

Faculty of Life Sciences Module Handbook

Master of Public Health

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Module Handbook

Master of Public Health

Specifying the subject-specific examination and study regulations for the Master of Public Health degree course published on 19.02.2015 Approved by the Faculty Council of the Faculty of Life Sciences on 22.01.2015

> Faculty of Life Sciences Department of Health Sciences

University of Applied Sciences Hamburg Faculty of Life Sciences/ Department of Health Sciences Ulmenliet 20, 21033 Hamburg Tel.: +49.40.428 75-0 Fax: +49.40.428 75-6449 www.haw-hamburg.de

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Overview

Well trained health professionals are needed to meet the growing demand within the changing field of public health nationally and internationally. The target group of the Master of Public Health degree course are graduates with professional experience seeking in-depth knowledge and skills of research, evidence based practice and policy making in the complex field of public health. Master of Public Health graduates are able to solve problems regarding the maintenance and promotion of health, well-being and quality of life of populations by taking into account political, economic, social and environmental determinants of health in the respective health system.

The Master of Public Health examination proves that students have mastered the theoretical methods and knowledge necessary for dealing with scientifically challenging tasks taken from professional practice. Therefore, students acquire an overview of the subject as a whole and the skills to independently develop and apply scientific methods and knowledge into practice. In the course students also develop their intellectual and social skills, and thereafter are able to take on leadership and management positions in the field of public health. Following the successful completion of the degree course, the university will award the student with the academic gualification of 'Master of Public Health' (MPH).

For students willing to gain practical experience in European public health organisations and to acquire research experience on European public health issues a supplementary certificate 'European Master of Public Health' (EMPH) is offered.

The admission requirements are regulated by an Ordinance on Admission and Selection for the degree.

Modules and Credit Points

The standard length of the Master of Public Health course is three semesters. The degree is organized in two parts. The first part comprises two semesters with 60 credit points (CP) to be acquired in ten modules which focus on determinants of health and major health problems in global and interdisciplinary perspective, as listed in the study overview below. In the second part (third semester), a Master's thesis must be completed within six months and is worth 30 CP.

To obtain the supplementary 'European Master of Public Health' certificate, it is required that at least 20% of the module content covers European aspects which must be documented. Therefore, students have to complete a 22-week internship in a European international institution or a European public health organization in another European country. The internship must be approved by the internship coordinator and is rewarded with 30 CP.

Master Thesis

The Master thesis is a theoretical, empirical and/ or experimental examination of a subject and offers the opportunity of pursuing a relevant public health topic of individual interest. The topic is issued by the Chairperson of the Examination Board. The thesis must be written in English, a language other than English must be approved by the Examination Board. The thesis must be completed within six months, supervision by a professor is provided.

To obtain the supplementary 'European Master of Public Health' certificate, the thesis must focus on a European public health issue.

Study Overview

Master of Public Health

| First part of study | Global, European and German Public Health Health Promotion and Prevention Epidemiology & Study Designs Infectious and Non-Communicable Disease Epidemiology Nutrition, Health Behaviour and Lifestyle | 1 [*] Semester |
|----------------------|---|-------------------------|
| | Ethics and Scientific Methodology in Public Health Health Policy Health Economics Physical, Chemical and Biological Environment and Health Occupational Health | 2 Semester |
| Second part of study | Master Thesis MPH | 3 [.] Semester |

Master of Public Health including supplementary certificate "European Master of Public Health"

| First part of study | Global, European and German Public Health Health Promotion and Prevention Epidemiology & Study Designs Infectious and Non-Communicable Disease Epidemiology Nutrition, Health Behaviour and Lifestyle | 1 [*] Semester |
|----------------------|---|-------------------------|
| First par | Ethics and Scientific Methodology in Public Health Health Policy Health Economics Physical, Chemical and Biological Environment and Health Occupational Health | 2 Semester |
| Second part of study | Internship EMPH (in a European international public health organisation) | 3. Semester |
| Second pa | Master Thesis EUMPH (covering a European public health issue) | 4 [.] Semester |

Description of the Modules – Master of Public Health

1st Semester

5 Modules with each 6 CP/ Modules = 30 CP

| Degree Programme Master of Public Health Module 1, 1st Semester | |
|--|---|
| Name of module | Global, European and German Public Health |
| Module responsible | Prof. Dr. Christine Faerber |
| Lecturers | Academic staff of the Life Sciences Faculty, external lecturers |
| Semester | Summer Semester (March – August) |
| Frequency/ Period of time | Yearly/ Within one semester |
| Credit Points (CP) | 6 CP |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h |
| Language | English |

Objectives

The aim of the module is to enable the students to understand, analyse and evaluate health and public health in different social, regional, cultural and systemic contexts.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Compare different concepts of health and public health.
- Conceptualize public health in relation to other disciplines (i.e. medicine in their own and other regions).
- Understand the global context of public health, the global spectrum of diseases and epidemiological transition.
- Identify stakeholders in global public health and public health issues of actual relevance and their social determinants.
- Synthetize human rights and health (e.g. migration and reproductive health).
- Reflect major trends of social change with special reference to demography, social structure, and economic and technological development.
- Identify population groups with elevated health risks, and recognise their health needs, e.g. children, elderly, unemployed adults, immigrants, women, vulnerable people and other disadvantaged groups.

Personal and social skills

The students are able to:

- Participate actively in the learning process researching autonomously using different media.
- Collaborate equally and effectively with students from other professions, regions and cultures in group work.
- Acknowledge the differences in the participants in respect to culture, gender, and region.
- Reflect critically upon global health issues.
- Develop policy approaches to tackle global health problems.

Content of module

The module comprises two subjects:

Global, European and German Public Health

- Basic definitions, models and concepts of health and disease
- Concepts of mental and somatic diseases and their practical implications, including diagnostic systems and diagnoses
- Major definitions of public health
- Significant aspects of the history of public health theory and practice
- Health problems (regional, worldwide) with criteria of differentiation
- Public health policies in Germany, Europa and worldwide
- Public health practice (incl. public health workforce)
- Health (care) issues (with reference to students' regional background)
- Global Burden of Disease-Study

Population Health and its Social Determinants

- Level and trends of main population health indicators in European countries, such as morbidity, mortality, life and health expectancy
- Basic concepts of socio-economic indicators, i.e. family structure, education, gender, migration, ethnicity and socio economic inequalities
- Respective level and trends of main population socio-economic indicators in European countries and worldwide
- Current national and global strategies/ initiatives to reduce inequities in health

| Teaching and Learning Strategies/ Methodology/ Media | Seminaristic instruction (seminaristischer Unterricht): Lectures Group work Oral Presentation |
|--|---|
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working material | Markle, W, Fisher, M & Smego, R (eds.) 2007, Understanding Global Health. McGraw-Hill Professional, New York City. Robert Koch Institute (ed.) 2008, Health in Germany, Berlin. Rosling, H 2006, Global Health: an introductory textbook, Studentlitteratur AB, Sweden. World Health Report (several years) www.who.int/whr/en/ The European Observatory on Health Systems and Policies: www.euro.who.int/en/aboutus/partners/observatory/publications or equivalent current literature |

| Degree Programme Master of Public Health Module 2, 1st Semester | |
|--|---|
| Name of module | Health Promotion and Prevention |
| Module responsible | Prof. Dr. Joachim Westenhoefer |
| Lecturers | Academic staff of the Life Sciences Faculty, external lecturers |
| Semester | Summer Semester (March – August) |
| Frequency/ Period of time | Yearly/ Within one semester |
| Credit Points (CP) | 6 CP |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h |
| Language | English |

The aim of the course is to develop a profound understanding of the principles of health promotion in different settings, of the major theories and approaches of health promotion and to develop the competency to apply the public health action cycle for planning, implementing, monitoring and evaluating interventions.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Explain the major principles and theories of health promotion.
- Analyse population health challenges relevant for health promotion at various levels of social and political organisations, from global to local.
- Apply the public health action cycle for planning, implementing and evaluating health promotion interventions.
- Successfully conduct a self-change project for a self-selected health-related behaviour.
- Design, implement, manage and evaluate a health promotion program (case study).
- Write a project proposal.

Personal and social skills

- Actively collaborate with other students in teams.
- Reflect responsibly processes of behaviour change.
- Present work and research results in different formats.
- Discuss critically different perspectives and viewpoints.
- Autonomously research for relevant information from different sources and media.
- Present work and research results in written and oral forms.
- Cooperate effectively in teams with other students.

The module comprises two subjects:

Health Promotion and Prevention

- History and development of public health, prevention and health promotion
- Definitions and comparison of health promotion in respect to similar concepts such as health education, prevention, social hygiene, etc.
- Definitions, action areas and strategies of the Ottawa Charta
- Concepts, such as salutogenesis, social determinants, empowerment, self-determination, gender and equity, social capital, participation, social connectedness, as guiding principles in health promotion practice
- Theories and planning models of health promotion such as Precede–Proceed, Health Belief Model, Transtheoretical (Stage) Model, Social Learning Theory, Attribution Theory, etc.
- Health promotion structures, institutions and financing, also in comparison to other countries
- Public health action cycle: principle, phases, instruments, applications
- Behaviour change programs

Project Development and Management

- Development of health promotion/ public health programs including program design, implementation, monitoring and evaluation
- Evaluation of input, output, outcome and impact

| Teaching and Learning Strategies/ Methodology/ Media | Seminaristic instruction (seminaristischer Unterricht): Lectures Discussions Group work Self-Change Project Case Studies |
|--|---|
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working material | Glanz, K, Rimer, BK & Viswanath, K (eds.) 2008, <i>Health Behaviour and Health Education. Theory, Research, and Practice</i> . 4th edn, Jossey-Bass, San Francisco. Additional literature is provided on the e-learning platform |

| Degree Programme Master of Public Health | | |
|--|--|--|
| Module 3, 1st Semester | Module 3, 1st Semester | |
| Name of module | Epidemiology and Study Designs | |
| Module responsible | Prof. Dr. med. Ralf Reintjes | |
| Lecturers | Prof. Dr. med. Ralf Reintjes, academic staff of the Life | |
| | Sciences Faculty, external lecturers | |
| Semester | Summer Semester (March – August) | |
| Frequency/ Period of time | Yearly/ Within one semester | |
| Credit Points (CP) | 6 CP | |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h | |
| Language | English | |

The aim of the course is to give the students an overview of the most important study designs in public health, including their strengths and weaknesses, applied to practical examples. The course will introduce the students to the context for scientific research and the skills needed to undertake quantitative and qualitative studies. Students will be able to apply study designs, analyse studies and present their findings as a report.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Understand main approaches to, and concepts of, qualitative and quantitative methods frequently applied in public health concerning population groups as well as organisations.
- Understand all relevant study designs and their explanatory power.
- Assess the quality of studies and study designs.
- Discuss advantages and disadvantages of study designs.
- Understand major definitions of statistics as a science and basic statistical concepts.

Personal and social skills

- Organize working groups.
- Discuss a public health topic in a saturated way.
- Present epidemiological results in written form.

The module comprises two subjects:

Epidemiology and Biostatistics

- Measures of frequency of illness
- Measures of association and impact
- Bias, confounding & effect modification
- Methods of sampling
- Descriptive statistics
- Statistical distributions
- Parametric vs. non-parametric statistical tests
- Linear regression

Quantitative and Qualitative Study Designs

- Quantitative concepts, terms, theories and methodologies, such as ecologic, cross sectional, case control, cohort, randomized controlled trial or intervention study designs
- Qualitative concepts, terms, theories and methodologies, such as: grounded theory, phenomenology, ethnography, case study, action research

| Teaching and Learning | Seminaristic instruction (seminaristischer Unterricht): |
|--------------------------|---|
| Strategies/ Methodology/ | Case scenarios |
| Media | Computer practice |
| | Students contributions (reports, group work) |
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working | Creswell, JW 2008, Research design – Qualitative, Quantitative, |
| material | Mixed Methods Approaches, Sage Publications, Thousand Oaks. |
| | |
| | Gordis, L 2008, <i>Epidemiology</i> , 4th edn, Saunders, Philadelphia. |
| | Hennekens, CH & Buring, JE 1987, <i>Epidemiology in Medicine</i> , Little Brown & Company, Boston. |
| | Rothman, KJ 2002, <i>Epidemiology: an introduction</i> , Oxford University Press Inc, New York. |
| | Rothman, KJ, Greenland, S & Lash TL 2008, <i>Modern</i> <i>Epidemiology</i> . Lippincott Williams & Wilkins, Philadelphia. |
| | or equivalent current literature |

| Degree Programme Master of Public Health | |
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| Module 4, 1st Semester | |
| Name of module | Infectious and Non-Communicable Disease Epidemiology |
| Module responsible | Prof. Dr. Ralf Reintjes |
| Lecturers | Prof. Dr. Joachim Westenhoefer, Prof. Dr. Ralf Reintjes, academic staff of the Life Sciences Faculty, external lecturers |
| Semester | Summer Semester (March – August) |
| Frequency/ Period of time | Yearly/ Within one semester |
| Credit Points (CP) | 6 CP |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h |
| Language | English |

The aim of the course is to conduct quality research for the epidemiology, control and management of infectious and non-communicable diseases that are of public health importance as well as to provide an overview and an introduction to the methods and findings in the epidemiology of non-communicable diseases.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Identify key factors for the spread of infectious diseases.
- Understand surveillance systems (Infectious Disease Information System, different types of surveillance, capture-recapture analysis to assess the sensitivity of surveillance systems).
- Understand the possible use of mathematical modelling.
- Describe the major non-communicable diseases and major components of their aetiology.
- Evaluate scientific literature in the field.
- Evaluate approaches to screening and prevention of non-communicable diseases.
- Compute multiple regression and logistic regression analyses using SPSS.

Personal and social skills

- Apply study designs in practice.
- Work in a team to discuss results.
- Have the flexibility and ability to work under pressure.
- Evaluate scientific literature.
- Present work results in a scientific manner.

The module comprises two subjects:

Infectious Disease Epidemiology

- Surveillance Infectious Disease Information System
- Principles of capture-recapture analysis: Assessing the sensitivity of surveillance systems
- Outbreak investigations systematic search for the source and transmission route
- Distribution of epidemics by WHO regions
- Key factors for the spread of infectious diseases
- Epidemiologic studies answering predefined questions
- Mathematic modelling in infectious disease epidemiology
- Concept of risk factors and approaches to prevention
- Screening
- Multiple and logistic regression, adjustment for confounding variables

Non-Communicable Disease Epidemiology

- Validity and applications of standardized data collection instruments (e.g. SF36, QOL)
- Overview of non-communicable diseases
- Epidemiology of cardio-vascular disease
- Epidemiology of diabetes
- Epidemiology of cancer
- Epidemiology of mental disorders

| Teaching and Learning Strategies/ Methodology/ Media | Seminaristic instruction (seminaristischer Unterricht): Case scenarios Computer practice Students contributions (reports, group work) |
|--|---|
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working material | Glanz, K, Rimer, BK & Viswanath, K (eds.) 2008, <i>Health Behaviour and Health Education. Theory, Research, and Practice</i> . 4th edn, Jossey-Bass, San Francisco. Additional literature is provided on the e-learning platform |

| Degree Programme Master of Public Health | |
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| Module 5, 1st Semester | |
| Name of module | Nutrition, Health Behaviour and Lifestyle |
| Module responsible | Prof. Dr. Joachim Westenhoefer |
| Lecturers | Prof. Dr. Joachim Westenhoefer, academic staff of the Life Sciences Faculty, external lecturers |
| Semester | Summer Semester (March – August) |
| Frequency/ Period of time | Yearly/ Within one semester |
| Credit Points (CP) | 6 CP |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h |
| Language | English |

The aim of the course is to develop a profound understanding of the role of lifestyle and health behaviours (such as nutrition, physical activity, smoking, alcohol consumption, coping with stress, sexual activity) and to advance the understanding for the processes necessary to change components in these fields and the capacity to apply the public health action cycle with respect to these fields.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Describe the role of life style and health behaviour for health.
- Analyse the scientific literature in these fields.
- Apply the public health action cycle to health related problems in these fields.
- Apply project management methods to implement and monitor interventions.
- Analyse conditions for the change of life style and health behaviour.

Personal and social skills

- Communicate health related issues effectively with clients, employees, management and experts.
- Present work and research results in written and oral forms.
- Cooperate effectively in teams with other students.
- Distinguish clearly between scientific knowledge, assumptions and uncertainties.

The module comprises two subjects:

Nutrition and Health

- Principles of public health nutrition
- Diet-related diseases
- Obesity
- Malnutrition
- Assessment of diet, physical activity and nutritional status (as an exposure and/ or outcome)
- Determinants of normal and disorder eating behaviour

Health Behaviour and Lifestyle

• Indicators, determinants, trends and interventions in lifestyle and health behaviour, such as exercise activity, dietary behaviour, alcohol use, drug abuse, tobacco use, sexual behaviour, injury prone behaviour

| Teaching and Learning Strategies/ Methodology/ Media | Seminaristic instruction (seminaristischer Unterricht): Lectures Discussions Group work Case Studies |
|--|--|
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working material | Literature is provided on the e-learning platform |

2nd Semester

5 Modules with each 6 CP/ Modules = 30 CP

| Degree Programme Master of Public Health | |
|--|---|
| Module 6, 2nd Semester | |
| Name of module | Ethics and Scientific Methodology in Public Health |
| Module responsible | Prof. Dr. Christine Faerber |
| Lecturers | Academic staff of the Life Sciences Faculty, external |
| | lecturers |
| Semester | Winter Semester (September – February) |
| Frequency/ Period of time | Yearly/ Within one semester |
| Credit Points (CP) | 6 CP |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h |
| Language | English |

Objectives

The aim of the course is to focus on the systematic analysis of ethical and moral problems that arise in public health on a micro, meso and macro level. Furthermore the exploration of current developments in public health will be pivotal. In the course the key concept of evidence-based public health to searching and evaluating the public health literature will be introduced in order to strengthen the students' analytic assessment skills.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Identify ethical problems and values in health care, health care research and public health.
- Analyse ethical problems on a micro, meso and macro level.
- Apply ethical principles.
- Articulate health, legal, social and political implications of policies for vulnerable populations.
- Identify current developments in public health.
- Reflect key concepts in evidence-based public health.
- Independently elaborate relevant public health research question.
- Appraise available evidence for design flaws and sound conclusion.
- Synthesize the results of an empirical literature search, based on main characteristics of design, finding and results.

Personal and social skills

The students are able to:

- Reflect on his/ her own ethical and moral foundations and beliefs and that of other people.
- To discuss ethical issues and discourses regarding health care, public Health and public Health research.
- To discuss current developments critically.

Content of module

The module comprises two subjects:

Public Health Ethics

- Ethical principles, decision-making, and case-studies in health care
- Issues and case studies in bioethics
- Theory, policy, and practice of public health ethics

Literature Search and Scientific Methodology

- Evidence-based public health
- Strategies for effective retrieval of public health resources
- Critical appraisal tools

| Teaching and Learning | Seminaristic Instruction (seminaristischer Unterricht): |
|---------------------------------|--|
| Strategies/ Methodology/ | Lectures |
| Media | Discussions |
| | Group work |
| | Case Studies |
| | |
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working material | Bayer, R, Lawrence, OG & Jennings, B (eds.) 2007, <i>Public Health ethics. Theory, policy, and practice</i> , Oxford University Press, New York. |
| | Bradley, P & Burls A (eds.) 2000, <i>Ethics in public and community health</i> , Routledge, London. |
| | Dawson, A (ed.) 2011, <i>Public Health Ethics. Key Concepts and Issues in Policy and Practice</i> , Cambridge University Press, New York. |
| | Harris, DM 2011, <i>Ethics in Health Services and Policy: A Global Approach</i> , Jossey-Bass, San Francisco. |
| | Hofmann, AH 2010, <i>Scientific writing and communication: papers, proposals, and presentations</i> , Oxford University Press, New York. |
| | Additional literature is provided on the e-learning platform |
| | |

| Degree Programme Master of Public Health Madula 7, 2nd Semaster | |
|--|--|
| Module 7, 2nd Semester Name of module | Health Policy |
| Name of module | nearth Foncy |
| Module responsible | Prof. Dr. York Zoellner |
| Lecturer | Prof. Dr. York Zoellner, academic staff of the Life Sciences |
| | Faculty, external lecturers |
| Semester | Winter Semester (September – February) |
| Frequency/ Period of time | Yearly/ Within one semester |
| Credit Points (CPs) | 6 CP |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h |
| Language | English |

The aim of the course is two-fold: first, to acquire a broad understanding of policy issues and management theory in general; second, to recognize the interdependencies between the former, and apply the concepts acquired to the specific context of public health and health care provision. Additionally, the course aims to deepen students' understanding of particular public health issues and policy elements. This will pertain to the allocation of health care resources on national, regional and global levels, equity in finance and provision, and priority-setting from different perspectives.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Apply basic knowledge to public health policies (including environmental policies having an impact on health).
- Identify the schools of thought of management theory embedded in different public health policy elements.
- Apply advanced policy and management concepts to the analysis of health systems.
- Identify the interests reflected in the positions of key stakeholder groups in the Public Health field.

Personal and social skills

The students are able to:

- Work in a multi-cultural environment and team.
- Reflect critically upon contemporary developments.
- Discuss the pros and cons of particular health care system elements in reasonable depth.
- Discuss policy and management issues in a holistic and in-depth manner.
- Engage in science-based, goal-oriented discussions with Public Health stakeholders and peers.
- Critically appraise press reports and media broadcasts.

Content of module

The module comprises two subjects:

Health Policy

- Global context of public health
- European context of public health
- Comparative health policies in different countries
- Main health challenges, current political strategies, strengths and weaknesses
- Specific issues in global and European public health

Health Management

- Philosophical concepts/ problems of ethics in health care management
- Systematic comparative analysis of health care systems
- Management of health care systems in different countries
- Human resource management and capacity building in public health systems
- Sector wide approaches and vertical programmes in public health systems
- Building blocks of health care systems
- Performance assessment in health care

| Teaching and Learning Strategies/ Methodology/ Media | Seminaristic instruction (seminaristischer Unterricht): Lectures Discussions Group work Case Studies |
|--|---|
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working material | Walshe, K & Smith, J (eds.), 2011, <i>Healthcare Management</i>, 2nd edn, Open University Press/ McGraw-Hill, Berkshire. Andersen, G.E. (1999): The Three Worlds of Welfare Capitalism. John Wiley & Sons. Beaglehole, R & Bonita, R, 2001, <i>Global Public Health – a new era</i>, 2nd edn, Oxford University Press, New York. Birn, AE, Pillay, Y & Holtz, TH 2009, <i>Textbook of International Health; Global Health in a dynamic World</i>, Oxford University Press, New York. Merson, MH, Black, R & Mills, AJ 2012, <i>Global Health, Diseases, Programs, Systems and Policies</i>, 3rd edn, Jones & Bartlett, London. Goodwin, N et.al. 2006, <i>Managing Health Services</i>, Open University Press, London. |

| Degree Programme Master of Public Health | |
|--|--|
| Module 8, 2nd Semester Name of module Health Economics | |
| Name of module | |
| Module responsible | Prof. Dr. York Zoellner |
| Lecturers | Prof. Dr. York Zoellner, academic staff of the Life Sciences |
| | Faculty, external lecturers |
| Semester | Winter Semester (September – February) |
| Frequency/ Period of time | Yearly/ Within one semester |
| Credit Points (CP) | 6 CP |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h |
| Language | English |

The objective of the course is to acquire the conceptual understanding and hands-on skills required to apply economic theory to the challenges of healthcare finance, provider remuneration, distribution of healthcare goods and services, and cost-effectiveness assessment of the latter. The course intends to deepen students' understanding of particular health care and public health issues and policy elements. This will pertain to the allocation of health care resources on national, regional and global levels, equity in finance and provision, and priority-setting from different perspectives.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Apply advanced policy, management and economic concepts to the analysis of health systems.
- Identify the interests reflected in the positions of key stakeholder groups in the Public Health field.
- Discuss policy, management and economic issues in a holistic and in-depth manner.
- Recognize the interdependencies between micro and macro-economic issues in global health.
- Apply the acquired concepts in a quantitative way to particular case studies, such as the effectiveness and cost-effectiveness of public health interventions.
- Critically appraise press reports and media broadcasts.

Personal and social skills

- Work in a multi-cultural environment and team.
- Reflect critically upon contemporary developments.
- Discuss the pros and cons of particular health care system elements in reasonable depth.
- Engage in science-based, goal-oriented discussions with Public Health stakeholders and peers.

The module comprises two subjects:

Health Economics

- Basic micro and macro-economic definitions and tools
- Economic analysis applied to different healthcare goods and 'bads'
- Demand for, and supply of, health insurance
- Production and cost of health care
- Equity in the finance and provision of health care
- Economic evaluation and its role in the allocation of scarce resources

Health Care Organisation

- System typologies in provision and finance
- Systematic comparative analysis of different healthcare systems with respect to various indicators or performance metrics
- Asymmetry of information; regulatory and market solutions
- Governance in health care: stakeholders, structures, processes

| Teaching and Learning Strategies/ Methodology/ Media | Seminaristic instruction (seminaristischer Unterricht): Lectures Discussions Group work Case Studies |
|--|--|
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working material | Morris, S, Devlin, N & Parkin, D 2012, <i>Economic analysis in health care</i> , 2nd edn, John Wiley & Sons, Wiley. Folland S, Goodman AC & Stano M 2012, <i>The Economics of Health and Health Care</i> , 7th edn, Pearson Higher Education. or equivalent current literature |

| Degree Programme Master of Public Health | |
|--|---|
| Module 9, 2nd Semester | |
| Name of module | Physical, Chemical and Biological Environment and Health |
| Module responsible | Prof. Dr. (mult.) Dr. h.c. (mult.) Walter Leal |
| Lecturers | Prof. Dr. (mult.) Dr. h.c. (mult.) Walter Leal, academic staff of the Life Sciences Faculty, external lecturers |
| Semester | Winter Semester (September – February) |
| Frequency/ Period of time | Yearly/ Within one semester |
| Credit Points (CP) | 6 CP |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h |
| Language | English |

The aim of the course is to foster a profound understanding of the influences of environmental factors, issues and phenomena - of a physical, chemical and biological nature - on health. In addition, the course intends to develop the capacity among students to apply principles and practices of public health action, in the assessment and control of those environmental factors that can potentially affect health, helping to preventing disease and to create health-supportive environments.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Describe the role played by environmental issues on health.
- Analyse the scientific literature in the area.
- Understand how physical, chemical and biological factors influence the health of people and ecosystems.
- Apply project management methods to implement and monitor interventions.

Personal and social skills

- Communicate environmental health related issues effectively with clients, employees, management and experts.
- Present empirical work and research results in written and oral forms.
- Cooperate effectively in teams with other students.
- Distinguish clearly between scientific knowledge, assumptions and uncertainties.

The module comprises two subjects:

Environment and Health 1

- An introduction to environment and health
- Environmentally related health risks
- Contaminants in the biosphere and the geosphere
- Environmental conditions and the health of children
- Environmental toxicology and epidemiology: Fine particle emissions and their impact on the environment and health
- Descriptive and analytical methods in environmental health research

Environment and Health 2

- Environment and health in the working place
- Environmental monitoring as a tool for health protection
- Pesticides, heavy metals and nitrates: water as a health risk
- Climate change management and health
- Research project

| Teaching and Learning Strategies/ Methodology/ Media | Seminaristic instruction (seminaristischer Unterricht): Lectures interactive exercises case studies project-based work |
|--|---|
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working material | Moelle, DW 2011, <i>Environmental Health</i> , Harvard University Press, Cambridge (MA), USA. Prüss-Üstün, A, Bonjour, S & Corvalán, C 2008, The impact of the environment on health by country: a meta- synthesis. <i>Environmental Health</i> , vol. 7, Issue 7, <http: 1="" 7="" content="" www.ehjournal.net=""> Tarkowski, SM 2007, Environmental health research in Europe – bibliometric analysis, <i>European Journal of Public Health</i>, vol. 17, issue 1, pp. 14-18. <http: 14.full="" 17="" content="" eurpub.oxfordjournals.org="" suppl_1=""></http:></http:> |

| Degree Programme Master of Public Health Module 10, 2nd Semester | |
|---|---|
| Name of module | Occupational Health |
| Module responsible | Prof. Dr. Wolf Polenz |
| Lecturer | Prof. Dr. Joachim Westenhoefer, academic staff of the Life Sciences Faculty, external lecturers |
| Semester | Winter Semester (September – February) |
| Frequency/ Period of time | Yearly/ Within one semester |
| Credit Points (CP) | 6 CP |
| Workload for Students (h) | Workload 180h: presence 60h, private study 120h |
| Language | English |

The aim of the course is to develop a profound understanding of the role of workplace for health, the process necessary to change components in the field and the capacity to apply the public health action cycle with respect to that field.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Describe the role of workplace for health.
- Analyse the scientific literature in these fields.
- Apply the public health action cycle to health related problems in these fields.
- Apply project management methods to implement and monitor interventions.
- Analyse conditions for the change of workplace settings.

Personal and social skills

- Communicate health related issues effectively with clients, employees, management and experts.
- Present work and research results in written and oral forms.
- Cooperate effectively in teams with other students.
- Distinguish clearly between scientific knowledge, assumptions and uncertainties.

The module comprises two subjects:

Work and Health 1

- Foundational concepts of workplace health
- Global epidemiology of workplace health
- Basics of workplace health promotion
- Psychosocial health at work
- Gender and work

Work and Health 2

- An integrated approach to workplace health
- Review of workplace health promotion
- Basics of classic occupational health and safety
- Research instruments for workplace health
- Areas of special concern in occupational health

| Teaching and Learning Strategies/ Methodology/ Media | Seminaristic instruction (seminaristischer Unterricht): Lectures Discussions Group work Case Studies |
|--|---|
| Assessment(s) | Exam or presentation or written assignment |
| Literature/ Working material | Elgstrand, K & Petersson, NF 2009, OSH for development, Royal Institute of Technology, Stockholm. Guidotti, TL 2011, Global Occupational Health, University Press, Oxford. Gatchel, RJ & Schultz, IZ (eds.) 2013, Handbook of Occupational Health and Wellness, Springer, New York. Hanson, A 2007, Workplace Health Promotion: A salutogenic Approach, Milton Keynes, Bloomington. O'Donnell, MP 2002, Health Promotion in the Workplace, 3rd edn, Albany, Delmar. |

| Degree Programme Master of Public Health | |
|--|---|
| Module 11, 3rd Semester | |
| Name of module | Master Thesis MPH |
| Module responsible | Prof. Dr. med. Ralf Reintjes |
| Lecturer | The master thesis will be supervised by one professor of HAW Hamburg and a second supervisor. The choice of the second supervisor can be made by the student to be either a member of the academic staff of the HAW Hamburg or a person from their professional background who has at least attained a Master's degree. The supervisors have to be approved by the examination board. |
| Semester | 3 rd semester The master thesis may only be started once all examination credits from the first part of the course have been successfully completed. Exceptions require approval by the examination board. |
| Credit Points (CP) | 30 CP |
| Entry Requirements | Acquisition of 60 CPs in total (10 Modules from the 1 st and 2 nd semester with 6 CP each) |
| Workload for Students (h) | 900 hrs (6 months) |
| Language | English Exceptions require approval by the examination board. |

The aim of the thesis is to prove students' capability to apply scientific methods and findings, to independently handle an issue taken from the field of work associated with their degree course, addressing the issue in interdisciplinary contexts and independently expanding and further developing their scientific knowledge.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Gain a comprehensive and in-depth knowledge about the current developments of topics in the field of public health.
- Identify relevant themes, focus and structure of a specific topic
- Apply suitable methods to answer the research question.
- Integrate acquired theoretical scientific knowledge and methodology public health research.
- Independently carry out research with considerations of ethical aspects.

Personal and social skills

The students are able to:

- Critically reflect on public health issues.
- Retrieve, assess and use relevant literature/ research material.
- Advance their knowledge and skills in scientific writing (use of terminology, language, presentation).

Content of module

The Master Thesis is a comprehensive theoretical, empirical and/ or experimental examination of a subject. The topic is approved by the chairperson of the examination board. Theses in a language other than English must be approved by the examination board.

| Teaching and Learning Strategies/ Methodology/ Media | Supervision | |
|--|---------------|--|
| Assessment(s) | Master Thesis | |
| Literature/ Working material | | |

| Degree Programme Master of Public Health | | | | |
|--|--|--|--|--|
| Module 12, 3rd Semester | | | | |
| Name of module | Internship EMPH | | | |
| Module responsible | Prof. Dr. med. Ralf Reintjes | | | |
| Lecturer | The internship will be supervised by one professor of HAW Hamburg and a second supervisor of the European public health internship institution. | | | |
| Semester | 3 rd Semester The internship may only be started once all examination credits from the first part of the course have been successfully completed. Exceptions require approval by the examination board. | | | |
| Credit Points (CP) | 30 CP | | | |
| Workload for Students (h) | 22 weeks | | | |
| Entry Requirements | Acquisition of 60 CPs in total (10 Modules from the 1 st and 2 nd semester with each 6CP) | | | |
| Language | English Exceptions require approval from the internship responsible. | | | |

An internship 'EMPH' serves as a way to acquire practical skills and competencies in order to appraise public health problems in their wider European perspective and to be prepared for a greater European mobility.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Demonstrate a common European understanding of public health.
- Analyse the most significant commonalties and differences among European countries with respect to their historical and cultural roots.
- Systematically integrate European perspectives in their approach to any public health issue.
- Systematically and competently refer to European health-related information.
- Prepare themselves for the European job market.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Gain a comprehensive and in-depth knowledge about the current developments in the respective area of research.
- Independently apply and further develop the theoretical and methodological knowledge and understanding gained in their course of study.

Personal and social skills

The students are able to:

- Critically reflect on European public health issues.
- Retrieve, assess and use relevant literature / research material.
- Actively participate in a European public health project team.
- Apply project management skills.

Content of module

The skills acquired during the Master of Public Health program will be applied and practiced in the third internship semester. Here, students will be part of a public health project conducted at a European institution. Students will gain both practical skills and team work experiences. They learn how to run a project in the field of public health.

| Teaching and Learning Strategies/ Methodology/ Media | Supervision |
|--|--|
| Assessment(s) | Comprehensive internship report and presentation |
| Literature/ Working material | Please refer to the current information sheet on <i>Rules and regulations for the EMPH internship.</i> |

| Degree Programme Master of Public Health | | |
|---|---|--|
| Module 13, 4th Semester Name of module | Master Thesis EMPH | |
| | | |
| Module responsible | Prof. Dr. med. Ralf Reintjes | |
| Lecturer | The master thesis will be supervised by one professor of HAW Hamburg and a second supervisor. The choice of the second supervisor can be made by the student to be either a member of the academic staff of the HAW Hamburg or a person from their professional background who has at least attained a Master's degree. The supervisors have to be approved by the examination board. | |
| Semester | 4 th semester The master thesis may only be started once all examination credits from the first part of the course and the EMPH internship have been successfully completed. Exceptions require approval by the examination board. | |
| Credit Points (CP) | 30 CP | |
| Entry Requirements | Acquisition of 90 CPs in total (10 Modules from the 1 st and 2 nd semester with 6CP each + internship with 30 CP) | |
| Workload for Students (h) | 900 hrs (6 months) | |
| Language | English Exceptions require approval by the examination board. | |

The aim of the Master Thesis EUMPH is to prove students' capability to apply scientific methods and findings, to independently handle an issue taken from the field of work associated with their degree course, addressing a European public health issue in interdisciplinary contexts and independently expanding and further developing their scientific knowledge.

Development of competencies (*Professional, Technical, Methodological*) Upon successful completion of the module, students will be able to:

- Gain a comprehensive and in-depth knowledge about the current developments of topics in the field of European public health.
- Identify relevant themes, focus and structure a specific topic and apply suitable methods to answer the research question.
- Apply acquired theoretical scientific knowledge, methodology and analysis into public health research.
- Independently carry out research with considerations to ethical aspects.

Personal and social skills

The students are able to:

- Critically reflect on European public health issues.
- Retrieve, assess and use of relevant literature/ research material.
- Advance their knowledge and skills in scientific writing (use of terminology, language, presentation).

Content of module

The Master Thesis EMPH is a comprehensive theoretical, empirical and/ or experimental examination of a subject. The topic is approved by the chairperson of the Examination Board. Theses in a language other than English must be approved by the Examination Board.

| Teaching and Learning Strategies/ Methodology/ Media | Supervision | |
|--|---------------|--|
| Assessment(s) | Master Thesis | |
| Literature/ Working material | | |

Overview of modules and obligatory subjects

| No. | Module | Subjects |
|-----|---|--|
| 1 | Global, European and German Public Health | Global, European and German Public Health Population Health and its Social Determinants |
| 2 | Health Promotion and Prevention | Health Promotion and Prevention Project Development and Management |
| 3 | Epidemiology and Study Designs | Epidemiology and Biostatistics Quantitative and Qualitative Study Designs |
| 4 | Infectious and Non-Communicable Disease Epidemiology | Infectious Disease Epidemiology Non-Communicable Disease Epidemiology |
| 5 | Nutrition, Health Behaviour and Lifestyle | Nutrition and Health Health Behaviour and Lifestyle |
| 6 | Ethics and Scientific Methodology in Public Health | Public Health Ethics Literature Search and Scientific Writing |
| 7 | Health Policy | Health Policy Health Management |
| 8 | Health Economics | Health Economics Health Care Organisation |
| 9 | Physical, Chemical and Biological Environment and Health | Environment and Health 1 Environment and Health 2 |
| 10 | Occupational Health | Work and Health 1 Work and Health 2 |

Regulations for Assessments

Generally, modules are assessed every semester. The exam can be repeated twice. According to § 23 (5) APSO-INGI students who failed their third written module exam can apply for an oral exam. This is limited to three times per study course and one time for each module.

If a student cannot participate in an exam due to illness or if an exam has been failed, a repetition of the exam is possible at the end of the following semester.

Oral re-examination can be applied for at the professor responsible for the module.

Lecturers

Professors Prof. Dr. Christine Adis Prof. Dr. Christine Faerber Prof. Dr. (mult.) Dr. h.c. (mult.) Walter Leal Prof. Dr. Wolf Polenz Prof. Dr. Wolf Polenz Prof. Dr. med. Ralf Reintjes Prof. Dr. Annette Seibt Prof. Dr. Joachim Westenhoefer Prof. Dr. York Zoellner

Lecturers

Dipl. Ges. wirtin Wiebke Bendt

Claudia Duwe, MPH

Dipl. Ges. wirt Gunnar Paetzelt

External Lecturers

Amena Ahmad, M.P.H.

Dr. Arnd Hofmeister

Dr. Eberhard Forkel, MPH

Ute Papkalla, MPH, MA

Prof. Dr. Smita Shah

Prof. Dr. Mardie Townsend

Further academic staff of the Life Sciences Faculty, other HAW Hamburg faculties and partner universities and external lecturers.