

Master of Science Programme in Epidemiology (International Programme)

Academic Institution: Epidemiology Unit, Faculty of Medicine, Prince of Songkla University
(a designated WHO Collaborating Centre for Research and Training on Epidemiology)

Duration: Two (2) academic years

Objectives:

The general objectives of this programme are to assist the participants to

- understand in depth the logic and methods of epidemiology.
- apply epidemiological methods in questioning, studying and drawing conclusions on health problems in developing countries.
- obtain practical skills in integrating appropriate information technologies for epidemiology and health care systems.

Upon completion of the programme, participants should be able to:

- demonstrate substantial knowledge in epidemiological methods.
- perform an epidemiological study related to his or her locality.
- demonstrate an ability to keep up with modern knowledge in epidemiology.
- demonstrate skills in data management related to research and health information.

Course Synopsis and Methodology:

This is a sandwich-type international programme. In the first year students will attend classes at Prince of Songkla University in which all students will gain knowledge and skills in epidemiology, statistics, research methodology, database management, critical appraisal of research studies, qualitative research and field work. In the second year students will concentrate on their thesis which should focus on the importance of health problems in the student's own country using good research methodology. In the first half of the second year the students will collect data at their home institution. The later half is for data analysis and preparation of the thesis and manuscripts for publication in international journals.

Course Content/Study Topic:

1. Core courses

Research methodology

Introduction to research methodology, rationale for research, formulation of research objectives and hypothesis, research strategy, sampling and population, measurement, data collection and analysis, report preparation.

Epidemiological Methods I

Scientific reasoning, health indicators, determining health priorities, measurement of risk, causation, source of bias, introduction to study design, cross-sectional study, case-control study, cohort study, randomized controlled trial, bias, confounding and interaction, preparation of field study and construction of questionnaire.

Epidemiological Methods II

Appraisal of original articles, clinical agreement, diagnostic tests and screening, randomized controlled trial, good clinical practice (GCP) and special epidemiological methods.

Biostatistics and statistical computing I

Summarizing and presenting data, probability theory, binomial/Poisson distribution, normal distribution, sampling distributions, estimation, hypothesis testing of means and proportions, regression and correlation, non-parametric tests, analysis of categorical data.

Biostatistics and statistical computing II

Data exploration and strategy of data analysis, analysis of 2 x 2 tables, analysis of confounding and interaction, logistic regression, Poisson regression, survival analysis, sample size, meta-analysis.

Computer application for research

Basic anatomy and physiology of computers, operating systems, file management, hard disk management, computer virus, security, word processing, database, spread sheet, graphic presentation, computer network, Internet, electronic mail, academic database, data quality control, relational database and development of information systems for health services.

Journal appraisal

Understanding and criticism of an original article in an international journal presented in the class.

Field work

Identification of priority for a rapid (1 week) field research project, preparation of the proposal, planning of the study, data collection and analysis, presentation to decision makers and relevant parties.

2. Elective course

Qualitative techniques in health research

Concepts of qualitative techniques, conceptual framework, interview techniques, focus group discussion, observation techniques, field work.

3. The thesis

The thesis demonstrates the capability of the student in conducting a well planned research study of international standard.

A Master thesis is the beginning of professionalization for an epidemiological research career. The proposal will be prepared and refined in parallel with the progress of the coursework through group discussion before submission for approval by the Committee for Graduate Study of the University by the end of the first year. Data collection will be undertaken for a period of six months in the student's regular place of work. Final analysis and preparation of the thesis will occupy the final six months in Prince of Songkla University to ensure quality of work and success.

Qualifications:

1. The candidate should have completed a bachelor degree in a health profession such as medicine, public health, nursing or other related field. At least one-year of working experience in health services is preferred.
2. The candidate must have a working position in a health institution, which will provide administrative support for the data collection phase during the second year of study.
3. The candidate should have good command of English essential for carrying out study under the University requirements (TOEFL \geq 500, IELTS \geq 5.0, CU-TEP \geq 60, PSU-TEP \geq 60). In case of necessity, the candidates may need to take a special English course provided by Prince of Songkla University 2-6 months before the academic year starts in August.

Documents Required:

- Application form
- A medical examination report which includes results of chest x-ray, complete blood count, urinalysis and HIV test.
- An official transcript from all institutions of higher learning attended.
- Curriculum vitae, including a list of publications if available.
- An official report of the result of the English language proficiency examination (see Qualifications above).

Number of Participant: 3

Eligible Countries:

Afghanistan, Bangladesh, Cape Verde, Comoros, Eritrea, Fiji, Ghana, Indonesia, Iran, Jordan, Lesotho, Malaysia, Maldives, Mauritania, Nepal, Nigeria, Pakistan, Papua New Guinea, Philippines, Republic of Seychelles, Rwanda, Senegal, Solomon Island, South Sudan, Sudan, Sri Lanka, Timor-Leste, Togo and Vanuatu.

Closing Date for Nominations:
March 2016

Contact:

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