

# The Hong Kong University of Science and Technology

## UG Course Syllabus

Introduction to Chemical Engineering

CENG 1110

3 Credits

Pre-requisite: CENG 1000

Co-requisite: CHEM 1012

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### Course Description

Introductions to chemical process and product design, equipment design, simulation and computational tools. Application of material and energy balances to batch and continuous processes involving reactive and non-reactive unit operations and recycle systems.

### Assessments:

Assessment Task	Contribution to Overall Course grade (%)
Participation in tutorials	10%
Simulation case	10%
Mid-term quiz	20%
Final examination	60%

### Required Texts and Materials

- M. Murphy. (2023) Introduction to Chemical Processes, International Edition. McGraw-Hill, New York, NY, USA. 2nd Edition. [This textbook is available from the publisher as eBook or hard copy through the McGraw Hill Connect platform]. We will follow this book closely. Students are strongly recommended to purchase the textbook.

### [Optional] Additional Resources

- D.M. Himmelblau, J.B. Riggs. (2022) Basic Principles and Calculations in Chemical Engineering, 9th Edition. Prentice Hall, Upper Saddle River, N.J. [This textbook covers most of the topics that we will discuss and can be accessed online through the library]
- D. Seider, D. R. Lewin, J. D. Seader, S. W., R. Gani, K. M. Ng (2016). Product and Process Design Principles: Synthesis, Analysis and Evaluation, 4th edition, [This textbook is available as e-book through the library]