



**MASTERS IN PUBLIC HEALTH,
SPECIALISING IN HEALTH ECONOMICS**

2011 Programme



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INTRODUCTION

The University of Cape Town (UCT) is South Africa's oldest university. It was founded in 1829 as the South African College, and developed into a university between 1880 and 1900. Today UCT is recognised internationally as Africa's leading research university. With more than 70 specialist units, UCT is home to more than a quarter of South Africa's A-rated scientists. Regarding teaching, particular emphasis is placed on postgraduate studies and around 30% of students are enrolled in postgraduate programmes.

The Health Economics Unit (HEU) was formally established in 1990 as a division of the School of Public Health and Family Medicine in the Faculty of Health Sciences. In recognition of the limited opportunities for postgraduate study in health economics within Africa and the importance of capacity development within this discipline, the HEU offers a Masters in Public Health (MPH) specialising in Health Economics. The curriculum has a developing country focus, and while theoretical components are included, the programme concentrates on the development of practical research skills that are useful to graduates working in African health systems.

TARGET AUDIENCE, ENTRY REQUIREMENTS AND APPLICATION GUIDELINES

The course is designed for graduates in social or health sciences. The entry requirement is at least a second class honours degree in economics, health and social sciences, or equivalent, from an approved university. Fluency in English, both written and spoken, is also required. A demonstration of very good quantitative skills (i.e. good mathematic skills) is also an essential requirement. Medical doctors and other medical graduates must have demonstrated an interest in public health and an interest in economics. As places are limited, the selection will be based primarily on academic merit and professional experience.

Applicants must fill in the standard UCT application form relevant for the year of their proposed study. Forms can be obtained from the programme administrator Ms. Zerina Davis (telephone +27 21 406 6578 or email (Zerina.Davis@uct.ac.za)). The closing date for receipt of applications for students applying for a place in the 2011 academic year is **September 30, 2010**. Applicants are advised to courier their applications to the HEU as applications that arrive after the deadline will not be considered.

Any requests and/or enquiries sent to Ms. Zerina Davis should be copied to the programme co-ordinator Dr. Ayako Honda (Ayako.Honda@uct.za).

COURSE CONTENTS

The programme is offered on a full-time basis and comprises two semesters of coursework with a further six months for completion of a mini-dissertation, although it is also possible to take the course on a part-time basis. The first semester runs from late January until the end of June, and the second semester starts in mid-July and ends in November. All students are required to complete a minimum of eight modules: six core modules and two electives. The mini-dissertation is started once the coursework is successfully completed. Please note that the MPH specialising in health economics is an 18 month full-time programme. Masters participants who are in employment are required to negotiate an 18 month leave of absence, and will have to

provide the HEU with a letter stating that leave of absence for the full period of 18 months will be granted if the application is successful.

The core modules for the first semester are:

- Quantitative Methods in Health Economics
- Microeconomics for the Health Sector

The core modules for the second semester include:

- Health Policy and Planning
- The Economics of Health Systems
- Theory and Application of Economic Evaluation in Health Care
- Research Methods

The electives* are:

- Introduction to Epidemiology “EPI 1”
- Biostatistics 1
- Qualitative Research Methods
- Evidence Based Care “EPI 2”
- Development Economics**
- Critical Issues in the Study of HIV/AIDS and Society**
- Monitoring and Evaluation in Primary Health Care***

**The electives might change, subject to availability.*

***Eligibility for these courses is subject to approval by different departments in the Faculty of Humanities*

****Eligibility for these courses is subject to approval by the School of Public Health, University of the Western Cape*

THE CORE MODULES IN MORE DETAIL

Quantitative Methods in Health Economics

The aim of this module is to introduce students to fundamental statistical and econometric techniques as they apply to health economics. At the end of the course, students should have a good understanding of basic statistics and the essentials of econometrics. They should also be able to perform specific mathematical, statistical and econometric operations on health data. Different data sets will be used throughout the duration of the module.

Topics include:

- Descriptive statistics
- Introduction to probability theory and probability distributions
- Estimation: standard errors, variance, confidence intervals
- Hypothesis testing
- Indices and concentration curves
- Regression analysis and modeling
- Diagnostic tests for regression models
- Discrete choice models

- Principal components analysis
- Distribution equity – concentration curves

Microeconomics for the Health Sector

This module aims to enable students to apply the theory and principles of microeconomics to the field of health and health care. The main objective is to develop skills in applying the microeconomic toolkit to analyse country situations with a view to informing health care planning and policy. This includes the analysis of demand, production and cost functions of specific health care services and the economics of health insurance contracts.

Topics include:

- Definition, scope and role of microeconomics in the health sector
- The market for health care and the public sector
- Individual and household demand for health and health care
- Household-level analysis: the medical poverty trap and related issues
- Need, agency theory and supplier-induced demand
- Taxation, health and health care
- Models of the market for medical goods and pharmaceuticals
- Health care production and cost functions
- Efficiency in health care provision
- Health insurance contracts and incentive effects
- Sustainable community health financing

Health Policy and Planning

The aim of this module is to provide students with an understanding of key objectives of health care systems, the main tenets of planning, key issues in monitoring and evaluating the impact of health sector reforms, and equity in health care. It also aims to enable students to develop analytical skills for assessing policy development and implementation; strategic management of stakeholders; option appraisal; and, programming and budgeting, with special emphasis on human resources and pharmaceuticals.

Topics include:

- Introduction to health systems
- Introduction to health policy and planning
- Stakeholder analysis
- Global influences on domestic health policy
- Equity in health care
- Planning human resources
- Regulation of the pharmaceutical market
- Resource allocation
- Approaches to budgeting
- Public sector capacity and implementation
- Monitoring and evaluation/research to policy

The Economics of Health Systems

This module introduces students to the influence of macroeconomics and macroeconomic policy on health and health care. Topics include the importance of economic growth and development for health, different approaches to financing health services, and the impact of the public private mix on health care financing and delivery. In recognition of the external political influences on domestic health policy, the module also introduces students to the key ideological movements that have proved to be especially influential on developing country health systems, including structural adjustment programmes, globalisation and health sector reforms. While large portions of the module will be theoretical and descriptive, practical tools for evaluating economic and health sector reforms such as National Health Accounts, and financing and benefit incidence will be covered.

Topics include:

- Economic growth and health
- Health, health care and determinants of health
- Structural adjustment programmes
- Globalisation and health
- Health sector reform and decentralisation
- Public-private mix
- Health care financing
- National Health Accounts
- Financing and benefit incidence

Theory and Application of Economic Evaluation in Health Care

This module aims to enable students to understand and apply current methods in the economic evaluation in health care. The main objectives are to gain insights into the economic theory underlying economic evaluation in health care, to develop skills in designing and conducting cost-effectiveness, cost-utility, and cost-benefit analyses, and to use these skills to inform policy formulation and implementation processes. At the end of this module, the students should also have an understanding of the importance of modelling in economic evaluation.

The module will enable students to develop skills by combining taught sessions with practical case studies of the application of economic evaluation to developing country interventions. Methodological and practical issues surrounding each evaluation technique will be critically explored.

Topics include:

- Introduction to economics and economic evaluation
- Costing in economic evaluation
- Discounting and annuitisation
- Outcome measurement and valuation
- Cost-effectiveness, cost-utility, and cost-benefit analyses
- Ethical issues in economic evaluation
- Uncertainty in economic evaluation
- Modelling in economic evaluation

Research Methods

The aim of this module is to provide students with the technical skills required to write research proposals and to undertake research projects requiring quantitative methods. It also aims to enable students to cooperate as a group in protocol development.

Topics include:

- The research protocol; ethics
- Literature review – defining the question
- Overview of study design
- Population and sampling; sample size calculation
- Measurement: questionnaires; validity and reliability
- Data management and analysis
- Reporting, presentation and writing up

EXIT COMPETENCIES OF OUR GRADUATES

On completion of the masters programme, students should be able to:

- Undertake analyses of health sector policies
- Design and conduct econometric analyses
- Develop plans and budgets for health care services and programmes
- Design and evaluate the economic viability of alternative health financing schemes, as well as access and quality assurance monitoring mechanisms
- Measure inequalities in health care resource expenditure, access and capacity to benefit
- Design and conduct economic evaluations of alternative prevention, treatment and delivery options for specific health problems

ATTENDENCE

Students should inform the module convenor if they are going to be absent for more than one session in a block or in the individual session. **Anyone missing the initial block of a module (40% plus of the teaching time) may not join that module afterwards.** Students missing sessions must make their own arrangements to obtain material they have missed.

ASSESSMENT

Students will be assessed through assignments (approximately two per module, undertaken during the course of the semester), written examinations and a mini-dissertation. First semester exams are written in June and second semester exams in late October or early November. Students will be required to write a mini-dissertation applying theoretical and practical health economics skills to a health sector problem. Protocol and methodology development is undertaken during coursework, fieldwork is normally done in the student's home country, and the final dissertation is completed under supervision at the HEU. The dissertation should be completed within six months of successful completion of coursework.

The final mark awarded to the student is an average of the overall mark obtained on the coursework and the overall mark obtained for the mini-dissertation. Within the coursework component, each module counts equally. Within each module, exams and assignments count for 50% of the module mark. However, it is necessary to obtain a 45% sub-minimum for either exams or assignments to be awarded the credit for the module.

TEACHING METHODS

A combination of the following methods of instruction will be used:

- Lectures
- Group review of relevant published studies
- Group exercises and role-playing
- Brain storming sessions
- Structured seminar discussions
- Group design of research protocols, primary data collection, and computer-based analyses
- Tutorials
- Involvement in ongoing HEU projects

The programme will demand active student participation during lectures and intensive individual reading of health economics, policy and related literature.

TEACHING STAFF

Staff of the HEU alongside visiting lecturers from international academic institutions will teach the core health economics modules. The HEU is widely recognised as the leading research and training institution in the field of health economics in Africa. Our academic staff members are:

- **Prof. Di McIntyre**, BCom, Honours in Economics (Cape Town), MA in Economics (Cape Town), PhD (Cape Town)
- **Prof. Lucy Gilson**, BA (Hons) Oxford, MA (East Anglia), PhD (London)
- **Dr. Edina Sinanovic**, BSc in Economics (Zagreb), MCom in Health Economics (Cape Town), PhD in Health Economics (London)
- **Dr. Susan Cleary**, BA (Rhodes), Honours in Economics (Cape Town), MA in Economics (Cape Town), PhD (Cape Town)
- **Dr Ayako Honda**, B.A. (Tokyo), M.A. in Philippine Studies (Philippines), M.Sc. in International Health (Tokyo), PhD in Health Economics (London)
- **Ms. Veloshee Govender**, BCom, Honours in Economics (Durban), MCom in Health Economics (Cape Town), MPH International Health (Boston)
- **Mr. John Ataguba**, BSc Hons in Economics (Nigeria), MPH in Health Economics (Cape Town)
- **Ms. Sheetal Silal**, BBusSci in Quantitative Finance and Statistics, MSc in Operations Research in Development (Cape Town)

FINANCIAL ASSISTANCE AND COSTS

Potential funding sources are donor organisations, and multilateral institutions, listed below. In addition, a limited number of scholarships are currently available through the Health Economics Unit with priority being given to staff of the Health Economics and Policy Network institutions. Whilst the Postgraduate Office only offers financial assistance to full-time South African students, a small number of scholarships are made available to international students. See the HEU website for more details about bursaries and funding opportunities: <http://heu-uct.org.za/courses/degrees-and-diplomas/funding-opportunities/>

Funding sources:

UNIVERSITY OF CAPE TOWN

- Funding for postgraduate students in economics at UCT
www.commerce.uct.ac.za/Economics/Programmes/postgraduate_programmes/Funding/funding.asp
- General Postgraduate degree funding at UCT
www.pgfo.uct.ac.za/apply/funding/postgraduate/applications/
- Ushepia
www.ushepia.uct.ac.za/bg.htm

FOUNDATIONS & COUNCILS

- (MRC) Medical Research Council
www.mrc.ac.za/
- Wellcome Trust
www.wellcome.ac.uk/index.htm

DONORS & MULTILATERALS

- (CIDA) Community and Individual Development Association
www.cida.co.za/
- (DANIDA) Danish International Development Assistance
<http://www.um.dk/en>
- (DFID UK) Department for International Development
www.dfid.gov.uk/
- GTZ
www.gtz.de/en/
- (IDRC) International Development Research Centre
www.idrc.ca/en/
- (USAID) United States Agency for International Development
www.usaid.gov
- (WHO) World Health Organisation
www.who.int
- World Bank
www.worldbank.org

Programme costs

Please check the UCT website for fees information (<http://www.uct.ac.za/apply/fees/structure/>).

STUDY PERMITS

Foreign students must obtain a study visa before coming to South Africa. The cost of obtaining a visa is the responsibility of the applicant, including those funded through the HEU. Consult your nearest South African embassy about the study permit application procedure. Please note that such applications take considerable time to process and students should apply for study permits shortly after they receive their letters of admission. The date by which you must arrive in Cape Town will be stipulated in your letter of admission (usually around 20th of January). Please note that anyone missing the initial block of a module may not be able to take that module. It is therefore critical that students arrive in Cape Town in time to attend lectures. When applying for financial assistance to donor organisations in your country, please also budget for a refundable financial deposit of US \$600 charged by the South African government for potential repatriation expenses.

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