

Master of Science Program in Systems Agriculture

An International Program

(อยู่ระหว่างดำเนินการปรับปรุงใหม่)

1. Title of the Curriculum

Master of Science Program in Systems Agriculture

2. Name of Degrees

Master of Science (Systems Agriculture)

M.Sc. (Systems Agriculture)

3. Objectives

To produce M.Sc. graduates with the following qualifications:

1. Having knowledge and skill in system concepts and methodologies.
2. Being capable of analyzing and diagnosing problems in agriculture and natural resources management.
3. Can conducting interdisciplinary system research to find solutions that are appropriated to farmers' conditions and circumstances at different hierarchical levels.
4. Having deeper knowledge in their specialized and/or related fields.
5. Can appropriately utilize and transfer their research findings.

4. Program Structure

Plan A Type A 1

Required courses		Non-credit
Thesis work	A minimum of	38 credits
Total	A minimum of	38 credits

Candidates are also required to take the following non-credit courses: 124 891 Systems Agriculture Seminar I, 124 892 Systems Agriculture Seminar II, and any other non-credit courses or course auditions as recommended by the thesis advisory committee. Also, thesis work must be published or accepted for publishing in an accredited journal for at least 2 papers.

Plan A Type A 2

Course work	A minimum of	26 credits
- Required courses	A minimum of	11 credits
- Elective courses	A minimum of	15 credits
Thesis	A minimum of	12 credits
Total	A minimum of	38 credits

Also, thesis work must be published or accepted for publishing in an accredited journal for at least 1 paper.

5. Program contents

5.1 Required courses

For Plan A Type A 1

Non-credit

124 891	Systems Agriculture Seminar I	1(1-0-3)
124 892	Systems Agriculture Seminar II	1(1-0-3)

and others as recommended by the thesis advisory committee

For Plan A Type A 2

11 credits

124 701	System Theories and Concepts	3(2-3-3)
124 702	Methods for Data Collection and Analysis in Systems Agriculture	3(1-6-3)
124 703	Case Study of Agricultural Systems	3(0-9-3)
124 891	Systems Agriculture Seminar I	1(1-0-3)
124 892	Systems Agriculture Seminar II	1(1-0-3)

5.2 Elective

For Plan A Type A 2

15 credits

Select from the following courses or additional elective courses as later designated by the

Program Management Committee:

110 710	Insect and Host Plant Relationships	3(3-0-2)
110 770	Insect Pest Management on Crops	3(2-3-2)
111 711	Physiological Plant Pathology	3(3-0-3)
111 731	Epidemiology and Plant Disease Management	3(2-3-2)
111 751	Post-harvest Pathology of Vegetables and Fruits	3(2-3-2)
111 752	Seed Pathology	3(2-3-2)
111 753	Major Diseases of Economic Crops and Their Management	3(2-3-2)

132 711	Advanced Soil Fertility	3(3-0-3)
132 712	Soil Water and Plant Relationships	3(3-0-3)
122 733	Remote Sensing	3(2-3-2)
122 734	Geographic Information Systems in Land Resource Application	3(2-3-2)
122 738	Integrate Participatory Land Use planning	3(3-0-3)
122 741	Integrated Soil Resource Management	3(3-0-3)
122 743	Control of Environmental Pollution and Management	3(3-0-3)
113 711	Advanced Vegetable Crops Production	3(2-3-0)
113 721	Commercial and Industrial Fruit Crops	3(2-3-0)
113 731	Advanced Flower and Ornamental Crops	3(2-3-0)
113 742	Nutritional Requirements of Horticultural Crops	3(2-3-0)
113 743	Growth and Development of Horticultural Crops	3(3-0-0)
113 745	Postharvest Physiology and Technology of Horticultural crops	3(2-3-0)
113 751	Horticultural Seed Quality Control	3(2-3-0)
114 701	Research Methods in Agriculture	3(2-3-0)
114 703	Crop Growth Modeling	3(2-3-3)
114 711	Tropical Crop Production	3(3-0-0)
114 741	Crop Adaptation	3(3-0-0)
114 742	Nutrition of Field Crops	3(3-0-0)
114 743	Physiology of Crop Growth and Development	3(3-0-0)
114 744	Applied Physiology in Crop Production	3(3-0-0)
114 751	Seed Quality Control	3(2-3-0)
114 762	Cropping Systems	3(3-0-0)
114 801	Current Topics in Crop Production	3(1-6-6)
115 701	Fundamental Background for Agribusiness	3(3-0-9)
115 711	Advanced Agricultural production Economics	3(3-0-9)
115 721	Agricultural Marketing Management	3(3-0-9)
115 724	Managerial Economics in Agribusiness	3(3-0-9)
115 731	Advanced Resource and Environmental Economics	3(3-0-9)
116 701	Program Planning and Evaluation in Agricultural Extension	3(3-0-0)
116 702	Administration and Supervision in Agricultural Extension	3(3-0-0)
116 715	Psychology in Agricultural Extension	3(3-0-0)
116 725	Agricultural Extension Methodology	3(3-0-0)
127 700	Integrated Animal Production in Farming Systems	3(2-3-3)
127 735	Advanced Reproductive Physiology	3(3-0-3)

127 740	Tropical Feed Resources and Feeding Technology	3(3-0-3)
127 741	Advanced Ruminant Nutritional Science	3(3-0-3)
127 742	Nonruminant Nutritional Science	3(3-0-3)
127 760	General Veterinary Medicine	3(3-0-3)
127 771	Advanced Tropical pasture	3(3-0-3)
117 843	Ruminant Nutritional Science Modeling	3(3-0-3)
124 781	Selected Topics in Systems Agriculture	3(1-6-6)
124 782	Selected Topics in Systems Agriculture	2(1-3-6)
124 783	Selected Topics in Systems Agriculture	1(0-3-3)
124 801	Current Topics in Systems Agriculture	3(1-6-5)
124 894	Special Problems in Systems Agriculture	3(1-6-5)
415 718	Sociology of Natural Resources and Environment	3(3-0-9)
415 732	Population, Resources and Environment	3(3-0-9)
512 726	Environmental Impact Assessment	2(2-0-6)
751 713	Local Institutional Development	3(3-0-6)
751 716	Natural Resources and Environmental Management	3(3-0-6)

5.3 Thesis

For Plan A Type A 1

124 898	Thesis	38 credits
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For Plan A Type A 2

124 899	Thesis	12 credits
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6. Study plans

Course no.	Course name	Plan A 1	Plan A 2
<i>First Year 1st Semester</i>			
124 701	System Theories and Concepts	-	3
124 702	Methods for Data Collection and Analysis in Systems Agriculture	-	3
124 898	Thesis	6	-
xxx xxx	Elective	-	3
	Total	6	9

First Year 2nd Semester

124 703	Case Study of Ag. Sys.	-	3
124 891	Systems Agriculture Seminar I	non-credit	1
124 898	Thesis	10	-
124 899	Thesis	-	3
xxx xxx	Elective	-	3
	Total	10	10

Course no.	Course name	Plan A 1	Plan A 2
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Second Year 1st Semester

124 898	Thesis	12	-
124 899	Thesis	-	4
xxx xxx	Elective	-	6
	Total	12	10

Second Year 2nd Semester

124 892	Systems Agriculture Seminar II	non-credit	1
124 898	Thesis	10	-
124 899	Thesis	-	5
xxx xxx	Elective	-	3
	Total	10	9
	Cumulative credits	38	38