



Doctor of Philosophy Program in Epidemiology and Biostatistics

Faculty of Public Health

Khon Kaen University, Khon Kaen, THAILAND

Part I

Overview of the Program

1. Degree Offered

Doctor of Philosophy in Epidemiology and Biostatistics

Full name: Doctor of Philosophy (Epidemiology and Biostatistics)

Abbreviation: Ph.D. (Epidemiology and Biostatistics)

2. Body of the Program

2.1 Responsible Faculties

The degree is operated under the Faculty of Public Health, Khon Kaen University.

2.2 Management of the Program

The executive committee for the program includes the faculty members of the Faculty of Public Health and the Faculty of Medicine. This body monitors the program in accordance with Khon Kaen University requirements. Its roles include setting up practice guidelines regarding admission requirements and processes, teaching and learning activities, dissertation advisory system and graduation. There is another committee for the evaluation and development of the program. This body comprises professionals from outside the University Admission System.

There is a committee for screening applicants. This body assesses the qualifications to be sure applicants meet the specified requirements. These procedures are open to scrutiny.

3. Philosophy and Objectives

3.1 Philosophy

Effective medical and health development requires expertise in epidemiology and biostatistics. Therefore, our program teaches advanced medical and health sciences by integrating epidemiology and biostatistics concepts through the full range of health-related disciplines.

The Doctor of Philosophy in epidemiology and biostatistics program is an advanced educational program for health professionals from a variety of backgrounds who want to develop advanced professional skills. The program requires a prior master degree level or equivalent health science-related professional experience. It aims to develop and enhance advanced skills in solving health problems in light of an advanced skill in epidemiology and biostatistics. The program emphasizes the incorporation of each student's expertise into the development of epidemiology and biostatistics skills. It is designed to enable students to learn by themselves, to work efficiently and collaboratively across disciplines, to gain experiences internationally, to be pioneers in scholarly works and to be able to initiate and pursue their advanced knowledge in epidemiology and biostatistics.

3.2 Objectives

The program intends to produce doctoral graduates in epidemiology and biostatistics who can:

- search out knowledge in the health sciences through epidemiologic and biostatistical methods to synthesize new relationships that can be applied to policy formulation,
- select appropriate knowledge and technologies for planning and solving medical and health problems, and
- maintain high competence for analysis of comprehensive medical and health problems, formulating appropriate strategies of problem solving by efficiently integrating them into each situation and aiming for an international standard.

4. Duration of the Program

Students are required to enroll for at least 3 years (6 semesters) but not longer than 6 years (12 semesters). Each semester has at least 15 weeks.

5. Registration

- 5.1 Students can register for a course or withdraw, or add from and to a course, with the consent of the advisor or chairperson of the course. The time and fee for registration will be set by the University.
- 5.2 Registration is divided into three types:
 - Registration for credit.
 - Registration for a result of **S** and **U** (Audit).
 - Registration as a visitor.
- 5.3 Students in the fulltime Program in the regular semester must register in not less than nine credits and not more than fifteen. Students in the part-time Program must register in not less than three credits and not more than eight. Students who wish to register in fewer can only do so when the remaining credits add up to less than the figure set by the Dean concerned.
- 5.4 In the summer session, a student can only register in a maximum of six credits. These are exempted from this rule.
- 5.5 Students cannot re-register in a course in order to improve their grade to a **B** or more. In case students have completed all courses in the Program and received a grade point average of less than 3.00, they can re-take a course to improve a grade lower than **A**.
- 5.6 Students who have registered in all their courses but cannot graduate, or students who are on a leave, must pay the student fees set by Khon Kaen University in order to maintain their student status.
- 5.7 Students can register in any course in the study plan (or equivalent) in another institution and have it counted for credit provided they have consent from their advisor and the Dean concerned.

6. Evaluation and Graduation

6.1 The grade levels, symbols, meanings and values in the evaluation process are as follows:

Level	Meaning	Credit value
A	Excellent	4.0
B+	Very good	3.5
B	Good	3.0
C+	Average	2.5
C	Fair	2.0
D+	Poor	1.5
D	Very poor	1.0
F	Fail	0
I	Incomplete for courses which have value in either of the following cases: 1. Students cannot take the examination for unforeseen reasons. 2. Students cannot complete the tasks set by the lecturer. This has to be permitted by the Dean.	-
S	Satisfactory for a registered course, not taken for credit (audit). This is used to denote progress made in the production of a thesis or independent study.	-
U	Unsatisfactory for a registered course, not taken for credit (audit). This is used to denote progress made in the production of a thesis or independent study.	-
V	Visit. In case of registration in order to visit any course.	-
W	Withdrawn is used when students are given permission to withdraw or take a leave of absence from class. It is also used when a student is suspended from a class in a particular semester.	-
X	An evaluation that cannot be carried out as the student is still studying, doing research, or embarked on a course of study for which more than one semester is required. The X is changed to an S or a U when the work is completed.	-

6.2 The qualifying and English examinations are given a grade of **S** (meaning the student has passed the examination) or **U** (meaning the student has not passed). Students cannot attempt a qualifying examination more than twice (see details in Part II). No limit has been set for the number of times needed to achieve at least one of the following level of English proficiency:

(1) TOEFL (Paper Based)	550
(2) TOEFL (Computer Based)	175
(3) TOEFL (Internet Based)	61
(4) IELTS (Academic Module)	6.0

- 6.3 The dissertation will be given the grade Excellent, Good, Pass, or Fail. It cannot be attempted more than twice.
- 6.4 A course grade lower than a C, or a U in a compulsory course, is considered below average and should be re-taken.
- 6.5 Students caught cheating in an examination will be failed in that subject.
- 6.6 Students who graduate must have the following qualifications:
 - i. a complete set of credits for the Program.
 - ii. a cumulative grade point average of not less than 3.00.
 - iii. parts of the dissertation published must be:
 - 1) For Type 1.1 program, at least 3 papers published or being accepted for publication in international, peer-reviewed journals that archived at ISI, SCOPUS, or TCI database, of these, the student must be the first author for at least 2 papers that archived at the ISI database.
 - 2) For Type 2.1 program, at least 2 papers published or being accepted for publication in international, peer-reviewed journals that archived at ISI, SCOPUS, or TCI database, of these, the student must be the first author for at least 1 paper that archived at the ISI database.
 - iv. a Pass on the oral defense – effective the day the dissertation report has been approved by the Program Committee.
 - v. a Pass on the English examination.

7. Curriculum

The Doctor of Philosophy Program in Epidemiology and Biostatistics has two curriculum streams: one without course work (the Type 1.1 Program), and one with course work (the Type 2.1 Program). The Type 1.1 Program requires 48 credits for the dissertation. Other subjects may be taken with permission from the Dissertation Committee but not for credit. The Type 2.1 Program requires the students to enroll in 12 credits of course work plus 36 credits of dissertation. The student is required to pass a qualifying examination before proceeding with the dissertation.

Learning Experience

All course work is designed to be student-centered. The teaching materials are designed in a modular format to facilitate self-learning. Learning experiences are organized so that the students are motivated and encouraged to improve research, critical appraisal, synthesizing, and assimilation skills. Thus, formal lectures will be kept to a minimum. Activities are designed for searching and practicing through guided class discussions. The course coordinator is also the facilitator so students can achieve the learning objectives for each subject.

The Qualifying examination before enrolling in the dissertation is designed to assess the competency of students in the theoretical concepts of public health and its application. The exam includes both a written and an oral component under the direction of five examiners nominated by the program Executive Committee. The criterion for a Pass is that all the examiners give a Pass evaluation. Those who fail can request a re-examination within 45 days after the first examination. Student status is terminated if a student fails the second

examination. Those who pass the examination are granted PhD candidacy and the student can enroll for the dissertation.

Seminar

PhD candidates currently enrolled in the dissertation are required to participate in the following activities.

- Doctoral Seminar (DS) where each student is required to present and lead the discussion of at least one research manuscript per semester.
- PhD Seminar where each student is required to present dissertation-related work at least once a semester.

Details of these activities are described in Part II.

Dissertation Advisory and Control System

There is a procedure to ensure that there is a Dissertation Committee and the procedures in monitoring, controlling, and examining to meet the requirements of the Graduate School of Khon Kaen University. The dissertation has to be written and defended (orally) in English.

Also, there is a procedure to ensure that candidate meet their supervisors on average two hours per week to keep supervisors informed of progress and to gain advice.

The Course

The program has:

- "compulsory courses" which provide the tools for searching and establishing knowledge related to epidemiology and biostatistics;
- "elective courses" which provide knowledge in specific disciplines in which the student wants to develop skill and expertise;
- other public health-related courses to be audited as suggested by the Dissertation Committee for background standardization of the candidate;
- a qualifying examination for development of search and synthesis skills; and
- a dissertation for application of skills learned in a particular discipline.

Details of the curriculum are as follows:

A. Program Structure

	Type 1.1	Type 2.1	
Compulsory courses	-	6	credits
Seminar	3	3	
	(not for credit)		
Elective courses	-	3	credits
Dissertation	48	36	credits
Total	48	48	credits

B. Courses

B.1 Compulsory Courses

The program without course work or the Type 1.1 Program may require some non-credit course work.

The Type 2.1 Program needs a total of 6 credits for the following courses:

500 901	Advanced Epidemiologic Methods	3(2-3-5)
500 902	Advanced Biostatistical Methods	3(2-3-5)

Besides these compulsory courses, additional courses may be required later, however, notification will be given before the semester begins.

B.2 Seminar Courses

The program without course work or the Type 1.1 Program may require 3 non-credit course work.

The Type 2.1 Program needs a total of 3 credits for the following courses:

500 991	Seminar in Epidemiology and Biostatistics I	1(1-0-2)
500 992	Seminar in Epidemiology and Biostatistics II	2(2-0-4)

B.3 Elective Courses

Type 1.1 Program students may enroll in these courses for non-credit hours, with the permission of their Advisory Committee.

Type 2.1 Program students must enroll in at least 3 credits from the courses listed below (or additional courses yet to be announced).

500 701	Statistical Methods for Evidence-based Health Care	3(3-0-6)
500 702	Evaluation of Cancer and Chronic Diseases Screening	3(3-0-6)
500 703	Bioinformatics in Epidemiology	3(3-0-6)
500 704	Stochastic Process in Epidemiology	3(3-0-6)
500 705	Advanced Stochastic Process in Epidemiology	3(3-0-6)
513 703	Epidemiology of Communicable Diseases	2(2-0-4)
513 720	Health Impact Assessment	2(2-0-4)
513 902	Advanced Cancer Epidemiology	3(3-0-6)
516 913	Health Database Management	3(2-3-5)
516 914	Selected Topics in Programming in Health Informatics	3(2-3-5)

Students can enrol in other graduate courses at Khon Kaen University or other universities with permission of the Doctor of Philosophy in Epidemiology and Biostatistics Program Committee.

B.4 Dissertation

B.4.1 The program without course work [Type 1.1 Program]

500 997	Dissertation	48	credits
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B.4.2 The program with course work [Type 2.1 Program]

500 999	Dissertation	36	credits
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