The Hong Kong University of Science and Technology

UG Course Syllabus

[Course Title] Hydrosystems Engineering

[Course Code] CIVL 3510

[No. of Credits] 3 Credits

[Any pre-/co-requisites] Pre-requisite: CIVL 2510

Instructor 1

Name: CHENG, Tat Fan

Email: franklin.cheng@ust.hk

Instructor 2

Name: DAI, Lun

Email: dailun@ust.hk

Course Description

This course introduces the fundamental knowledge essential to the design and analysis of hydrosystems engineering problems with the consideration of climate change. The course consists of two interrelated parts: hydrology and hydraulics, within the non-negligible scope of climatology. Hydrology covers various processes of the water cycle (including precipitation, infiltration, rainfall-runoff modeling, and flow routing) that produce loads on hydrosystems. Hydraulics, on the other hand, uses basic principles of fluid mechanics in the analysis of natural water systems and the design of engineering structures.

Assessments:

[List specific assessed tasks, exams, quizzes, their weightage]

Assessment Task	Contribution to Overall Course grade (%)
Homework	10%
Mid-Term 1	20%
Mid-Term 2	20%
Final examination	50%

Required Texts and Materials

No specific text book is required.

[Optional] Additional Resources

Recommended but not required textbooks:

Marlyn L. Shelton, Hydroclimatology: Perspectives and Applications, Cambridge University Press

Frank M. White, (8th edition), Fluid Mechanics, McGraw-Hill Education

All necessary material will be provided via CANVAS.