

Subject Code	BSE2S01 (subject to reinstatement)
Subject Title	Science for Healthy and Sustainable Living Environments
Hosting Department	Department of Building Environment and Energy Engineering
Level	2
Class Quota	40
Medium of Instruction	English
Subject Duration	Semester 1 + semester 2
Teaching Staff	Ir Prof. KW Mui and Ir Dr LT Wong
Target Students	GUR, open for students from FENG, FCE, FHSS, SD, FS, SFT
Pre-requisites	Nil
Selection of students required?	Yes
Subject Synopsis	<p><i>Concepts and Practices of Service Learning:</i></p> <ul style="list-style-type: none"> 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, justice and development Social responsibilities of global citizens as intellectuals and professionals Proper attitudes and behaviours in service delivery Development of a service project proposal/plan Effective teamwork and problem-solving skills in service learning projects Reflection as a tool for learning <p><i>Discipline-Specific Concepts, Issues and Skills</i></p> <ul style="list-style-type: none"> Principles of sustainability; concepts of sustainable built environment and green buildings; Scientific method and inquiry; formulation, hypothesis, prediction and experiment; Applications of basic scientific methods and scientific thinking to everyday experiences and global concerns about built environments: e.g. quantification of sustainability, consumption, efficiency and conservation of energy, water and other resources, reduction of wastes and disposals Environmental, financial, cultural, and socioeconomic challenges faced by underprivileged people relate to sustainability and the living environment, particularly concerning the capability to achieve and maintain sustainable practices or a healthy living environment. <p><i>Project-Specific Concepts, Issues and Skills</i></p> <ul style="list-style-type: none"> Scientific concepts and practices in teaching and demonstrating science and sustainability concepts, including teaching methods, classroom management and communication Moral and ethical concerns related to working with children and young people in school

Service Project	
What will students do to serve?	<p>Students will visit underprivileged schools/grassroots families to learn about their living situation, especially regarding energy efficiency and sustainability in everyday life. Students may have to conduct interviews and surveys to understand energy usage, water usage, etc. Students will then use this experience to design learning activities for primary or secondary school students, who will be required to integrate sustainability issues into their activities and use interactive and learner-centred activities.</p> <p>Our target is to work with primary and secondary schools that serve primarily underprivileged children, so the issues that our students encounter in their preparatory site visit should be familiar to the primary and secondary students. Our service will fit into the Other Learning Activities (OLE) component in the primary and secondary school curriculum frameworks. The schools we will work with lack the extra resources to support such activities.</p> <p>Students must integrate examples from built environment sustainability, organize relevant and meaningful learning activities, demonstrate engineering experiments, design teaching materials and worksheets, etc. The activities for the primary and secondary students will end with a project in which our students will act as instructors and mentors to the schoolchildren.</p>
Whom will students serve?	Underprivileged students
Where will students serve?	<input type="checkbox"/> Hong Kong <input type="checkbox"/> Chinese mainland Province: _____ City: _____ <input type="checkbox"/> Taiwan <input type="checkbox"/> Macau <input checked="" type="checkbox"/> Overseas Country: Cambodia City: _____
When will students serve?	<p>Attendance at all lectures and workshops (on selected Saturday mornings) in Semester 1 is mandatory.</p> <p>The Service-Learning trip will be TENTATIVELY arranged during the winter break to fulfil the 40-hour service requirement. The trip will tentatively include the following: - Ice-breaking day: 0.5 day - Cultural training in Phnom Penh: 1 day - STEM workshops: 3 days - Cultural visit (Angkor Wat) and NGO visit about sustainability/environment in Siem Reap: 2 days - Project Presentation with ceremony: 1 day</p> <p>Please note that there will be no scheduled classes in Semester 2. After the trip, students are required to submit their reports and reflective journals.</p>
Fee payable by students	HKD2,000 (TBC)
Subject and Service Attributes	
Teaching and Learning	<input type="checkbox"/> #OnlineTeaching

Remarks: The information given above is subject to change.

