

How to Integrate Sustainability in Technological Degrees: Robotics at UPC

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Abstract : Embedding Sustainability in technological curricula has become a crucial factor for educating engineers with competences in sustainability. The Technical University of Catalonia UPC, in 2008, designed the Sustainable Technology Excellence Program STEP 2015 in order to assure a successful Sustainability Embedding. This Program takes advantage of the opportunity that the redesign of all Bachelor and Master Degrees in Spain by 2010 under the European Higher Education Area framework offered. The STEP program goals are: to design compulsory courses in each degree; to develop the conceptual base and identify reference models in sustainability for all specialties at UPC; to create an internal interdisciplinary network of faculty from all the schools; to initiate new transdisciplinary research activities in technology-sustainability-education; to spread the know/how attained; to achieve international scientific excellence in technology-sustainability-education and to graduate the first engineers/architects of the new EHEA bachelors with sustainability as a generic competence. Specifically, in this paper authors explain their experience in leading the STEP program, and two examples are presented: Industrial Robotics subject and the curriculum for the School of Architecture.

Keywords : sustainability, curricula improvement, robotics, STEP program

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