

Training Engineering Students in Sustainable Development

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Abstract : Work on sustainable developments and the call for action in education for sustainable development have been ongoing for a number of years. Training engineering students with the relevant competencies, particularly in sustainable development literacy, has been identified as an urgent task in universities. This requires not only a holistic, multi-disciplinary approach to education but also a suitable training environment to develop the needed skills and to inculcate the appropriate attitudes in students towards sustainable development. To demonstrate how this can be done, a module involving an overseas field trip was introduced in 2013 at the National University of Singapore. This paper provides details of the module and describes its training philosophy and methods. Measured against the student learning outcomes, stipulated by the Engineering Accreditation Board, the module scored well on all of them, particularly those related to complex problem solving, environmental and sustainability awareness, multi-disciplinary team work and varied-level communications.

Keywords : civil engineering education, socio-economically sustainable infrastructure, student learning outcome, sustainable development

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