THE UNIVERSITY OF HONG KONG

Template for Mapping of Programme Learning Outcomes to University Educational Aims – Taught Postgraduate Programmes

Faculty / ~~School~~ of Engineering

Programme title: Master of Science in Engineering in Sustainability Engineering

Applicable student cohort(s): students admitted in 2027-28 and thereafter

The purpose of mapping is to illustrate the coherence of the programme in achieving the University Educational Aims (UEAs). The mapping should be an evaluative and reflective process, and the Faculty / School must ensure that the programme as a whole offers students sufficient opportunities to develop the attributes articulated in each of the UEAs and the corresponding Institutional Learning Outcomes. *Please put a tick (√) in the boxes under the UEA columns below to indicate the alignment, as applicable.*

Programme Learning Outcomes (PLOs)	**Alignment with University Educational Aims (UEAs)*** Benchmarked against the highest international standards, the taught postgraduate programmes at HKU are designed to enable students to develop capabilities in:					
	UEA1 Critical intellectual enquiry and acquiring up-to-date knowledge and research skills in a discipline/ profession	**UEA2** Application of knowledge and research skills to practice or theoretical exploration, demonstrating originality and creativity	**UEA3** Tackling novel situations and ill-defined problems	**UEA4** Collaboration and communication of disciplinary knowledge to specialists and the general public	**UEA5** Awareness of and adherence to personal and professional ethics	**UEA6** Enhancement of leadership and advocacy skills in a profession *(for professional programmes only)*
PLO1: On successful completion of the curriculum, students should be able to critically evaluate scientific theories, emerging technologies, and interdisciplinary research methods underpinning sustainability science, using AI tools and evidence-based approaches integrated throughout the programme.	✓					

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PLO2: On successful completion of the curriculum, students should be able to apply interdisciplinary knowledge to design evidence-based, innovative sustainability solutions within core thematic areas such as green energy and sustainable manufacturing.		✓	✓			
PLO3: On successful completion of the curriculum, students should be able to analyse complex, ill-defined sustainability challenges through global case studies and root cause analysis, developing context-specific interventions via intensive, experiential learning modules at the Kadoorie Centre.			✓			
PLO4: On successful completion of the curriculum, students should be able to develop original decarbonization strategies for industries using systems thinking, AI and IoT tools, and cross-sectoral data, as emphasised in the Carbon-Appraised and Environmental Sustainability themes.		✓	✓		✓	

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PLO5: On successful completion of the curriculum, students should be able to collaborate in multicultural teams to co-create sustainability action plans, balancing economic, social, and environmental priorities through workshops and track-based projects with industry and academic partners.				✓	✓	✓
PLO6: On successful completion of the curriculum, students should be able to communicate technical sustainability concepts to diverse stakeholders using digital platforms and persuasive storytelling, grounded in human-centred, practical solutions fostered through the programme's applied learning approach.				✓		✓

*The Institutional Learning Outcomes for each UEA can be found at tl.hku.hk/tl/.

March 2025
Amended May 2025

Mapping of courses against the PLOs (in the form of a matrix). The mapping includes the Discipline core courses, elective courses and the capstone experience.

Courses in MSc(Eng)(SE)	Course Learning Outcomes					
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
SUSE7001 Green Energy and Sustainable Energy Systems (9-credit)	✓	✓		✓		✓
SUSE7002 Sustainable Manufacturing and Sustainability Materials (9-credit)	✓	✓		✓	✓	✓
SUSE7003 Sustainable Agriculture and Food Sustainability (9-credit)		✓	✓		✓	✓
SUSE7004 Sustainable Built and Urban Environments (9-credit)	✓		✓	✓	✓	✓
SUSE7005 Environmental Technologies (9-credit)	✓		✓	✓		✓
SUSE7006 Carbon Technologies and Appraisals (9-credit)	✓	✓		✓	✓	
SUSE7007 Climate Change Impacts and Adaptation (6-credit)	✓		✓	✓		✓
SUSE7008 ESG Integration and Sustainable Value (6-credit)		✓		✓	✓	✓
SUSE7009 Dissertation (18-credit)	✓	✓	✓	✓		✓
SUSE7010 Ideation Project (6-credit)	✓	✓		✓	✓	✓
SUSE7011 Internship (6-credit)	✓	✓	✓		✓	✓