

Doctor of Philosophy Program in Land Resources and Environment

International Program

1. Degree Program :

Doctor of Philosophy Program in Land Resources and Environment
ปรัชญาดุษฎีบัณฑิต สาขาวิชาทรัพยากรที่ดินและสิ่งแวดล้อม

2. Degree Offered :

Doctor of Philosophy (Land Resources and Environment)
ปรัชญาดุษฎีบัณฑิต (ทรัพยากรที่ดินและสิ่งแวดล้อม)
Ph.D. (Land Resources and Environment)
ปร.ด. (ทรัพยากรที่ดินและสิ่งแวดล้อม)

3. Objectives :

Main objectives of the curriculum are to develop human resources at Ph. D. level for :

- 3.1 high capacity on application of innovations on land resources and environment
- 3.2 high capacity on problem-solving research and development of innovations in land research and environment management
- 3.3 high level scientists in land resources and environment with capacity to share and exchange knowledge both locally and internationally, for government and private sectors

4. Curriculum

The doctorate degree program in Land Resources and Environment offers 2 study types.

4.1 Type 1 emphasizes research dissertation that will generate new knowledge and has high academic quality in Land Resources and Environment

Type 1(1) Candidates with bachelor degree or equivalent are required to complete a minimum of 72 credits for the thesis work and take the following non-credit courses : 122 891 Seminar in Land Resources and Environment I, 122 892 Seminar in Land Resources and Environment II, 122 991 Seminar in Land Resources and Environment III, 122 992 Seminar in Land Resources and Environment IV, and 122 993 Seminar in Land Resources and Environment V; and other non-credit courses or course auditions as recommended by the supervisory committee.

Type 1(2) Candidates with master degree or equivalent are required to complete a minimum of 48 credits for the thesis work and take the following non-credit courses : 122 991 Seminar in Land Resources and Environment III, 122 992 Seminar in Land Resources and Environment IV, and 122 993 Seminar in Land

Resources and Environment V; and other non-credit courses or course auditions as recommended by the supervisory committee.

4.2 Type 2 requires students to take both course work and dissertation research that will generate new knowledge and has high academic quality in Land Resources and Environment.

Type 2(1) Candidates with bachelor degree or equivalent are required to complete a minimum of 48 credits for the dissertation and a minimum of 24 credits for course work.

Type 2(2) Candidates with master degree or equivalent are required to complete a minimum of 36 credits for the dissertation and a minimum of 12 credits for course work.

5 Courses

5.1 Type 1

(1) Type 1(1) For candidate with Bachelor degree or equivalent. The minimum required 72 credits of the program comprise of :

A. Required courses

Non-credit

The following courses and others as recommended by the supervisory committee are required as non-credit :

122 891	Seminar in Land Resources and Environment I	1(1-0-3)
122 892	Seminar in Land Resources and Environment II	1(1-0-3)
122 991	Seminar in Land Resources and Environment III	1(1-0-3)
122 992	Seminar in Land Resources and Environment IV	1(1-0-3)
122 993	Seminar in Land Resources and Environment V	1(1-0-3)

B. Dissertation

72 Credits

122 996	Dissertation	72 Credits
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(2) Type 1(2) For candidate with Master degree or equivalent. The minimum required 48 credits of the program comprise of :

A. Required courses

Non-credit

The following courses and others as recommended by the supervisory committee are required as non-credit :

122 991	Seminar in Land Resources and Environment III	1(1-0-3)
122 992	Seminar in Land Resources and Environment IV	1(1-0-3)
122 993	Seminar in Land Resources and Environment V	1(1-0-3)

B. Dissertation

48 Credits

122 997	Dissertation	48 Credits
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5.2 Type 2

(1) Type 2(1) For candidate with Bachelor degree or equivalent. The minimum required 72 credits of the program comprise of :

A. Required courses		9 Credits
122 705	Research Methods in Natural Resources	3(3-0-3)
122 991	Seminar in Land Resources and Environment III	1(1-0-3)
122 992	Seminar in Land Resources and Environment IV	1(1-0-3)
122 993	Seminar in Land Resources and Environment V	1(1-0-3)
122 994	Special Problems in Land Resources and Environment	3(0-9-3)

B. Elective courses	15 Credits
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Select a minimum of 15 credits from the following courses or any courses offered in the Department and any revision thereafter.

114 701	Research Methods in Agriculture	3(2-3-0)
114 742	Nutrition of Field Crops	3(3-0-3)
122 701	Principle of Environmental Science	3(3-0-3)
122 703	Soil Resources	3(3-0-3)
122 723	Analytical Methods for Land Resources and Environmental Quality	3(1-6-3)
122 733	Remote Sensing	3(2-3-2)
122 734	Geographic Information Systems in Land Resource Applications	3(2-3-2)
122 735	Land Resources	3(3-0-3)
122 736	Land Classification	3(3-0-3)
122 737	Land Evaluation	3(3-0-3)
122 738	Integrated Participatory Land Use Planning	3(3-0-3)
122 743	Environmental Pollution and Management	3(3-0-3)
122 746	Agroforestry	3(3-0-3)
122 890	Selected topics in Land Resources and Environment	3(3-0-3)
126 733	Agro-ecosystem	3(3-0-0)
132 711	Advanced Soil Fertility	3(3-0-3)
132 712	Soil-Water and Plant Relationships	3(3-0-3)
132 713	Submerged Soils	3(3-0-3)
132 714	Problem Soils and Their Management	3(3-0-3)
132 721	Advanced Soil Chemistry	3(3-0-3)
132 722	Advanced Soil and Plant Analysis	3(1-4-3)

132 731	Soil Classification	3(3-0-3)
132 732	Soils of Thailand	3(3-0-3)
132 741	Integrated Soil Resources Management	3(3-0-3)
132 742	Forest Soils	3(3-0-3)
132 751	Advanced Soil Physics	3(3-0-3)
132 761	Advanced Soil Microbiology	3(2-3-3)
163 721	Applied Hydrology	3(3-0-6)
163 750	Applied Soil Physics	3(3-0-6)
311 714	Plant Geography	3(2-3-4)
415 718	Sociology of Natural Resources and Environment	3(3-0-6)
512 726	Environmental Impact Assessment	2(2-0-6)

C. Dissertation

48 Credits

122 998	Dissertation	48 Credits
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(2) Type 2(2) For candidate with Master degree or equivalent. The minimum required 48 credits of the program comprise of :

A. Required courses

3 Credits

122 991	Seminar in Land Resources and Environment III	1(1-0-3)
122 992	Seminar in Land Resources and Environment IV	1(1-0-3)
122 993	Seminar in Land Resources and Environment V	1(1-0-3)

B. Elective courses

9 Credits

Select a minimum of 9 credits from the following courses or any courses offered in the Department and any revision thereafter.

114 701	Research Methods in Agriculture	3(2-3-0)
114 742	Nutrition of Field Crops	3(3-0-3)
122 701	Principle of Environmental Science	3(3-0-3)
122 703	Soil Resources	3(3-0-3)
122 723	Analytical Methods for Land Resources and Environmental Quality	3(1-6-3)
122 733	Remote Sensing	3(2-3-2)
122 734	Geographic Information Systems in Land Resource Applications	3(2-3-2)
122 735	Land Resources	3(3-0-3)
122 736	Land Classification	3(3-0-3)
122 737	Land Evaluation	3(3-0-3)
122 738	Integrated Participatory Land Use Planning	3(3-0-3)

122 743	Environmental Pollution and Management	3(3-0-3)
122 746	Agroforestry	3(3-0-3)
122 890	Selected topics in Land Resources and Environment	3(3-0-3)
126 733	Agro-ecosystem	3(3-0-0)
132 711	Advanced Soil Fertility	3(3-0-3)
132 712	Soil-Water and Plant Relationships	3(3-0-3)
132 713	Submerged Soils	3(3-0-3)
132 714	Problem Soils and Their Management	3(3-0-3)
132 721	Advanced Soil Chemistry	3(3-0-3)
132 722	Advanced Soil and Plant Analysis	3(1-4-3)
132 731	Soil Classification	3(3-0-3)
132 732	Soils of Thailand	3(3-0-3)
132 741	Integrated Soil Resources Management	3(3-0-3)
132 742	Forest Soils	3(3-0-3)
132 751	Advanced Soil Physics	3(3-0-3)
132 761	Advanced Soil Microbiology	3(2-3-3)
163 721	Applied Hydrology	3(3-0-6)
163 750	Applied Soil Physics	3(3-0-6)
311 714	Plant Geography	3(2-3-4)
415 718	Sociology of Natural Resources and Environment	3(3-0-6)
512 726	Environmental Impact Assessment	2(2-0-6)
	C. Dissertation	36 Credits
122 999	Dissertation	36 Credits

6. Class Schedules

6.1 Type 1(1)

First Year	1 st Semester	Credits			
		Type 1(1)	Type 1(2)	Type 2(1)	Type 2(2)
122 705	Research Methods in Natural Resources	-	-	3	-
122 996	Dissertation	9	-	-	-
122 997	Dissertation	-	9	-	-
xxx xxx	Elective courses	-	-	9	9
	Total Credits in 2 nd Semester	9	9	12	9
	Total Credits	9	9	12	9

First Year		2nd Semester		Credits			
		Type 1(1)	Type 1(2)	Type 2(1)	Type 2(2)		
122 996	Dissertation	9	-	-	-		
122 997	Dissertation	-	9	-	-		
122 998	Dissertation	-	-	6	-		
122 999	Dissertation	-	-	-	9		
xxx xxx	Elective courses	-	-	6	-		
Total Credits in 2 nd Semester		9	-	12	9		
Total Credits		18	18	24	18		

Second Year		1st Semester		Credits			
		Type 1(1)	Type 1(2)	Type 2(1)	Type 2(2)		
122 891	Seminar in Land Resources and Environment I	Non-credit	-	-	-		
122 991	Seminar in Land Resources and Environment III	-	Non-credit	-	1		
122 996	Dissertation	9	-	-	-		
122 997	Dissertation	-	9	-	-		
122 998	Dissertation	-	-	9	-		
122 999	Dissertation	-	-	-	8		
Total Credits in 2 nd Semester		9	9	9	9		
Total Credits		27	27	33	27		

Second Year		2nd Semester		Credits			
		Type 1(1)	Type 1(2)	Type 2(1)	Type 2(2)		
122 892	Seminar in Land Resources and Environment II	Non-credit	-	-	-		
122 992	Seminar in Land Resources and Environment IV	-	Non-credit	-	1		
122 994	Special Problems in Land Resources and Environment	-	-	3	-		
122 996	Dissertation	9	-	-	-		
122 997	Dissertation	-	9	-	-		
122 998	Dissertation	-	-	6	-		
122 999	Dissertation	-	-	-	8		
Total Credits in 2 nd Semester		9	9	9	9		
Total Credits		36	36	42	36		

Third Year	1 st Semester	Credits			
		Type 1(1)	Type 1(2)	Type 2(1)	Type 2(2)
122 892	Seminar in Land Resources and Environment II	-	-	-	-
122 991	Seminar in Land Resources and Environment III	Non-credit	-	1	-
122 993	Seminar in Land Resources and Environment V	-	Non-credit	-	1
122 996	Dissertation	9	-	-	-
122 997	Dissertation	-	9	-	-
122 998	Dissertation	-	-	8	-
122 999	Dissertation	-	-	-	8
	Total Credits in 2 nd Semester	9	9	9	9
	Total Credits	45	45	51	45

Third Year	2 nd Semester	Credits			
		Type 1(1)	Type 1(2)	Type 2(1)	Type 2(2)
122 892	Seminar in Land Resources and Environment II	-	-	-	-
122 992	Seminar in Land Resources and Environment IV	Non-credit	-	1	-
122 996	Dissertation	9	-	-	-
122 997	Dissertation	-	3	-	-
122 998	Dissertation	-	-	8	-
122 999	Dissertation	-	-	-	3
	Total Credits in 2 nd Semester	9	3	9	3
	Total Credits	54	48	60	48

Fourth Year		1st Semester	Credits			
			Type 1(1)	Type 1(2)	Type 2(1)	Type 2(2)
122 892	Seminar in Land Resources and Environment II	-	-	-	-	
122 993	Seminar in Land Resources and Environment V	Non-credit	-	1	-	
122 996	Dissertation	9	-	-	-	
122 998	Dissertation	-	-	8	-	
	Total Credits in 2 nd Semester	9	-	9	-	
	Total Credits	63	-	69	-	

Fourth Year		2nd Semester	Credits			
			Type 1(1)	Type 1(2)	Type 2(1)	Type 2(2)
122 892	Seminar in Land Resources and Environment II	-	-	-	-	
122 993	Seminar in Land Resources and Environment V	-	-	-	-	
122 996	Dissertation	9	-	-	-	
122 998	Dissertation	-	-	3	-	
	Total Credits in 2 nd Semester	9	-	3	-	
	Total Credits	72	-	72	-	