香 港 資 優 教 育 學 苑
The Hong Kong Academy for Gifted Education

Manned Mission To Mars 2025 (SCIS1031)

Introduction	The Hollywood blockbuster "The Martian" and the announcement of recent surface water flow on Mars in autumn 2015 had sparked a recent interest on Mars exploration. Together with a human mission to Mars to be unveiled in September 2016, it is a great time to investigate some important questions about Mars: what makes Mars unique among the planets in the solar system? Why is Mars especially important for exploration? What have we learnt so far about Mars? What are the advantages and challenges in designing a human mission when compared with robotic missions? This course provides a unique combination of learning experiences (hands-on practice of instruments, stargazing and analysis of the photographs taken, visit of the Observatory, planetarium shows, back-of-the-envelope calculations, etc.) for students to learn about the science of Mars, covering aspects from past robotic missions to potential colonization and terraforming in the far future. (Remarks: course content is similar to the previous SCIS1031 course: Astronomy I Course: Pluto – Revolution of the Outer Solar System)
Programme Type / Level	Astronomy I Course (Level 3) (Token-required)
Instructor(s)	Mr. FONG Ho Cheung and other teachers of Galaxy Scientific Group
Target Participants	➢ S1 – S3 HKAGE student members ➢ Class size: 35
Medium of Instruction	Cantonese (English if necessary) with Chinese handouts
Certificate	**Certificate** will be awarded to participants who have: ❖ Attended **at least 6 sessions** ❖ Completed all the assignments with **satisfactory performance**
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: 1. Interpret astronomical observations with laws of physics and mathematics; 2. Critically analyse the data collected in real-time operation of a telescope and draw valid conclusions; 3. Critically analyse a human mission to Mars by synthesising knowledge and skills used in the course
Screening	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 Astronomy in the screening question can be enrolled in the programme.

Application Deadline **22 Aug 2016** **Application Result Release Date** **8 Sep 2016**

Student members may withdraw from the programme on or before the deadline. Otherwise, the token will be deducted.

Schedule

Session	Date	Time	Venue (HKAGE)
1	8 Oct	1:00 p.m. – 6:00 p.m. 7:00 p.m. – 9:30 p.m.	Room 303
2			
3	15 Oct		Room 403
4			
5	22 Oct		Room 303
6			
7	29 Oct		
8			

*There will be one to two evening classes where we will visit other external astronomical centers. The instructor has already arranged a chartered shuttle bus for pick-ups between the Academy and class venues. Evening classes will be dismissed at the Academy. Details will be explained during class.

*The evening stargazing activity class maybe cancelled and postponed to a later date accordingly due to inclement weather, please watch out for the instructor's arrangements. Cancelled and replacement class due to weather conditions will not be included in the calculation of attendance.

Enquiries

For enquiries, please contact us at 3940 0191 or 3940 0184.