

CENG 1800 – Introduction to Food Science and Technology

School:	School of Engineering
Subject Area:	Chemical and Biological Engineering
Course Credit:	3
Instructor:	LIU Y.S. Marshal
Pre-requisite/co-requisite:	Nil

Notes:

- The syllabi provided here is for reference only and may be subject to changes and adjustments as determined by the course instructors.

CENG1800 Introduction to Food Science & Technology, 2025

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Class Schedule:

Blended learning: Online lectures and quizzes will be announced in due time.

Lecture / tutorial: 14-JUL - 08-AUG MoWe 10AM - 12:50AM Room 4582

Lab 1: 10AM - 1:20PM, Lab 2: 2-5pm, July 18, 25, Aug 1, 8, Rm 2007, CYT Bldg,

Learning outcomes:

1. Explain the roles of major nutrients and chemical components in meeting nutritional needs.
2. Describe principles and methods used in food processing, preservation, and production.
3. Analyze the importance of safe, sustainable, and economical practices in food technology.
4. Evaluate food industry challenges and propose solutions considering regulatory, environmental, and socioeconomic factors.
5. Apply food processing techniques through practical experiments.
6. Design innovative food products, processes, or facilities prioritizing safety, sustainability, and economy.

Components of Assessment:

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| • Class participation and performance | 10% |
| • Online quizzes | 10% |
| • 3 quizzes (open book) | 40% |
| • Lab performance and two short reports | 30% |
| • Group project (5 min presentation + 5 min Q&A) | 10% |

Lab session:

- A total of 8 experiments (two experiments for each week).
- Every student submits two short reports (max 5 pages), within one week after finishing the experiment and obtaining data.
- A group comprises 4 students from different departments (better from different schools and years).
Form your own group in the first class, and TA will help assign afterwards.

Lab schedule

July 18: 1A: Bread 1B: Jelly

July 25: 2A: Beer 2B: Cookie

Aug 1: 3A: Yogurt 3B: Tofu

Aug 8: 4A: Salt 4B: Bubbles

Reference:

- 1) Vaclavik, Vickie A. & Christian, Elizabeth W. Essentials of Food Science, 3rd edition, Springer, 2014 E-book
- 2) Shewfelt, Robert L., Boca Raton. Introducing Food Science. CRC press, 2009,
- 3) McWilliams, Margaret. Food Fundamentals, 10th edition, Pearson, 2013,
- 4) Fellows PJ. Food Processing Technology - Principles and Practice (3rd Ed.). Woodhead Publishing, 2009 E-book.

5) Others: US Food & Drug Administration, Centers for Disease Control and Prevention, HK Department of Health