

# The Hong Kong University of Science and Technology

## UG Course Syllabus

[Course Title] **Water and Wastewater Engineering**

[Course Code] **CIVL 3420**

[No. of Credits] **3**

[Pre-requisites] CIVL 1140 OR CIVL 2410

**[Instructor(s) Name]** Guanghao CHEN, Hongxiao GUO

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### Course Description

This course provides a comprehensive introduction to the fundamental concepts of water quality and the essential processes involved in water and wastewater treatment. The course is structured into three main sections: (1) Overview of Water and Wastewater Treatment: This section lays the groundwork by exploring the significance and objectives of water and wastewater treatment. (2) Key Processes in Water Treatment: Students will delve into critical unit operations within water treatment systems. (3) Key Processes in Wastewater Treatment: This section focuses on essential unit operations in wastewater treatment systems, such as biological treatment, activated sludge processes, and biofilm systems. Through a combination of lectures, laboratory experiments, and practical exercises, students will gain a solid understanding of the principles underlying water and wastewater treatment processes.

### Assessments:

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

Assessment Task	Contribution to Overall Course grade (%)
Assignment	20%
Attendance	10%
Lab report	20%
Final examination	50%

### Required Texts and Materials

[Droste, R.L (2019). Theory and Practice of Water and Wastewater Treatment, Second edition, John Wiley & Sons, New York.]