

Course Title
Ph.D. in Food Science and Technology

Academic Institution: Faculty of Agro-Industry, Prince of Songkla University

Program Title: Doctor of Philosophy (Food Science and Technology) or Ph.D. (Food Science and Technology)

Program learning outcome (PLO)

PLO1 Generate the new knowledge or innovation for the development and improvement of food processing or food products, particularly seafoods, halal foods and agricultural products in the southern region.

PLO2 Develop research topic to solve the problem, develop new product and improve the food production process.

PLO3 Integrate knowledge in food science and technology to develop and improve the production process and develop new food product.

PLO4 Demonstrate honesty, responsibility and academic ethics.

PLO5 Apply research methodologies to correctly develop research projects.

PLO6 Select the relevant tools or software to increase efficiency in the production process and product development.

PLO7 Search and filter information using information technology for continuous learning.

PLO8 Demonstrate effective English communication skills applicable to academic context.

Philosophy of the Program

The program aims to produce graduates with high level of research skill for generating new knowledge and innovation to meet the needs of the food industry and to apply the profession and communicate appropriately both locally, nationally and internationally with morality and ethics. The program employs progressive learning, including active learning, problem-based learning, project-based learning and work-integrated learning.

PSU's educational philosophy (<http://webagro.psu.ac.th>)

PSU's educational philosophy is managed by

- Progressivism using learning process with the students as the “center of attention” and the basis of “Outcome Based Education” such as active learning, problem-based learning, project-based learning, service learning
- PSU aims to provide students with a lifelong learning approach
- PSU believes that these principles can be met and aided by Prince of Songkla Mahidol Adulyadej's motto “Our soul is for the benefit of mankind”

Program structure:

Courses	Plan 1 (Research only)		Plan 2 (Research with course works)	
	Plan 1.1	Plan 1.2	Plan 2.1	Plan 2.2
Compulsory	-	-	3	9
Elective	-	-	6	12
Thesis	48	72	Seminar 3 Thesis 36	Seminar 3 Thesis 48
Total	48	72	48	72

Note: Plan 1.1 and 2.1 for students who graduated in Master program

Plan 1.2 and 2.2 for students who graduated in Bachelor program

Study plan for Plan 1 (Research only)

Academic year	Semester	Plan 1.1		Plan 1.2	
1	1	850-948 Thesis	8 credits	850-972 Thesis	9 credits
	2	850-948 Thesis *850-661 Seminar 1	8 credits 1 credit	850-972 Thesis	9 credits
	Total		16 credits	Total	18 credits
2	1	850-948 Thesis *850-662 Seminar 2	8 credits 1 credit	850-972 Thesis 850-661* Seminar 1	9 credits 1 credit
	2	850-948 Thesis	8 credits	850-972 Thesis	9 credits
	Total		16 credits	Total	18 credits
3	1	850-948 Thesis	8 credits	850-972 Thesis	9 credits
	2	850-948 Thesis *850-663 Seminar 3	8 credits 1 credit	850-662* Seminar 1 850-972 Thesis	1 credit 9 credits
	Total		16 credits	Total	18 credits
4	1	-	-	850-972 Thesis	9 credits
	2	-	-	850-663* Seminar 1 850-972 Thesis	1 credit 9 credits
	Total			Total	18 credits
		Total	48 credits	Total	72 credits

Study plan for Plan 2 (Research with course works)

Academic year	Semester	Plan 2.1		Plan 2.2	
1	1	950-500 Research	3 credits	850-611 Functional Properties of Food Components	3 credits
		850-xxx Elective course	6 credits	850-631 Advanced Food Processing	3 credits
	Total		9 credits	Total	9 credits
	2	850-661 Seminar 1	1 credit	850-xxx Elective course	12 credits
		850-936 Thesis 1	7 credits		
Total		8 credits	Total	12 credits	
2	1	850-936 Thesis	8 credits	850-936 Thesis	8 credits
		Total		8 credits	Total
	2	850-662 Seminar 2 850-936 Thesis	1 credit 7 credits	850-661 Seminar 1 850-948 Thesis	1 credit 8 credits
Total		8 credits	Total	9 credits	
3	1	850-936 Thesis	8 credits	850-948 Thesis	8 credits
		Total		8 credits	Total
	2	850-663 Seminar 3 850-936 Thesis	1 credit 6 credits	850-662 Seminar 2 850-948 Thesis	1 credit 8 credits
Total		7 credits	Total	9 credits	
4	1	-	-	850-948 Thesis	8 credits
		Total		8 credits	Total
	2	-	-	850-663 Seminar 3 850-948 Thesis	1 credit 8 credits
Total			Total	9 credits	
		Total	48 credits	Total	72 credits

Elective courses 6 - 12 credits

850-500	Module: Food Ingredients from Agricultural Processing and Food Industry By-products	6((3)-9-6)
850-501	Module: Advanced Fruit and Vegetable Technology	6((3)-9-6)
850-602	Module: Properties, Bioactivities and Applications of Functional Ingredient in Foods	6((3)-9-6)
850-512	Advanced Food Analysis and Research Instrumentation	3((2)-3-4)
850-513	Functional Foods	3((2)-3-4)
850-514	Functional Food Ingredients and Alternative Food Additives	3((3)-0-6)
850-515	Meat and Poultry Meat Science	3((2)-3-4)
850-516	Advanced Food and Nutrition Toxicology	3((3)-0-6)
850-517	Utilization of By-Products from Fishery Industry	3((2)-3-4)
850-521	Experimental Design in Product Development	3((3)-0-6)
850-522	Sensory Evaluation of Foods	3((2)-3-4)
850-523	Mastering Innovation and Business Innovation Management	3((3)-0-6)
850-532	Physical and Engineering Properties of Food and Biomaterials	3((2)-3-4)
850-533	Membrane Technology in Food and Biotechnology Industries	3((3)-0-6)
850-534	Starch Technology	3((2)-3-4)
850-535	Food Protein Technology	3((2)-3-4)
850-536	Postharvest and Minimal Processing of Fruits and Vegetables	3((2)-3-4)
850-537	Science and Technology of Fat and Oil	3((2)-3-4)
850-541	Advanced Food Microbiology and Food Safety	3((3)-0-6)
850-542	Foodborne Pathogens and Controls	3((2)-3-4)
850-543	Food Safety and Risk Assessment	3((3)-0-6)
850-600	Special Topics in Food Science and Technology	3((3)-0-6)
850-632	Transport Phenomena in Food and Biomaterials	3((3)-0-6)
857-531	Enterprise Diagnosis in Food Industry	3((3)-0-6)

Duration: 3-4 years

Graduation Requirements

1. Pass qualifying examination
2. Meet the English performance following the regulation issued by Graduate School
3. Fulfill the program requirements with a GPA of at least 3.00 (except Plan 1)
4. Satisfy the proposal examination and thesis with grade S or X
5. Plan 1 publish the academic article from thesis or a part of thesis in a journal which has a peer review at least 2 articles (ISI, Scopus)
6. Plan 2 publish the academic article from thesis or a part of thesis in a journal or proceeding which has a peer review at least 1 article (ISI, Scopus)