








Handling Sequences and Series (MATS2410)

<p>Introduction</p>	<p>Sequences and series appear occasionally in our daily life such as growth and depreciation, numbers of victims in disease outbreaks, etc. On the other hand, sequence of numbers is always an intersecting topic at both primary and secondary levels. In this course, special types of sequences and series with their formulae will be introduced and students will learn how to make use of those formulae to handle sequences and series. Also, they will learn how to solve problems related to this topic.</p> <p>This is the second programme in the Subject Core Series which is comprised of four level 2 programmes. They are namely</p> <ol style="list-style-type: none"> 1. Equations and Identities (MATS2220) 2. Handling Sequences and Series (MATS2410) 3. Plane Geometry (MATS2310) 4. Quadratic Functions and Standard Conics (MATS2610)
<p>Programme Type / Level</p>	<p>Numbers and Arithmetic Course (Level 2) (Token-required)</p>
<p>Instructor(s)</p>	<p>Mr Tse Siu On</p>
<p>Pre-requisites</p>	<p>Students should have the basic knowledge in</p> <ol style="list-style-type: none"> 1. algebraic manipulations such as addition and multiplication of polynomials, factorisation, simplification of rational expressions, etc; 2. theories on quadratic equations such as finding roots, nature of roots and sum and product of roots; 3. basic properties of indices and logarithm and know how to solve equations and inequalities involving logarithm and index variables.
<p>Target Participants</p>	<p> ➤ S1 – S3 HKAGE student members ➤ Class size: 50</p>
<p>Medium of Instruction</p>	<p> Cantonese with English handouts</p>
<p>Certificate</p>	<p> E-Certificate will be awarded to participants who have:</p> <ul style="list-style-type: none"> ❖ Attended at least 3 sessions AND ❖ Completed all assignments with satisfactory performance in the course tests
<p>Intended Learning Outcomes</p>	<p> Upon completion of the programme, participants should be able to:</p> <ol style="list-style-type: none"> 1. Understand the general term of a sequence; 2. Formulate the general term of an arithmetic or geometric sequence; 3. Evaluate the sum of finite terms of an arithmetic or geometric series; 4. Evaluate the infinite sum of a geometric series whenever exists.
<p>Screening</p>	<p> Please answer the screening question in the online application form. *The screening question is designed to help the applicant understands the course level and the course content. The question must be answered by the student applicant and it can only be attempted once. The answer cannot be changed once the application is submitted. Selection is based on students' performance in answering the question. Only students who can demonstrate motivation and the basic knowledge of sequences and series in the screening question can be enrolled in the programme.</p>
<p>Application Deadline</p>	<p>18 May 2020 12:00 n.n. (1st batch)</p> <p>29 Jun 2020 12:00 n.n. (2nd batch)</p> <p>Application Result Release Date</p> <p>29 May 2020 (1st batch)</p> <p>10 Jul 2020 (2nd batch)</p>

If student members withdraw from the programme after the Application Deadline, the token will be deducted.

Schedule



Session	Date	Time	Venue (HKAGE)
1	3 Aug	2:00 p.m. – 5:00 p.m.	Room 105 Online Teaching
2	5 Aug		
3	7 Aug		
4	10 Aug		

Remarks: For any assessment to be held in the programme, no make-up will be arranged.

Sample Examples for the Programme

Eg. 5 A poor man **Mr P** is employed by a harsh rich man **Mr R** as a safety guard at Mr R's house and they have signed a 3-year **contract** with the following conditions:

- (1) Mr P should pay Mr R for his daily meals and accommodation with \$1000 on the first day and then **increased by \$1000** next day. (i.e. \$2000 in the second day, \$3000 in the third day and so on.)



- (2) Mr R will pay Mr P for his monthly salary with 1 cent for the first month and then **doubled** next month. (i.e. 2 cents in the second month, 4 cents in the third month and so on.)

After the end of the contact, find out who should pay the other and how much should be paid correct to the nearest dollar. (assume 1 year = 12 months = 365 days)



Enquiries



For enquiries, please contact us at 3940 0101 after language selection, press "1".