

<b>Subject Code</b>	AAE3S01																		
<b>Subject Title</b>	Mitigating the STEM Divide through Providing Early Aviation Experiences to Youths																		
<b>Hosting Department</b>	Department of Aeronautical and Aviation Engineering																		
<b>Level</b>	3																		
<b>Class Quota</b>	50																		
<b>Medium of Instruction</b>	English																		
<b>Subject Duration</b>	Summer Term																		
<b>Teaching Staff</b>	Dr K.H. Ng, Dr Li-ta Hsu, Dr Ganguan Xu, Dr Xi Shen																		
<b>Target Students</b>	GUR, open for all students from FENG except COMP																		
<b>Pre-requisites</b>	1. AP10001 Introduction to Physics OR AP10005 Physics I; AND 2. AMA1110 Basic Mathematics I – Calculus and Probability & Statistics																		
<b>Selection of students required?</b>	No																		
<b>Subject Synopsis</b>	<a href="https://www.polyu.edu.hk/aae/study/subject-list/">https://www.polyu.edu.hk/aae/study/subject-list/</a>																		
<b>Service Project</b>																			
<b>What will students do to serve?</b>	<p>[Please feel free to simplify the content] To help mitigate the STEM divide, students will work in small groups and provide STEM education through aviation-themed activities in the respective service recipients' schools.</p> <p>The service-learning project consists of four main components.</p> <p>(i) Tutoring on STEM knowledge using aviation-related knowledge as a vehicle: The focus of the project will be on teaching and learning STEM concepts and theories while cultivating knowledge transfer and scientific thinking.</p> <p>(ii) Flight simulator experience using the simulators in Aviation Engineering Laboratory, Department of Aeronautical and Aviation Engineering, or other virtual reality (VR) tools: It emphasises on students' practice and hand-on experience using the flight simulator.</p> <p>(iii) Project competition in small aircraft design: The student project competition emphasises on students' engineering practices and design skills, and nurtures future younger generation interests in STEM via aviation-themed activities and develops students' sense of knowledge transfer.</p> <p>(iv) Reflection and/or debriefing sessions are held after each service day. Students are required to reflect and consolidate their experiences during the service deliveries in these sessions.</p>																		
<b>Whom will students serve?</b>	Underprivileged secondary school students																		
<b>Where will students serve?</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 30px;"><input checked="" type="checkbox"/></td> <td style="width: 300px;">Hong Kong</td> <td style="border-bottom: 1px solid black;">District: Prince Edward, To Kwa Wan.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Chinese mainland</td> <td style="border-bottom: 1px solid black;">Province:</td> </tr> <tr> <td></td> <td></td> <td style="border-bottom: 1px solid black;">City:</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Taiwan</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>Macau</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>Overseas</td> <td style="border-bottom: 1px solid black;">Country:</td> </tr> </table>	<input checked="" type="checkbox"/>	Hong Kong	District: Prince Edward, To Kwa Wan.	<input type="checkbox"/>	Chinese mainland	Province:			City:	<input type="checkbox"/>	Taiwan		<input type="checkbox"/>	Macau		<input type="checkbox"/>	Overseas	Country:
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	City: _____
<b>When will students serve?</b>	Mid-July to early-August.
<b>Fee payable by students</b>	N/A
<b>Subject and Service Attributes</b>	
<b>Teaching and Learning</b>	<input checked="" type="checkbox"/> #F2FTeaching <input type="checkbox"/> #HybridTeaching
<b>Service Mode</b>	<input type="checkbox"/> #OnlineService <input type="checkbox"/> #HybridService <input checked="" type="checkbox"/> #F2FService
<b>Service Language</b>	<input checked="" type="checkbox"/> #ServiceClient_Cantonese <input type="checkbox"/> #ServiceClient_English <input type="checkbox"/> #ServiceClient_Putonghua <input type="checkbox"/> #ServiceClient_OtherNonEnglish
<b>Service Location</b>	<input checked="" type="checkbox"/> #Location_HK <input type="checkbox"/> #Location_MainlandChina <input type="checkbox"/> #Location_Taiwan <input type="checkbox"/> #Location_Macau <input type="checkbox"/> #Location_Overseas
<b>Enquiry</b>	Dr Kam K.H. Ng Assistant Professor Department of Aeronautical and Aviation Engineering The Hong Kong Polytechnic University Email: <a href="mailto:kam.kh.ng@polyu.edu.hk">kam.kh.ng@polyu.edu.hk</a> Phone: +852 3400 8232