

## Master of Science Program in Postharvest Technology (International Program)

M.Sc. (Postharvest Technology)

### Philosophy:

The Master of Science Program in postharvest technology focuses on developing human resources with creativity, in-depth knowledge and ability in multidisciplinary fields to analyze complicated problems. Graduates can effectively plan for research and apply suitable postharvest technology to maintain the quality of agricultural products and avoid damage. They can also create new knowledge and innovations. This international standard program aims at producing human resources imbued with morals, ethics, responsibility, honesty and dedication. They can effectively work in real situations and deal with problems professionally to create work beneficial for the country's development.

### Objectives:

1. To produce graduates imbued with high capability in postharvest technology, who can apply the knowledge in multidisciplinary fields such as plant anatomy, biochemistry, bio-molecular science, horticulture, food processing, microbiology, plant pathology, entomology, packaging and engineering to solve problems in the production process of agricultural produce and create innovations.
2. To produce graduates who are knowledgeable in conducting complicated research work, and apply the knowledge in industry to appropriately reduce the loss of agricultural produce after harvesting to meet the demand for agricultural industry development and food processing industry.
3. To provide opportunities for students to learn in real situations, from hands-on experience in the industrial sector so that they can be entrepreneurs in postharvest technology.
4. To promote academic services and disseminate the knowledge of postharvest technology to relevant agencies in both government and private sectors nationally and internationally.
5. To promote and produce research studies in postharvest technology relevant to the demand nationally and internationally to serve the free education policy of the ASEAN community.

**Qualifications of a prospective candidate:**

**Plan A 1**

1. Has at least one year research experience. And/or
2. Holds a bachelor's degree in agriculture, science or related fields with first class or second class honors.
3. Passes the entrance exam for postharvest technology background with a score of at least 50%.
4. Is a Thai national or a foreigner who can communicate well in English.
5. Has other qualifications as stipulated by KMUTT regulations for post graduate study and by the program faculties exam committee who consider the appropriateness to study in the program.

**Plan A 2**

1. Holds a bachelor's degree in agriculture, science or related fields with a GPA of at least 2.5.
2. Is a Thai national or a foreigner who can communicate well in English.
3. Has other qualifications as stipulated by KMUTT regulations for post graduate study and by the program faculties exam committee who consider the appropriateness to study in the program.

**Plan B**

1. Has at least one year work experience in the private sector.
2. Holds a bachelor's degree in agriculture, science or related fields.
3. Is a Thai national or a foreigner who can communicate in English and Thai.
4. Has other qualifications as stipulated by KMUTT regulations for post graduate study and by the program faculties exam committee who consider the appropriateness to study in the program.

**Professions after graduation:**

**Plan A 1**

1. High level researchers working locally and internationally.
2. Lecturers, researchers or academics in postharvest technology in government and private sectors.
3. PhD candidates.

**Plan A 2**

1. Researchers and agricultural produce promotion officers in government and private sectors.
2. Quality assurance managers of agricultural produce in wholesale and retail companies such as department stores and supermarkets.
3. Project analysts in science and technology.
4. PhD candidates.

**Plan B**

1. Researchers and agricultural produce promotion officers in government and private sectors.
2. Managers, officials and researchers of exporting companies for vegetables, fruits, flowers and seeds.
3. Entrepreneurs or owners of agricultural business.

**Curriculum**

Total Program Credits

Plan 1.1 Dissertation (Dissertation 36 Credits) 36 Credits

Plan 1.2 Dissertation (Dissertation 12 Credits) 38 Credits

Plan 2 Independent Study 38 Credits

**Curriculum Components**

Plan 1.1 (Dissertation 36 Credits) 36 Credits

Dissertation	36 Credits
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Plan 1.2 (Dissertation 12 Credits) 38 Credits

Major Course	14 Credits
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Elective Course	12 Credits
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Dissertation	12 Credits
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Plan 2 Independent Study 38 Credits

Major Course	17 Credits
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Elective Course	15 Credits
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Independent Study	6 Credits
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**COURSE STRUCTURE**

Plan 1.1 Dissertation (Dissertation 36 Credits) 36 Credits

**First Year**

<b>First Semester</b>	<b>Credits</b>
PHT 695 Dissertation	8 (0-16-32)
PHT 691 Seminar 1	1 (0-2-3)S/U
Total	8 (0-18-35)

**First Year**

<b>Second Semester</b>	<b>Credits</b>
PHT 695 Dissertation	10 (0-20-40)
PHT 692 Seminar 2	1 (0-2-3)S/U
Total	10 (0-22-43)

**Second Year**

<b>First Semester</b>	<b>Credits</b>
PHT 695 Dissertation	10 (0-20-40)
Total	10 (0-20-40)

**Second Year**

<b>Second Semester</b>	<b>Credits</b>
PHT 695 Dissertation	8 (0-16-32)
Total	8 (0-16-32)

Plan 1.2 Dissertation (Dissertation 12 Credits) 38 Credits

**First Year**

<b>First Semester</b>	<b>Credits</b>
PHT 601 Research Techniques in Postharvest Technology	3 (2-3-9)
PHT 621 Postharvest Handling Systems of Agricultural Commodities	3 (2-3-9)
PHT 622 Postharvest Physiology and Technology of Agricultural Commodities	3 (3-0-9)
Total	9 (7-6-27)

**First Year**

<b>Second Semester</b>	<b>Credits</b>
PHT xxx Elective Course 1	3 (x-x-x)
PHT xxx Elective Course 2	3 (x-x-x)

PHT 698 Special Problems	3 (3-0-9)
PHT 699 Dissertation	3 (0-6-12)
Total	12 (3+x-6+x-21+x)

**Second Year**

First Semester	Credits
PHT xxx Elective Course 3	3 (x-x-x)
PHT xxx Elective Course 4	3 (x-x-x)
PHT 699 Dissertation	4 (0-8-16)
PHT 691 Seminar 1	1 (0-2-3)
Total	11 (x-10+x-19+x)

**Second Year**

Second Semester	Credits
PHT 692 Seminar 2	1 (0-2-3)
PHT 699 Dissertation	5 (0-10-20)
Total	6 (0-12-23)

**Plan 2 Independent Study 38 Credits**

**First Year**

First Semester	Credits
PHT 601 Research Techniques in Postharvest Technology	3 (2-3-9)
PHT 621 Postharvest Handling Systems of Agricultural Commodities	3 (2-3-9)
PHT 622 Postharvest Physiology and Technology of Agricultural Commodities	3 (3-0-9)
PHT xxx Elective Course 1	3 (x-x-x)
Total	12 (7+x-6+x-27+x)

**First Year**

Second Semester	Credits
PHT 691 Seminar 1	1 (0-2-3)
PHT 693 Research Project 1	3 (0-6-12)
PHT xxx Elective Course2	3 (x-x-x)
PHT xxx Elective Course3	3 (x-x-x)
Total	10 (0+x-8+x-15+x)



**Second Year**

**First Semester**

	<b>Credits</b>
PHT 692 Seminar 2	1 (0-2-3)
PHT 694 Research Project 2	3 (0-6-12)
PHT xxx Elective Course4	3 (x-x-x)
PHT xxx Elective Course5	3 (x-x-x)
Total	10 (0+x-8+x-15+x)

**Second Year**

**Second Semester**

	<b>Credits</b>
PHT 690 Special Project Study	6 (0-12-24)
Total	6 (0-12-24)