

Gifted Education Fund: Off-school Advanced Learning Programmes

Programme No. 2023-11 (For secondary students)

Title of programme	China Aerospace Education Programme
Programme provider	Faculty of Science, The Chinese University of Hong Kong Supporting organisation(s): The Hong Kong Academy for Gifted Education
Theme(s)	STEAM-related mentorship programme
Intake	40 students (Secondary 4-5 in the 2023/24 school year)
Prerequisite	<ul style="list-style-type: none">• a good command of English language; and• basic/advanced knowledge of AI
Programme delivery period	from May 2024 to Jan 2025 (around 9 months)
Medium of instruction	Course material: Chinese supplemented with English Class teaching/ discussion: Cantonese supplemented with English
Objectives	<ul style="list-style-type: none">• to develop gifted students with knowledge about the history of development and foundation of our country's aerospace industry;• to equip students with theoretical knowledge about mechanics, gravity, orbits and practical skills to solve for the trajectory numerically;• to provide students with essential knowledge and engineering skills behind the development, construction and operations of our country's "Long March" series of rockets, Beidou Satellite Navigation System, Mars exploration project and the Chinese Space Station;• to develop students' understanding about the impact of the aerospace development on our economic, societal and people's livelihood;• to enhance students' passion and interest to participate in aerospace science research; and• to instil a sense of national pride and patriotism affection among students
Programme outline	This programme aims to keep our students abreast of our country's advanced development in aerospace engineering and foster their sense of national pride. Starting with a series of lectures on foundational knowledge about the rationale and impacts of the development of various aerospace projects, students would then be engaged in 6 hands-on problem-based learning modules through which they will be able to develop the essential knowledge and skills about the details of various of aerospace initiatives, such as the "Long March" series of rockets, Beidou Satellite Navigation

	<p>System, Mars exploration project and the Chinese Space Station in the mainland. It is believed that students would get sufficient inspiration to engage in aerospace-related further study.</p> <p>The programme consists of 2 phases.</p> <p>Phase 1 (about 4 months)</p> <ul style="list-style-type: none"> • 18 sessions (36 hours in total) • Face-to-face lectures (2 hours each) on the foundational understanding of the development of China’s aerospace industry, theory about mechanics and orbital science and numerical computation of trajectories. <p>Phase 2 (about 6 months)</p> <ul style="list-style-type: none"> • 30 sessions (90 hours in total), followed by a 4-hour final project presentation • 6 problem-based learning modules on aerospace engineering such as Beidou Satellite Navigation System, Mars exploration and multi-staged water rockets. Each of the 6 problem-based learning modules consists of 5 face-to-face lesson/ workshops (3 hours each).
Admission fee	Free of charge
Application method	<p>Application form can be downloaded from the following webpage: https://www.edb.gov.hk/en/curriculum-development/curriculum-area/gifted/ge_fund/gef/osalp.html</p> <p>Please complete the application form and send it by post <u>on or before 19 April 2024</u> to the following address:</p> <p>Centre for Promoting Science Education, Faculty of Science Room G30, Science Centre North Block The Chinese University of Hong Kong Sha Tin, New Territories Hong Kong (Attn: Ms Yannie Kwong)</p>
Document(s) to be submitted	<ul style="list-style-type: none"> • a completed application form; • evidence of applicant’s other learning experience (if any); • a copy of applicant’s report cards (the second term of the 2022/23 and the first term of the 2023/24 school year); and • a copy of applicant’s certificate(s) of award/ participation in courses/ competitions related to physics, mathematics, engineering or coding
Enquiry	<p>If you have any questions about this programme, please contact:</p> <p>Dr Leung Po Kin (Department of Physics, Faculty of Science, The Chinese University of Hong Kong)</p>

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Announcement of results	by late May 2024