HKU Summer Institute 2020

High School Programmes

Course Details	
Course Code	MATH1641
Course Title	Mathematical Laboratory and Modeling
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	This course introduces elementary mathematical modeling techniques. Also, a powerful and free software Scilab would be taught and used to study models in Physics, Chemistry, Biology, Ecology and Management. Students may need to bring their own notebooks.
Course Outline	In this course, we shall 1. introduce fundamental programming techniques in SciLab, 2. demonstrate how mathematical models are formulated, and 3. how to interpret these models with the help of computer. Some basic techniques in calculus and linear algebra will be covered in due course.
Learning Outcomes	On successful completion of this course, students should be able to:

Course Learning Outcomes (CLO)	
CLO 1	recognize the importance of numerical methods in mathematical modeling
CLO 2	demonstrate basic algebraic and arithmetic computations in the Scilab environment
CLO 3	write and interpret programs in Scilab programming language
CLO 4	solve simple numerical problems by using interactive Scilab commands
CLO 5	solve moderately complicated numerical problems by writing Scilab programs

Study Load	36 contact hours + 120 learning hours
Assessments	Assignments / in-class activities (20%), two midterm tests (30%) and one written examination (50%) No supplementary examination will be offered.
Language of Instruction	English

Class Schedule	
Course Period	July 13 - 31, 2020
Class Day & Time	Monday, Tuesday, Thursday & Friday 09:30 - 12:30 (live or pre-recorded lectures, live Q&A sessions; dates of live classes would be announced in late June or early July) ▪ There would be one more live lecture / Q&A session on July 22 or 29, 2020
Venue	This course will be conducted via Zoom or other platforms (to be announced).

Application	
Pre-requisite	Form 5 or above, or Equivalent, in the academic year 2019-2020. Applicants should provide a list of current courses plus the examination results of the first, second and third most recent semesters.
Remarks	This course is the same as the summer course MATH1641 offered to non HKU undergraduate students. Accommodation: Not Applicable
Online Application	Please visit the **webpage of "MATH1641 Mathematical Laboratory and Modeling"** for **Online Application**.
Course Fee	HK$4,400 (This course will be switched to online teaching. A special discount of 20% off will be applied)
Early Bird Offer	Apply on or before March 1, 2020: 5% discount on course fee
Deadline for Application	June 30, 2020

Enquiries
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