The Hong Kong University of Science and Technology

[Course Title] **Chemical and Biological Reaction Engineering**

[Course Code] **CENG 3230**

[No. of Credits] **3**

[Any pre-/co-requisites] **nil**

Name: [Instructor(s) Name] **Prof. King Lun Yeung**

Email: [Your Email Address] **kekyeung@ust.hk**

Course Description

[Briefly describe the course content, key topics or themes, objectives, methods of instruction, e.g., lectures, discussions, projects].

Chemical and Biological Reaction Engineering explores the fundamental principles of chemical reactions and reactor design. Key topics include reaction kinetics, reactor sizing, isothermal reactor design, bioreactions, and catalysis. The course aims to develop problem-solving skills, enhance understanding of reactor selection, and foster informed decision-making in engineering contexts. Instruction methods include lectures, interactive discussions, and hands-on assignments that encourage the use of computational tools. Students will engage in collaborative exercises and receive continuous assessment through assignments and examinations, culminating in a comprehensive understanding of chemical and biological reaction engineering principles.

Assessments:

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

Assessment Task	Contribution to Overall Course grade (%)
Class Work	10%
Homework	30%
Mid-Term	30%
Final examination	30%

Required Texts and Materials

H. Scott Fogler, Elements of Chemical Reaction Engieering, Pearson, NJ (2006).

[Optional] Additional Resources

L. D. Schmidt, The Engineering of Chemical Reactions, Oxford University Press, NY (2005).