

HKU Educational Aims and Institutional Learning Outcomes

The 4-year undergraduate curriculum at HKU is designed to enable our students to develop their capabilities in:

1. Pursuit of academic/professional excellence, critical intellectual enquiry, and life-long learning
2. Tackling novel situations and ill-defined problems
3. Critical self-reflection, a greater understanding of others, and upholding personal and professional ethics
4. Intercultural communications, and global citizenship
5. Communication and collaboration
6. Leadership and advocacy for the improvement of the human condition

Programme Educational Objectives

Our Programme Objectives are based on three perspectives: breadth; depth and professionalism:

1. **Breadth** - Graduates possess broad education, including problem-solving skills and knowledge of important current issues in engineering, necessary for productive careers in the public or private sectors, or for the pursuit of graduate education.
2. **Depth** - Graduates possess an understanding of the fundamental knowledge prerequisite for the practice of, or for advanced study in civil engineering, including its scientific principles, rigorous analysis, and creative design.
3. **Professionalism** - Graduates demonstrate skills for clear communication and responsible teamwork, and professional attitudes and ethics, so that they are prepared for the complex modern work environment and for lifelong learning.

Relationship of Programme Objectives to University Education Aims

PROGRAMME OBJECTIVES	UNIVERSITY EDUCATION AIMS					
	1	2	3	4	5	6
1	X	X				
2	X	X				
3	X		X	X	X	X

The programme outcomes are as follows:

- (a) an ability to apply knowledge of mathematics, computer science, geography, urban planning, urban design, and civil engineering appropriate to the degree discipline

- (b) an ability to design and conduct experiments/surveys, as well as to identify, acquire, manage, use, analyse, and interpret urban/survey/experiment data
- (c) an ability to design a system, component or process to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability/buildability, and sustainability
- (d) an ability to function on multi-disciplinary teams in the degree discipline
- (e) an ability to identify, analyse, formulate, and solve urban infrastructure informatics problems
- (f) an ability to understand professional, ethical, legal, and social responsibilities in the degree discipline and commit to pursue professional practices
- (g) an ability to effectively communicate urban infrastructure informatics problems/ issues, solution techniques/tools, and analysis results and implications to the profession
- (h) an ability to understand the impact of civil engineering solution, data analytics solution, urban planning, and public policy in a global and societal context, especially the importance of health, safety and environmental considerations to both workers and the general public
- (i) an ability to stay abreast of contemporary issues in the degree discipline
- (j) an ability to use information and communication technology tools relevant to the discipline along with an understanding of their processes and limitations
- (k) an ability to use current techniques, skills, and tools necessary for practice appropriate to the degree discipline

Relationship of Programme Outcomes to Programme Objectives

PROGRAMME OUTCOMES	Programme Objectives		
	1	2	3
a	X	X	
b	X	X	
c		X	
d		X	
e	X	X	
f	X		X
g	X		X
h	X		X
i	X		X
j		X	
k		X	