Updated on 30 November 2022

Subject Code	AP2S01
Subject Title	Enhancing Scientific Literacy through Daily Physics
Hosting Department	Department of Applied Physics
Level	2
Class Quota	80
Medium of Instruction	English
Subject Duration	Semester 2 + Summer Term
Teaching Staff	Dr. K.L. Jim, and Dr. S.H. Choy
Target Students	GUR, open-for-all
Pre-requisites	Nil
Selection of students required?	No
Subject Synopsis	The topics in the course syllabus cover three areas: **Concept and Practice of Service Learning:** • Principles, concepts and myths of service learning • Benefits of service learning to students, the university and the community • Ethical issues in service learning • Basic concepts and theories of social problems, developments and justice • Social responsibilities of global citizens as intellectuals and professionals • Proper attitudes and behaviours in service delivery • Developing a service project proposal • Effective team work and problem solving skills in service-learning projects • Reflection as a tool for learning **Discipline-Specific Concepts, Issues and Skills** • Principles and concepts of scientific literacy and thinking • Scientific methods and inquiry; formulation, hypothesis, prediction and experiment; • Physics concepts in force and energy, weather and climate, health and environment, and working principles of different scientific equipment • Impact of scientific literacy on society; fear of science; pseudo-science versus proto-science **Project-Specific Concepts, Issue and Skills** • Concepts and practices in teaching and demonstrating scientific concepts to young children, including teaching methods; Bloom's taxonomy; classroom management and development of teaching plans; communication skills and effective explanation of science principles to children without using technical jargons • Financial, cultural and socioeconomic challenges faced by children in underprivileged community • Moral, ethical and safety concerns related to teaching and supervising children

Service Project

Remarks: The information given above is subject to change.

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What will students do to serve?	In the service-learning projects, students will work in groups and be attached to the partner primary schools. The focus of the projects will be on enhancing children's interest in learning and motivating them to explore the world of physics. In addition, through mentoring, PolyU students will serve as role models to the children and inspire them to set higher future goals. PolyU students will visit the primary schools in groups. Small-group educational activities related to daily physics will be demonstrated. Students' behavior during services will be supervised, and their performances will be regularly assessed by on-site supervisors from AP, with comments and suggestions from serviced primary schools.
Whom will students serve?	Primary school students
Where will students serve?	☒ Hong Kong — District: Sham Shui Po ☐ Chinese mainland — Province: City: ☐ Taiwan ☐ Macau ☐ Overseas — Country: City:
When will students serve?	Weeks 7 to 13 of Semester 2, after Semester 2 exam and Summer Semester
Fee payable by students	N/A

Service Attributes

Service Mode	☒ #OnlineService ☒ #F2FService
Service Language	☒ #ServiceClient_Cantonese ☐ #ServiceClient_English ☐ #ServiceClient_Putonghua ☐ #ServiceClient_OtherNonEnglish
Service Location	☒ #Location_HK ☐ #Location_MainlandChina ☐ #Location_Taiwan ☐ #Location_Macau ☐ #Location_Overseas
Enquiry	Dr. K. L. Jim (apjim@polyu.edu.hk) Dr. S. H. Choy (apshchoy@polyu.edu.hk)

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