												
Assessments	Assignments (10%), two midterm tests (40%) and one 2.5 hour written examination (50%) No supplementary examination will be offered.												
Language of Instruction	English												

Class Schedule	
Date	July 3 - July 13, 2017 (Monday, Wednesday, Thursday & Friday)
Time	09:30 - 12:30 and 14:30 - 17:30
Venue	The University of Hong Kong

Application	
Target Students	Non HKU Undergraduates
Pre-requisite	High score in NCEE (Gaokao) math or in AP Calculus, or Good grade in IB Math (DP) or in GCE A-level Further/Pure math, or Equivalent.
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 "MATH2101 Linear Algebra 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	<ul style="list-style-type: none"> ▪ March 15, 2017 for Non-local Applicants; ▪ May 31, 2017 for Local Applicants

Enquiries
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