



Course Syllabus (Academic Year 2023)

School of Interdisciplinary Studies, Kanchanaburi Campus, Mahidol University

- Course No. and Title** : KAFT 460 Meat and Fishery Product Technology
Credit (study hours) : 3 (3-0-6)
- Program Name** : Bachelor of Science in Food Technology
- Course Module** : Specific Core Course, Elective Subject
Pre/co-requisite : KAFT 324 food chemistry II, KAFT 337 food processing II
- Class Semester** : 1st Semester 2nd Semester Academic Year 2023
- Class Schedule & Venue** : every Monday at 09:00 – 12:00 onsite at room R-2312
and online for Dr. Plengsuree' topics
- Class Coordinator** : Asst. Prof. Dr. Natteewan Udomsil
Room : L217 Email : natteewan.udo@mahidol.ac.th

7. Course Description

Structure, properties and qualities as well as preparation and processing of meat, poultry, and fishery products such as freezing, canning, drying, salting, smoking, fermentation, and food additives in meat, poultry, and fisheries products; ethics in food business

8. Course Objectives / Course Learning Outcomes (CLOs)

| No. | Objectives / CLOs | Expected Skills / Knowledge | | | PLOs |
|-----|---|-----------------------------|------------|-----------|------|
| | | Specific | Generic | Knowledge | |
| 8.1 | Students will be able to explain the principles and the factors that affecting to meat qualities and products นักศึกษาสามารถอธิบายหลักการและปัจจัยสำคัญต่าง ๆ ที่มีผลต่อคุณภาพเนื้อสัตว์และผลิตภัณฑ์ | S1, S3 | G1, G2, G4 | K1, K3 | 1 |

| | | | | | |
|-----|--|--------|---------------------|-----|---|
| 8.2 | Students will be able to explain the structure, the characteristic and the quality of meat, poultry and fish นักศึกษาสามารถอธิบายโครงสร้าง คุณสมบัติ และคุณภาพของผลิตภัณฑ์เนื้อสัตว์ สัตว์ปีกและสัตว์น้ำ | S2, S3 | G1, G4 | K3 | 1 |
| 8.3 | Students will be able to explain how the raw material is processed into finish products and how the by-products are used นักศึกษาสามารถอธิบายกระบวนการแปรรูป เนื้อสัตว์ สัตว์ปีก และสัตว์น้ำเป็นผลิตภัณฑ์ประเภทต่าง ๆ และการใช้ประโยชน์จากเศษเหลือของวัตถุดิบ | S2, S3 | G1, G4 | K3 | 1 |
| 8.4 | Students will be able to demonstrate the use of communication skill and show cooperative teams นักศึกษาสามารถแสดงทักษะด้านการสื่อสารและการทำงานร่วมกันเป็นทีม | - | G10, G14 G15-G17 | K25 | 5 |

9. Class Instructor List:

- 9.1 Asst. Prof. Dr.Natteewan Udomsil (NU) Email: natteewan.udo@mahidol.ac.th
- 9.2 Dr. Sarawut Taksinoros, D.V.M. (ST) Faculty of Veterinary Science, Mahidol University
- 9.3 Dr. Plengsuree Thiengnoi (PT) Nakhonsawan Campus, Mahidol University
Email: plengsuree.thi@mahidol.ac.th

10. Course Outline

| Week | Date | Contents | CLOs | Teaching & Learning | Instructor's Names |
|------|----------|---|-----------------------|----------------------|--------------------|
| 1 | 7/08/23 | Course introduction | 8.1, 8.2, 8.3 | Classroom discussion | NU |
| 2 | 14/08/23 | - Physiology and chemistry of fish - Postharvest changes of fish | 8.1, 8.2, 8.3 | Classroom discussion | PT |
| 3 | 21/08/23 | - Seafood Nutrition & Seafood poisoning | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | PT |

| | | | | | |
|----|---|--|-----------------------|-------------------------------|--------|
| | | - Fishery microbiology | | | |
| 4 | 28/08/23 | Food additives in fishery industry | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | PT |
| 5 | 4/09/23 | Fishery processing I | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | PT |
| 6 | 11/09/23 | Fishery processing II | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | PT |
| 7 | 18/09/23 | Fishery products and by-products | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | PT |
| 8 | 25/09/23 | Microbiology in meat and product | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | NU |
| 9 | Mid-term Examination (2 nd October -6 th October 2023) | | | | |
| 10 | 9/10/23 | Meat : From Farm to Table I | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | ST |
| 11 | 16/10/23 | Meat : From Farm to Table II | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | ST |
| 12 | 23/10/23* | Meat : From Farm to Table II | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | ST |
| 13 | 30/10/23 | Surimi technology | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | PT |
| 14 | 6/11/23 | Slaughtering and carcass processing I | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | PT |
| 15 | 13/11/23 | Meat processing I | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | PT |
| 16 | 20/11/23 | Meat processing II | 8.1, 8.2, 8.3, 8.4 | Classroom discussion | PT |
| 17 | 27/11/23 | Meat & Fish Show (Poster presentation) | 8.1, 8.2, 8.3, 8.4 | Demonstration / Discussion | PT, NU |
| 18 | Final Examination (4 th December – 15 th December 2023) | | | | |
| 19 | | | | | |

Note: Day off for Chulalongkorn Day, lecture date will be changed and announced later

11. Course Assessment

| No. | Methods / Activities | Regulations | CLOs | Week | Weight Distribution (%) |
|------|------------------------------------|---|-----------------------|---------------|-------------------------|
| 11.1 | Mid-term exam | - Closed book - Calculator is not allowed | 8.1, 8.2, 8.3 | 2-8 | 38.5 |
| 11.2 | Final exam | - Closed book - Calculator is not allowed | 8.1, 8.2, 8.3 | 10-16 | 38.5 |
| 11.3 | Assignment Report | Rubric | 8.1, 8.2, 8.3, 8.4 | 18 | 10 |
| 11.4 | Presentation (Meat & Fish Show) | Rubric | 8.4 | 17 | 10 |
| 11.5 | Class participation | Instructor evaluation of class participation | 8.4 | 1-8, 10-18 | 3 |
| | | | | Total | 100 |

12. Grading System

Criterion-referenced evaluation

| Grade | Score | Grade | Score | Grade | Score | Grade | Score |
|-------|-------------|-------|-------------|-------|-------------|-------|-------------|
| A | ≥ 80 % | B | 70 – 74.99% | C | 60 – 64.99% | D | 50 – 54.99% |
| B+ | 75 – 79.99% | C+ | 65 – 69.99% | D+ | 55 – 59.99% | F | < 50 % |

Norm-referenced evaluation

13. References

13.1 จักรี ทองเรือง. 2544. ชูริมิ. สำนักพิมพ์แห่งจุฬาลงกรณ์มหาวิทยาลัย, กรุงเทพฯ. 325 หน้า.

13.2 คณะจารย์ภาควิชาวิทยาศาสตร์และเทคโนโลยีการอาหาร. 2546. วิทยาศาสตร์และเทคโนโลยีการอาหาร : Food science and technology. คณะอุตสาหกรรมเกษตร มหาวิทยาลัยเกษตรศาสตร์, พิมพ์ครั้งที่ 4, สำนักพิมพ์มหาวิทยาลัยเกษตรศาสตร์, กรุงเทพฯ.

13.3 มัทนา แสงจินดาวงษ์. 2548. ผลิตภัณฑ์ประมงของไทย. มหาวิทยาลัยเกษตรศาสตร์, กรุงเทพฯ. 322 หน้า.

13.4 Alasalvar, C. & Taylor, T. 2002. Seafoods : quality, technology, and nutraceutical applications, Springer, Berlin. 224 pp.

13.5 Hall, G.M. 1997. Fish processing technology, Blackie Academic & Professional, London. 292 pp.

13.6 Feiner, G. 2006. Meat Products Handbook: Practical Science and Technology. Woodhead Publishing Limited, Cambridge.

13.7 Hui, Y.H., W-K. Nip, R.W. Rogers, and O.A. Young. 2001. Meat Science and Applications. Marcel Dekker, Inc., New York.