Master of Science in

Global Urban Health

Module Handbook 2022/2023



University of Freiburg

Centre for Medicine and Society (ZMG)

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Address of ZMG:

Bismarckallee 22, 3rd floor D-79098 Freiburg

In collaboration with:

Other University of Freiburg Faculties and Partner Universities in Freiburg Freiburg Protestant University of Applied Sciences Catholic University of Applied Sciences Freiburg Freiburg University of Education



<u>INDEX</u>

1.	PROGRAM
1.1	Purpose and characteristics of the MSc Global Urban Health3
1.2	Expected learning outcomes4
1.3	Conceptual Framework of the MSc Global Urban Health6
2.	STRUCTURE AND ORGANIZATION9
2.1	Interdisciplinarity and collaborating institutions9
2.2	Responsible Persons10
2.3.	Location11
2.4	Prerequisites and selection criteria of the MSc GUH11
2.5	European Credit Transfer System (ECTS)11
2.6	General Information on Structure12
3	MODULE OVERVIEW AND TIMETABLES16
3.1	Modules Overview16
3.2	Master Thesis Timeline18
3.3	General Program timetable19
4	MODULE DESCRIPTIONS19
4.1	Core Module - Research Concepts and Methods20
4.2	Advanced Modules 1 – 3
4.3	Research Project45
5	CONTACT INFORMATION FOR GUH MASTER'S PROGRAM



1. Program

1.1 Purpose and characteristics of the MSc Global Urban Health

The following module handbook holds for the postgraduate program Master in Global Urban Health (MSc GUH) at the University of Freiburg, Germany. After successful completion of this Master's program, the academic degree Master of Science (abbreviated MSc) is awarded. The internationally oriented, English-language Master's program offers students a broad interdisciplinary training in the field of urban health. It is designed as an intensive, full-time postgraduate program and has a focus both on practical interventions and on operational/implementation research. The MSc GUH program holds an accreditation from ACQUINO, an internationally renowned Accreditation Institute, and the Baden Wuerttemberg Ministry of Science & Arts.

The MSc Global Urban Health, established at the Faculty of Medicine at the University of Freiburg, together with the University Centre for Medicine and Society: Global Health (ZMG) offers professionals from different backgrounds - medical and social sciences, urban planning, anthropological, psychological and others – the opportunity of a high-quality practice-oriented postgraduate training, which opens career opportunities at national and international level. All major institutions working in development cooperation (such as GiZ, KfW, MsF, Red Cross) and international organizations (including WHO, The Global Fund, World Bank, UNEP, UNICEF, GAVI) require a postgraduate Master Degree in Public Health, International Health, Global Health and related areas. Likewise, academic institutions with emphasis on Public Health, International Health, Global Health, Environmental Sciences, Urban Planning, Health Economy, Health Policy and similar areas will select and maintain staff with a relevant Master training. Ministries of Health, Social Security, Environment, Transport, Public Services and related areas in Low and Middle Income Countries (LMICs) prefer staff with post-graduate training for solving the enormous health problems in urban environments. In all professional areas mentioned above a certain amount of research skills is required mainly in the field of Operational/Implementation Research and Intervention Research – in order to develop innovative evidence-based intervention strategies. Participants coming from research institutions will have the opportunity of strengthening their skills and competences in these areas while the others will learn the basics, which enable them to conduct with the appropriate tools relevant studies in their professional area and/or to assess the relevance and quality of studies conducted by others.



The overall goal of the intensive MSc program is to to strengthen participants` competence in the following areas:

- To develop analytical and management skills to meet the challenges of urban health
- To identify and quantify biological-psychological-social threats to health and risk factors in urban areas
- To develop knowledge and skills in the field of prevention, control, programme development and implementation, monitoring and evaluation for improving urban health
- To design and conduct research projects in the field of urban health
- To make proactive evidence-based decisions and to gain leadership qualities and effective working skills according to the professional background
- To enhance independent and reflective thinking and inspire an interest for lifelong learning.

1.2 Expected learning outcomes

Knowledge

After the successful completion of the program, the participant will be able to:

- Understand the current issues and priorities in the field of urban health, social determinants and interconnectivity
- Use relevant research methods and understand how the methods can be applied to address particular research questions
- Apply epidemiological/statistical and social science research tools to design an operational research study and to analyze and interpret research questions
- Use appropriate skills related to the prevention, control and management of health problems and health services problems related to the challenges of urbanization

Cognitive skills

After the successful completion of the program, the participant will be able to:

- Analyze, synthesize and evaluate information from a variety of sources in a critical manner
- Apply knowledge in a variety of contexts to analyze and reach evidence-based conclusions on complex situations, health problems and opportunities in the field of urban health
- Put into practice the principles and values of ethical practice with regard to the design and implementation of operational research studies, consent and confidentiality in the collection, analysis, presentation, publication and dissemination of data
- Demonstrate creativity, innovation, inspiration and originality in the application of knowledge



Practical skills

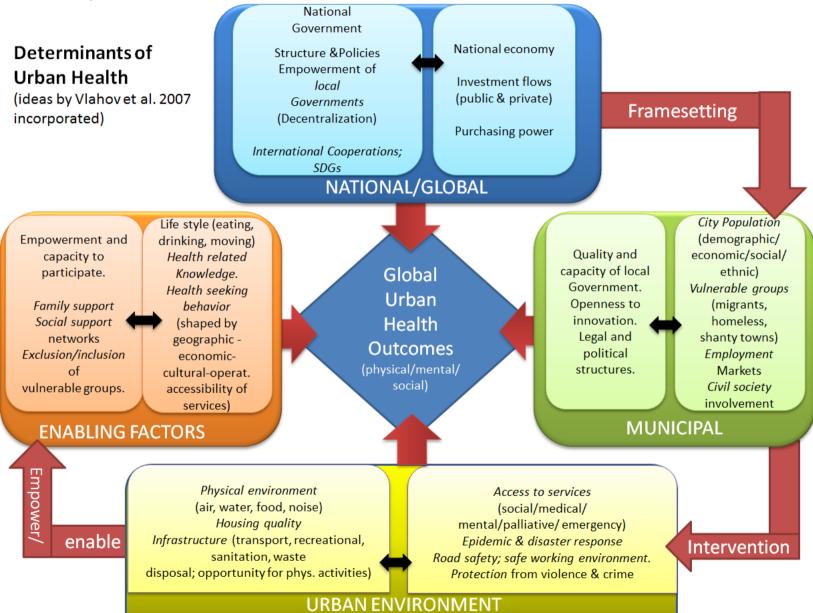
After the successful completion of the program, the participant will be able to:

- Formulate research questions, develop an appropriate research strategy and implement a systematic approach to urban health planning and quality management
- Undertake research studies in an ethical and responsible manner and accurately record and store the collected data
- Efficiently and effectively collect, analyze, manage and disseminate data collected in the field
- Inform policy-makers and other actors (including community leaders) about short, medium- and long-term policy options for urban health systems design and preparedness in an increasingly interconnected urban health context in a global environment.



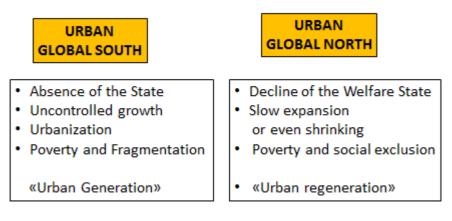


1.3 Conceptual Framework of the MSc Global Urban Health



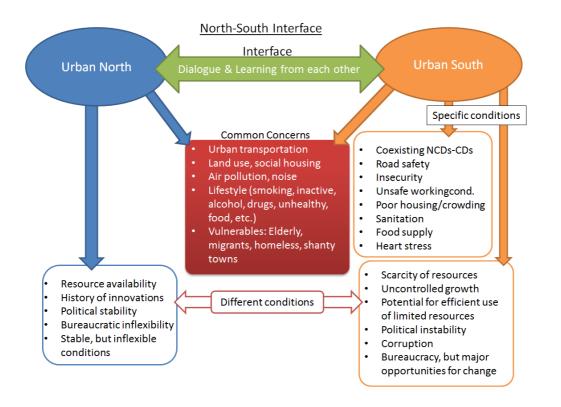
An infinite number of conditioning factors, or determinants, shapes the "urban setting". Many of them have a direct or indirect health impact. In the diagram 1.2, these have been ordered into different layers, which belong to the global and national level (shaping legislation and depending on macro-economic variables), to the municipal level (where many interventions are being initiated), as well as to the urban environment including individual living conditions and work. Enabling and limiting "intermediary" factors that rest in the community and/or the individual levels are also mentioned. The social and political conditions in the "Urban Global South" and the "Urban Global North" are not stable but in a continuous transformation, a process that appears to be faster in the South compared to the North. These features (see diagram below) will be analyzed in the MSc GUH.

Urban South& Urban North: Social and political characteristics



Source: Eberhard Rothfuss

The Master's program will facilitate the dialogue and interface between the urban South and the urban North. There are numerous common concerns in urban environments of the South and the North, which have been addressed in different ways due to contrasting economic, political, social and environmental conditions:



Learning from each other does not mean that the same solution can be adopted in every setting, but the wealth of approaches both in poverty-driven, intermediate and better-off settings will stimulate new ideas about what can be done and where more evidence has to be collected. This environment of dialogue, exchange of experiences and networking between South and North will be provided by the MSc GUH.



2. Structure and Organization

2.1 Interdisciplinarity and collaborating institutions

The Master program is a truly interdisciplinary undertaking at University of Freiburg; it integrates many disciplines and faculties. The program is under the responsibility of Faculty of Medicine organized by ZMG, Centre for Medicine and Society.Together with other University of Freiburg centers, the members of the ZMG are closely interlinked in teaching and research.

Faculty of Medicine

The more than 100 professors at the Freiburg Faculty of Medicine work at 58 institutes, departments and other institutions, located in the heart of Freiburg and at the Medical Center – University of Freiburg. They carry out first-class research in cooperation with other faculties and research institutions in Freiburg and within national and international networks. The faculty has a long tradition, as medicine was one of the four original faculties when the University of Freiburg was founded in 1457. More than 100 years ago, it was a pioneer in equal rights for women; Germany's first female students of Medicine were enrolled in Freiburg in the winter semester of 1899-1900.

Centre for Medicine and Society (ZMG)

The Centre was founded in 2014 as a central unit of the University of Freiburg. It is committed to research and training in the field of Global Health, including Planetary Health with a special focus on urban settings. The Centre is responsible, through its Executive Director, for overseeing the implementation and further development of the Master program which is being organized by the Master Core Team.

Faculty of Humanities (Philosophical Faculty)

The Faculty includes a number of disciplines which contribute to the teaching of the MSc GUH using the "city" as the connecting concept. External lecturers, with backgrounds in the social sciences, broaden the analysis of "urbanity". Examples of specific themes are: Health in Megacities; City and the global South; Health governance in cities; and the history of urban epidemics.

Department of Knowledge Transfer

This department at the Central University Administration coordinates the continuing Education Program at the Ministry including the MSc GUH and publishes an annual report on all the university activities related to continuous education.



2.2 Responsible Persons

Executive Director of ZMG

Prof. Dr. Hajo Grundmann Institute of Hospital Hygiene and Infection Prevention Breisacherstr.115b D-79106 Freiburg

Dean of Studies

Prof. Dr. Lutz Hein Studiendekanat der Medizinischen Fakultät Breisacherstr. 153 D-79110 Freiburg

Scientific Advisor

Prof. Dr. Axel Kroeger Centre for Medicine and Society (ZMG) World Health Organisation (WHO, contractor) Liverpool School of Tropical Medicine (UK) Bismarckallee 22, 3rd floor D-79098 Freiburg

Coordinator of the Master Program

Dr. Sonia Diaz-Monsalve Centre for Medicine and Society (ZMG) Bismarckalle 22, 8th floor D-79098 Freiburg

Administrative Officer

Monika Gaalova (Master Finance, Banking and Investment) Centre for Medicine and Society (ZMG) Bismarckalle 22, 3rd floor D-79098 Freiburg

Technical Officer

Molly Catherine Centre for Medicine and Society (ZMG) Bismarckalle 22, 3rd floor D-79098 Freiburg

Teaching staff

The teaching staff includes professors and lecturers of the University of Freiburg from a variety of faculties, external lecturers from partner universities and institutions as well as external experts with long-term practical experiences (see list of lecturers in the Annex).



2.3. Location

The Master Program is located at <u>Bismarckallee 22 / D-79098 Freiburg</u>. Classes are held on the 4th floor. Map with precise location of building:



2.4 Prerequisites and selection criteria of the MSc GUH

The Master course is open to all professionals in health, social sciences including economics, urban planning and others, holding a higher academic degree with a **minimum 4 years of academic full time training** (240 ECTS; see below 2.4). Candidates are expected to have at least 1 year of working experience (paid or unpaid) in a relevant field.

The medium of instruction is English. Proficiency in reading and speaking English is required – **minimum English required level is B2.** Accepted certificates: (TOEFL (550 paper / 213 computer / 72 - 94 online), IELTS (5+), DAAD (a, b or c in all categories), PTE (59+), Cambridge FCE, CAE and CPE, GER-Level B2 or more).

Approximately 20 participants will be accepted each year, drawn from a wide range of countries. We aim to achieve a balance in gender, age, discipline and between participants from industrialized and LMICs (Low and Middle Income Countries).

2.5 European Credit Transfer System (ECTS)

ECTS is a learner-centered system for credit accumulation and transfer, based on the principle of transparency of the learning, teaching and assessment processes. Its objective is to facilitate the planning, delivery and evaluation of study programs and student mobility by recognizing learning achievements and qualifications, and periods of learning. http://ec.europa.eu/education/library/publications/2015/ects-users-guide en.pdf

According to the European Credit Transfer and Accumulation System (ECTS), one Credit Point corresponds to an average workload of 25-30 hours. In Continuing University Education of



the University of Freiburg, one Credit Point corresponds to an average workload of 30 hours (student effort). MSc students follow 37 CP (ECTS) of taught modules plus 23 CP (ECTS) in the Research Project module, **total 60 CP (ETCS)**.

The program consists of 40 working hours per week (including theory and self-study). The proportion of self-studies is the following: Core module 36.4%; Communicable Diseases Module 35%; Planning Module 30%; Environment Module 25%; Non Comm. Diseases Module 40%; Mental Health Module 35%; Migration Module 30%.

2.6 General Information on Structure

The MSc GUH is a modular program consisting of three major parts:

16 ECTS 7 ECTS 7 ECTS 7 ECTS 23 ECTS (3+3+17)	Core Module: Research	Advanced	Advanced	Advanced	Research Project
	Concepts & Methods	Module I	Module II	Module III	and Thesis
	16 ECTS	7 ECTS	7 ECTS	7 ECTS	23 ECTS (3+3+17)

<u>Duration and ECTS</u>: See duration of the core module and advanced modules in table 2. <u>Language</u>: English <u>Participants</u>: 20

Study performance

The various elements of a module are made up from formal contact time (lectures, tutorials, discussions, practical exercises, excursions and others), assessment (preparing and completing assignments and examinations) and self-studies.

Examination – Grading System

To pass examinations associated with the different modules participants need to achieve at least the grade 4.0 (sufficient). The final grade is calculated from the grade for the taught modules (core module and advanced modules 1 to 3 where the arithmetic mean of the core and advanced modules represent the overall grade for taught modules) and the master module (oral examination and master thesis). The taught courses count for 60% and the master module for 40% of the overall grade. Grades are awarded according to the German grading scale (1-5) specified on Table 1 below.

ECTS system	German Grading System	Definition
А	1 (1-1,3)	excellent
В	2 (1,7-2,3)	good
С	3 (2,7-3,3)	satisfactory
D	4 (3,7-4,0)	sufficient
F	5 (>4,0)	fail

Table 1: Grades according to the German and ECTS grading system and their definition.

Examination – Regulations and Assessments

Examinations (PL, Prüfungsleistungen in German) are marked as described in the table below. In case a student fails the exam, a repeat exam will be held 4 to 8 weeks after having received the information about the fail. In case PowerPoint presentations are the form of assessment,



the repeat exam will be a homework on a similar topic to be submitted 4 to 8 weeks after having received the information on failure.

The description of the exams (PLs) is given after the presentation of each submodule, together with the relative weight (as percentage of the total of 60 ECTS) of each. The additional requirements for passing a module (SL, Studienleistung) are presented in the table below.

Overview of marked examination types (Prüfungsleistungen)

Modules	Examinations Type	ECTS- Points	Duration/Extent
Core Module – Research Concepts & Methods			
Qualitative and quantitative methods and findings of	Written Exam	10	2 x 2 hrs
social and public health research (Qualitative research			
methods; Health economics)			
Statistics	Written Exam	3	1,5h
Epidemiology	Written Exam	3	2h
	Total	16	
Advanced Module 1: Communicable Diseases and Qua	lity Assured Health Pro	grams	
Communicable diseases and outbreaks in urban	Oral Presentation	7	10 Minutes presentation
environments	and Written Essay		(25%) and 10 pages essay
Needs assessment, planning tools and quality			(75%)
assurance in health systems for the urban poor			
	Total	7	
Advanced Module 2: Environmental Management and	Control of Non-Comm	unicable	
Diseases in urban areas			
Environmental determinants of health in urban areas	Oral Presentation	7	10 minutes presentation
Social determinants and behavioural risk factors of	with Discussion		including Discussion (80%)
Non-Communicable diseases			& documentation (20%)
	Total	7	
Advanced Module 3: Migration, Violence and Mental H	lealth Issues Among th	e Urban Poor	
Mental health in urban environments	Poster oral	7	10 minutes presentation
Migration and violence in urban settings	presentation &		(50 %) & concept paper
	written concept		(50%)
	paper		
	Total	7	
Master Module: Research Project			
Research Design	Protocol	3	No word count
Oral Exam	Oral Examination	3	30min
Master Thesis		17	4.000 words
			recommended for core
			part
	Total	23	
	Grand-total	60	

*For more details on each of the assignment methods and weigh factors, refer to the Modules' descriptions in the second part of the Handbook.



Overview of unmarked assessments (Studienleistungen)

(In all courses attendance and active participation is mandatory, cf. § 9 Abs 2 Study-Regulations)

Modules	Examinations Type	Duration / Extent
Qualitative and quantitative methods and findings of	MCQs answered and	
social and public health research	checked individually	
(Qualitative research methods; Health economics)		15 questions
Statistics	2 Home exercises	
		4 pages
	Analysis Exercise with	
Epidemiology	presentation	10 minutes
		presentation
Advanced Module 1: Communicable diseases and Qua	ity assured programs	
Communicable diseases and outbreaks in urban	MCQs answered and	
environments	checked individually	20 questions
Needs assessment, planning tools and quality	Presentations of policy	2 x 10 minutes incl.
assurance in health systems for the urban poor	briefs & indicator exercise	discussion
Advanced Module 2: Environmental Management and	Control of Non-Communicabl	e Diseases in urban areas
Environmental determinants of health in urban areas	Measurement &	
	presentation of air quality	10 minutes incl.
	in small groups	discussion
Social determinants and behavioural risk factors of	Presentation of different	10 minutes incl.
Non-Communicable diseases	views of drug licensing	discussion
Advanced Module 3: Migration, Violence and Mental H	lealth Issues Among the Urba	n Poor
Mental health in urban environments	Oral presentations about	10 minutes incl.
Migration and violence in urban settings	excursions clinic and	discussion
	refugee institutions	
Master Module: Research Project		
Research Design Assessment before submission of the	Oral presentation &	10 minutes
protocol to the Ethical Committee	Written Assignment	7 pages

For being awarded credit points requirements are the following:

- Students take active part in each course/seminar/hands-on of the module and in its course.
- Complete self-studies: 36.4%; Comm. Diseases 35%; Planning tools 30%; Environment 25%; Non Comm. Diseases 40%; Mental Health 35%; Migration 40%.
- Completing the examinations during and after the sub-modules, presentation at seminars and participation at discussions.

Methodologies: In the morning sessions usually formal teaching (lectures) and group work; in the afternoon usually exercises, excursions, group work and self-study. Participation in the modules are mandatory and a maximum of 15% absence is allowed which can be extended to 30% (§9 of the Study and Examination Regulations). The postgraduate program M.Sc. Global Urban Health starts in the winter semester (last week of September). The courses offered within this program are repeated annually. This full-time program leads participants to a Master's degree usually in one year (for more details see the document "Study- and Examination Regulations").

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Weighting Factors						
	ECTS	%				
	Qualitative Research	5	8%			
Care Madula (26%)	Health Economics	5	8%			
Core Module (26%)	Statistics	3	5%			
	Epidemiology	3	5%			
	Communicable Diseases	2	3%			
Advanced Module 1 (11%)	NAPTs	5	9%			
	Environmental Determinants	3,5	6%			
Advanced Module 2 (12%)	Non-Communicable Diseases	3,5	6%			
Advanced Module 3 (12%)	Mental Health + Migration	7	12%			
	Research Design	3	5%			
Research Project (38%)	Oral exam	3	5%			
	Research Study	17	28%			
	Total	60	100%			

The weighing factors for each component of the program are in the following table:



3 Module Overview and Timetables

3.1 Modules Overview

Core Module

Research Concepts and Methods

Description: Research methods, epidemiology/ statistics/ social sciences methods, health services, and other general issues of health and risk factors in urban settings

Convener: Axel Kroeger.



Advanced Modules

Module 1: Communicable Diseases and Quality Assured Programs in Urban Settings

1.1 Communicable diseases and outbreaks in urban environments

Conveners: Axel Kroeger, Winfried Kern, Hartmut Hengel.

1.2 Needs assessment, planning tools and quality assurance in health systems for the urban poor

Convener: Sonia Diaz-Monsalve.

Module 2: Environmental Management and control of Non-Communicable Diseases (NCDs) in urban areas

2.1 Environmental determinants of health in urban areas: magnitude, measurement and interventions

Convener: Armin Schuster

2.2 Social Determinants and behavioral risk factors of NCDs in urban environments.

Convener: Eva Maintz.

Module 3: Migration, violence and mental health among the urban poor

3.1 Mental Health in urban environments.

Convener: Peter Scheib

3.2 Migration and violence in urban settings.

Convener: Laura Wall.



Conveners: Axel Kroeger, Sonia Diaz-Monsalve, Hajo Grundmann

	Structure of the Master's Programme						
Weeks		Modules	_				
		Administrative issues	Topic Areas				
1			Epidemiology				
2	s)	Research Concepts & Methods (16 ECTS)	Statistics				
3	nth	(12 weeks, Sept.26 - Dec.16, 2022)	Qualitative Studies				
4	om		Social Science Methods				
5	: (3		Health Economics				
6	lule	D	Urbanisation				
7	100	Research Methods	Health Systems				
8 9	re N	Special Topics	Urban Planning Traditional Medicine				
10	Col		Social Mobilisation				
10			Pro-social behavior				
12			Excursions				
		Christmas Holidays (Dec.19, 2022 - Jan.8					
		1. Communicable Diseases & Quality Assured Hea					
13							
13		1.1 Communicable diseases and Outbreaks in u (2 weeks, Jan. 9 -20, 2023)	rban environments				
		(2 weeks, Jan. 5 -20, 2023)					
15		1.2 Needs assessment, planning tools and quality assurate	nce in health systems for the				
	s)	urban poor					
16	eak	(2 weeks, Jan.23 - Feb.3, 2023					
17	months, including breaks)	Revision + Asessments (1 week, Feb.6 -					
	ding	2. Environmental Management and Control of N	ICDs in Urban Areas				
18	clue	2.1 Environmental determinants of health	in urban areas				
19	i, in	(2 weeks, Feb.13 - 24, 2023)					
20	ths	2.2 Social determinants and behavioural risk	factors of NCDs				
21	nor	(2 weeks, Feb.27 - March 10, 20	23)				
22	-	Revision + Asessments (1 week, Mar.13	- 17, 2023)				
	ıles	3. Migration, Violence and Mental Health Among t	he Urban Poor (7 ECTS)				
23	Advanced Modules (6	3.1 Mental health in urban enviror	iments				
24	Σ	(2 weeks, Mar.20 - 31, 2023)					
	Joon	Easter Holidays (2 weeks, Apr.3 - 14	l, 2023)				
	lvar	3.2 Migration and violence in urban	settings				
25	Ad	(2 weeks: April 17 - 28, 2023)	-				
26		Revision + Asessments (1 week, May 1					
27			-,,				
		Overall Course Assessment. Core Module & Ac	lvanced Modules.				
28		Final examination including External examination	ner (May 2023)				
29							
Re	searc	h Project (23 ECTS) - 15 weeks, including: Protocol Develop development and implementation	ment, Oral Exam, Thesis				
		Graduation					

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3.2 Master Thesis Timeline

Activity	Date
1. "Introduction to the Research Project"	4 October 2022
2. "The Research Protocol: Process and Pitfalls"	12 October 2022
3. "Research Objectives & Methods"	18 October 2022
4. Selection of Topics & Objectives; Identify Supervisor	End of October 2022
5. Interaction with supervisor (advice)	Continuous
6. Presentation of Research Objectives & Methods	30 November 2022
7. Presentation of the Draft Proposal	6 February 2023
8. Protocol Submission to ERC University Ethics Committee	20 March 2023 by 7 am
9. Oral Exam (include questions on the Master thesis and key messages for each module available on ILIAS)	19 May 2023 (to be confirmed)
10. Implementation of the research protocol	From June 2023 onwards
11. Submission of Thesis	8 September 2023
12. Graduation	15 September 2023

*For exact timeline details, please check the Master's Thesis Guidelines



3.3 General Program timetable

26/09/2022	Start of the Program
26/09/2022 – 16/12/2022	Core Module: Research Concepts and Methods
19/12/2022 - 08/01/2023	Christmas Holidays
	Advanced Modules
09/01/2023 – 20/01/2023	1.1 Communicable Diseases and Outbreaks in Urban Environments
23/01/2023 - 03/02/2023	1.2 Needs Assessment, Planning Tools and Quality Assurance in Health Systems for the Urban Poor
06/02/2023 - 10/02/2023	Revision + Assessments of Module
13/02/2023 - 24/02/2023	2.1 Environmental Determinants of Health in Urban Areas
27/02/2023 – 10/03/2023	2.2 Social Determinants and Behavioral Risk Factors of Non- Communicable Diseases
13/03/2023 - 17/03/2023	Revision + Assessments of Module
20/03/2023 - 31/03/2023	3.1 Mental Health in Urban Environments
03/04/2023 - 14/04/2023	Easter Holidays
17/04/2023 – 28/04/2023	3.2 Migration and Violence in Urban Settings
02/05/2023 - 5/05/2023	Revision + Assessments of Module
08/05/2023 – 26/05/2023	Overall Course Assessment Including Oral Examination
08/05/2023 - 11/09/2023	Research Project and Submission of Thesis
Mid-September 2022 (dates to be confirmed)	Marking of Thesis and Overall Marking
Week after marking the thesis	Graduation (exact date to be determined)



4 Module Descriptions

4.1 Core Module - Research Concepts and Methods

Module Name: Research Concepts and Methods	
General Content: Research methods; Epidemiology; Statistics; Social Science Methods, Health Services and other general issues of health and risk factors in urban settings.	Duration: 12 weeks
Module Conveners: Axel Kroeger Lecturers: M. Boatca, M.Catherine, S. Dabringhaus, S. Diaz, M. Koerner, A. Kr (Cochrane), E. Maintz, J. Nyirenda, J. Pink, J. Schlehe, UAEM (Universities Allie team. External Experts: E. Alfonso-Sierra, Ch. Knauth, F. Konold, A. Krämer, J. Meye (WHO), E. Rothfuss	d for Essential Medicines)
 Description: The Research Concepts and Methods Module has different teaching blocks: The basic knowledge of epidemiology, statistics, research design (a studies, economic appraisals), research implementation and analysis a Concepts of Global Health applied to cities and urban living will be e urban interface, the challenges of megacities, characteristics of middl A better understanding of demographic, social, psychological, o determinants of urban health will be generated or strengthened; Processes of urbanization will be illustrated from a historical perspect The role of formal and non-formal health care systems and health prog and governance aspects will be analyzed and linked to Urban Health. 	will be taught and practiced explored including the rural- e-sized cities; ultural and environmenta ive;

Learning Objectives:

At the end of the module, participants will be able to:

- Define key terminology, concepts and different perspectives of Global Health and urban health including Global Health concepts applied to the city and North-South interface.
- Analyze urban health and risk factors from different perspectives: Social sciences view (historical, political, behavioral and others), biological-medical view, health systems view (governance, financing, equity, access issues and others).
- Measure and analyze health, disease, risk factors, economic issues, health services and social phenomena.
- Summarize major health interventions in urban areas, particularly of LMICs (low and middle income countries), as well as the role of international organizations.
- Start writing a research protocol under the supervision of a tutor paying attention to ethical issues.
- Describe the main aspects for responding effectively to global and urban health challenges through improved health governance, international agreements (SDGs and others) and other forms of international cooperation.

Contents:

1) Concepts and challenges in Global Urban Health:

- Key terminology and conceptual frameworks
- Theory of the city and urban society
- Determinants of health

2) Research Methods and Evidence Base for Global Urban Health:

- Principles of epidemiological study designs (details on the next page)*
- Basic statistical and epidemiological concepts
- Qualitative research and other social sciences research tools
- Critical appraisal skills
- Systematic literature reviews
- Translating research into policy
- Principles and rules of research ethics

3) Governance in Global Urban Health:

- History (from rural to urban; from Primary Health Care to SDGs)
- Key stakeholders in the Global Urban Health Arena
- Issues of governance

4) Health Systems in Global Urban Health:

- Key elements of health systems
- Economic appraisals. Performance based funding
- Policy responses for promoting equity, quality and sustainability
- Health systems research

Learning Methods:

The following learning methods are applied in this module:

- Formal lectures, interactive lectures with discussions
- Group exercises
- Outdoor practical exercises
- Home assignments and/or self-directed-studies

* The module includes field trips as well as study tours to the World Health Organization (WHO), The Global Fund, GAVI and the UN Development Program (UNDP) in Geneva.

Note: Due to potential COVID-19 travel restrictions, the excursions date will be confirmed during the year.

Module Assessment:

Main assessment tool is written exams, lasting 1,5 to 2h each and oral presentation on the Research Protocol.

This module's final grade encompasses of the average of the following **4 marks**:

- 1. Combined **mean mark** (weigh factor 16) of the following written examinations: In-class written examination on **quality research methodologies** (week 5) and in-class written examination (short answer questions) on **economic appraisals** (Week 10)
- 2. Mark of the in-class written examination on **statistical tools** (short answer questions/ calculations related to terminology, concepts) weigh factor 5
- 3. Mark of the in-class written examination on **epidemiological methods** (including sampling) weigh factor 5

Total weighing factor for the Core Module = 26.

This means that the mark of the core module contributes 26% to the total mark of the MSc.

The **Research Protocol** and its Presentation will take place in January/February and the mark will be attached to the Master Module (see details section 4.3 below – date to be confirmed) - weigh factor 5.



Recommended Reading for Urban Health:

- Kraemer A, Hossain Khan M, Kraas F (eds). (2011). Health in Megacities and Urban Areas. Heidelberg, London, New York. doi 10.1007/978-3-7908-2733-0.

- W. H. Baumgartner, E. (2016). Creative Inequality in the Mid-sized University City – Socio-spatial Reflections on the Brazilian Rural-urban Interface.

- International Council for Science (ICSU) (2011). Report of the ICSU Planning Group on Health and Wellbeing in the Changing Urban Environment: a Systems Analysis Approach. Paris[www.icsu.org].

Recommended reading for Epidemiology and Statistics:

- Kirkwood BR, Sterne JAC. (2003). Essential Medical Statistics. 2nd edition, Blackwell Science.

- Porta M. (2008). A Dictionary of Epidemiology. 5th edition.

- Leon Gordis (2008), Epidemiology. Saunders-Elsevier.

- Hennekens CH, Buring J, Mayrent SL (ed.) (1987). Epidemiology in Medicine. Boston/Toronto.

- WHO-TDR Implementation Research Toolkit. Workbook. TDR-WHO, Geneva 2018.

Compulsory reading for Qualitative Studies:

- Bernard, H. Russell (2011). Research Methods in Anthropology. Qualitative and Quantitative Approaches. 5th edition, Lanham. Chapter 12: "Participant Observation", pp. 256-290.

- Gobo, G. (2008). Doing Ethnography. Los Angeles. Chapter 11: "Ethnographic Interviewing," pp.190-200.

- O'Reilly, K. (2005). Ethnographic Methods. London, New York, Routledge. Chapter 3: "Ethical ethnography," pp. 59-69.

General structure of the epidemiology sessions

The sessions will be structured into 3-hour units, separated by two breaks of about 15 minutes each. Usually, the first part will be lecture-based and the two following parts will be practical exercises. Session 8 will not have a lecture but a presentation of all student groups of their study design.

Additionally, in week 7 and 8 there will be complementary sessions in the second half of the week with practical indoor and outdoor exercises on sampling, household surveys and questionnaire design. Also, the lectures and exercises on demographic health and health services indicators in week 3 will be complementary to the epidemiological and statistical sessions.

Learning objectives

After this module students will be able to:

- Understand the difference between association and causation.
- Use and calculate measures of disease frequency, of effect, and of population impact.
- Differentiate systematic errors and where they come from in epidemiological studies.
- Explain bias in epidemiological studies and suggest measures to minimize its impact.
- Apply the concept of effect modification and indicate examples.
- Use the basic epidemiological study types.
- Understand what type of systematic error each study type is prone to and how to avoid it.
- Design an epidemiological study and for which problem which design is most appropriate.
- Identify the merits and limitations of a scientific paper.
- Apply ethical issues when developing research proposals

Contents:

- 1. Introduction to Epidemiology, measures of disease frequency
 - Basic concepts: Outcome, exposure, intervention
 - Association and causation
 - Prevalence and incidence
 - Risk, odds and rate
- 2. Measures of effect and population impact
 - Risk ratio and odds ratio
 - Population attributable risk, Population attributable risk ratio
 - Number needed to treat, number needed to harm
- 3. Confounding/Interaction
 - Bias (Selection bias, Information bias)
- 4. Disease dynamics
 - Study designs 1 (Cross sectional/surveys, ecological study, sampling)
 - Study designs 2 (Case control study, cohort study)
 - Study designs 3 (Intervention study)
- 5. Practical study design
 - Introduction to Statistical Software



	TIMETABLE "Research Concept and Methods" (Core Module) Week 1							
	Mon – 26/09/22	Tue – 27/09/22	Wed – 28/09/22	Thurs – 29/09/22	Fri – 30/09/22			
Morning	Introduction to Freiburg and the course (Kroeger, Diaz, Grundmann)	A tour through the German Bureaucratic Jungle (Gaalova) Introduction to Student Life (Catherine)	Introduction to Uni account/Eduroam (Catherine/Galoova) Intro to ILIAS (Sassiat)	Introduction to the Core Module: Concept of Global Health and Introduction to Urban Health (Kroeger)	Overcoming difficulties by Humor (Haenle)			
Afternoon		Poster	Preparation	Presentations posters to students and lecturers	Self-Study			
	1							
Mon – 03/10/22 Tue – 04/10/22 Wed – 05/10/22		Thurs – 06/10/22	Fri – 07/10/22					
Morning	Public Holiday	Public Health: Short History (Grundmann) Th <u>e Research Proj</u> ect (Kroeger/Diaz)	Epidemiology (1) (Nyirenda)	Informal Economy, Urbanisation and Health (Ercüment)	Statistics (1) (Catherine)			
Afternoon		Self-Study	Self-Study	Safety and Orientation (Wall)	Self-Study			



	Week 3							
	Mon – 10/10/22	Tue – 11/10/22	Wed – 12/10/22	Thurs – 13/10/22	Fri – 14/10/22			
Morning	Epidemiology (2) (Nyirenda)	Statistics (2) (Catherine)	The Research Protocol: Process and Pitfalls (Catherine/Diaz) Gl <u>obal Urban Hist</u> ory: Characteristics and case studies (Dabringhaus)	Urban History/ Urbanization and demographic change (Arndt)	City and global South, a social-science view (Rothfuß, Bayreuth)			
Afternoon	Self-Study		Self-Study	Gender and Diversity (Wittenzellner)	Self-Study			
	Week 4							
	Mon – 17/10/22	Tue – 18/10/22	Wed – 19/10/22	Thurs – 20/10/22	Fri – 21/10/22			
Morning	Statistics (3) (Catherine)	Research Objectives & Methods (Kroeger) Referencing	Qualitative Research (Niermann)	Qualitative Research (Niermann)	Epidemiology (3) (Nyirenda)			
Afternoon	Self-Study	Sustainable Development Goals (SDGs) (Horstick)	Qualitative Research (Niermann)	Self-Study	Self-Study			



	Week 5				
	Mon – 24/10/22	Tue – 25/10/22	Wed – 26/10/22	Thurs – 27/10/22	Fri – 28/10/22
Morning	Epidemiology (4) (Nyirenda)	Health Systems Analysis/Health Services Research (Körner)	Economic appraisal (Alfonso)	Economic appraisal (Alfonso)	Statistics (4) (Catherine)
Afternoon		Assessment Qualitative Research	Economic appraisal (Alfonso)	Self-Study	Self-Study
			Week 6		1
	Mon – 29/10/22	Tue - 01/11/22	Wed – 02/11/22	Thurs – 03/11/22	Fri – 04/11/22
Morning		Public Holiday	Urban agriculture (Konold) Introduction to Indicators (Diaz)	Statistics (5) (Catherine)	Epidemiology 5 (Nyirenda)
Afternoon	Assessment Economic Appraisal (Alfonso)		Self-Study		



	Week 7					
					Eri 11/11/22	
	Mon – 07/11/22	Tue – 08/11/22	Wed – 09/11/22	Thurs – 10/11/22	Fri – 11/11/22	
Morning	Epidemiology (6) (Nyirenda)	Statistics (6) (Catherine)	Sampling; sampling exercises (Kroeger)	Household interview surveys (Kroeger) — Mensa Survey	Megacities (Krämer)	
Afternoon	Self-Study	Research Ethics: principles and rules (Korinthenberg)	Outdoor practical exercise	Group analysis of exercises	Self-Study	
			Week 8			
	Mon – 14/11/22	Tue – 15/11/22	Wed – 16/11/22	Thurs – 17/11/22	Fri – 18/11/22	
Morning	Epidemiology (7) (Nyirenda)	Statistics (7) (Catherine)	Household interview surveys (Kroeger) Questionnaire analysis by group (support by Nyirenda)	Group presentation: assessment of sampling exercise & survey analysis (Kroeger) (Course work)	Excursion to BASEL	
Afternoon	Questionnaire analysis (by group)	Questionnaire analysis (by group; support by Nyirenda)	Questionnaire analysis (by group; support by Nyirenda)	Self-Study	Self-Study	



	Week 9				
	Mon – 21/11/22	Tue – 22/11/22	Wed – 23/11/22	Thurs – 24/11/22	Fri – 25/11/22
Morning	Epidemiology (8) (Nyirenda)	Statistics (8) (Catherine)	Urban financing, urban development. Intern. cooperation (Meyer,GIZ) – Online	Evidence Based Health Care, systematic reviews; literature search (Labonté)	
Afternoon	Self-Study	Self-Study	"Diversity starts with me": international/interdisciplinary/ intercultural interaction (Wall)		Self-Study
			Week 10		
	Mon – 28/11/22	Tue – 29/11/22	Wed – 30/11/22	Thurs – 01/12/22	Fri – 02/12/22
Morning	Epidemiology (9) (Nyirenda)	Statistics (9) (Catherine)	Students' Presentations of Research Objectives & Methods	Review sampling, household surveys (Kroeger) Alternative medical systems (Kroeger)	Issues with medicinal drugs (Maintz)
Afternoon	Self-Study	Self-Study	Students' Presentations of Research Objectives & Methods (Cont.)	Self-Study	Self-Study



	Week 11				
	Mon – 05/12/22	Tue – 06/12/22	Wed – 07/12/22	Thurs – 08/12/22	Fri – 09/12/22
Morning	Epidemiology (10) (Nyirenda)	Review Statistics (Catherine)	Qualitative Research (Dobler)	Hospitals in the Muslim World (Daneshgar)	Review Epidemiology (Nyirenda)
Afternoon	Self-Study	Self-Study	Self-Study	Self-Study	Self-Study
			Week 12		
	Mon – 12/12/22	Tue – 13/12/22	Wed – 14/12/22	Thurs – 15/12/22	Fri – 16/12/22
Morning	Self-Study	Assessment Statistics	Self-Study	Self-Study	Assessment Epidemiology
Afternoon	Self-Study	Self-Study	Self-Study	Self-Study	

4.2 Advanced Modules 1-3

Advanced Module 1: Communicable Diseases in Urban Environme Quality Assured Health Programs	nts and				
General Description: This first advanced module consists of two sub-modules: The first sub-module focuses on pathogens, transmission dynamics and early outbreak detection of communicable diseases as well as disease control strategies and epidemic responses including social mobilization and inter-sectoral approaches for vaccination programs, antimicrobial resistance management and special challenges like sanitation systems in urban areas. The second submodule provides technical skills for designing, implementing, evaluating and promoting the quality of health systems in urban contexts as well as assuring, monitoring and evaluating quality using concrete examples and case studies. Current challenges such as the unequal distribution of health care professionals result from a lack of delivery of quality health services and care to under-served regions of the world. These critical shortages, inadequate skills, and uneven geographic distribution of health professionals pose major barriers to achieving the preferred state (i.e. quality) of the global health care system. Together the two sub-modules will link crucial basic knowledge of endemic/epidemic disease control with knowledge about practical strategies to improve health services with the existing resources in low and middle income countries. It will help participants to apply tools and models for quality improvement through team work and creative approaches.	Duration: 4 weeks total				
Assessment Main assessment tools for both sub-modules are: Oral Presentation and written assignment. Oral presentation with 10 minutes duration.					
 The module's assessment mark consists of the marks of both sub-modules together: 1. Oral presentation after the CDs module - at the end of module 1.1, you will have randomly selected a communicable disease in a city of your choice; you will describe the characteristic of the pathogen, the transmission route and the disease as far as this understanding is important for the prevention and control of the disease. You will do a PowerPoint presentation of a max. of 10 minutes - Weighing factor 3. 2. Written assay – after completing Module 1.2 on planning, you will be able to do a proper. 					

 Written essay – after completing Module 1.2 on planning, you will be able to do a proper situational analysis of "your" disease and formulate the operational plan (see below for more details). Critically present and analyze the current situation of your urban district and develop your plan for the next year. The essay should not have more than 3,000 words – weighing factor 9.

(NB. Total weighing factor for Advanced Module 1 = **12 (3+9).** This means that the mark of the module contributes 12% to the total mark of the MSc)



Sub-Module 1.1: Communicable diseases and outbreaks in urban environments

Module conveners: Winfried V. Kern, Hartmut Hengel, Axel Kroeger	
	Duration:
Lecturers: H. Grundmann, G. Haecker, H. Hengel., W.V. Kern, A. Kroeger, M.	2 weeks
Panning, S. Rieg, D. Wagner	
External Experts: T. Callejas (WHO), B. Lange (Hannover), Ch. Lengeler (Basel)	

Learning Objectives:

At the end of the module participants will be able to:

- Recognize the magnitude and transmission dynamics of communicable diseases in urban environments
- Explain principles of early identification, management and control of communicable diseases in urban environments
- Interpret key indicators related to the control of communicable diseases in urban environments
- Develop a proactive and creative approach in controlling infectious diseases
- Implement in their work environment epidemiological investigations and formulate strategies for effective control of communicable diseases with community involvement
- Understand the role of different national and international institutions as well as of different professionals and apply the concept of inter-sectoral collaboration in their work environment

Learning Methods:

The following learning methods are applied in this sub-module:

- Formal lectures, interactive lectures with discussions
- Group exercises
- Home assignments and/or self-directed-studies
- Field trip to Diagnostic Lab

Contents:

- 1) Understanding communicable diseases in urban environments
 - Pathogens and transmission routes
- 2) Transmission dynamics and outbreak detection
 - Disease surveillance and burden
 - Vector surveillance
 - Dengue fever: transmission dynamics and interventions
 - Tuberculosis: transmission risk in crowded environments and migrants
 - Urban malaria: determining the magnitude and interventions
 - HIV-AIDS and other sexually transmitted infections
 - Covid-19
- 3) Establishing disease control and epidemic response
 - Social mobilization
 - Vaccination programs
 - Resistance management

Assessment:

Oral presentation: at the end of module 1.1, you will have randomly selected a communicable disease. You will choose a context (city or country), describe the characteristic of the pathogen, the transmission route and the disease as far as this understanding is important for the prevention and control of the disease. The oral PowerPoint presentation has a duration of 10 minutes - Weighing factor 3.



Recommended Reading:

Connolly MA (ed.). 2005. Communicable Disease Control in Emergencies. A Field Manual. WHO Geneva.
Detels R, Gulliford M, Abdool Karim Q, Tan CC (eds). 2015. Oxford Textbook of Global Public Health.
London.

- Heymann DL (ed.). 2015. Control of Communicable Diseases Manual. Washington D.C.

 Gould IM, van der Meer JWM (eds.). 2008. Antibiotic Policies: Fighting Resistance. New York, London.
 WHO/TDR 2016. Technical handbook for dengue surveillance, dengue outbreak prediction/detection and outbreak response (Model contingency plan), http://www.who.int/tdr/publications/year/2016/tech_handbook_dengue/en/

*An online learning course on Pandemics is offered to students later in the year, within the topics of the History of pandemics, surveillance and preparedness as well as epidemiology and transmission.

	Timetable N	Nodule 1.1: Comm	unicable diseases in u	rban environments			
	Week 1						
	Mon – 09/01/23	Tue – 10/01/23	Wed – 11/01/23	Thurs – 12/01/23	Fri – 13/01/23		
Morning	Introduction to the Module (Kroeger & Grundmann) Modelling the spread of infectious disease (Grundmann)	Transmission routes, infection surveillance (Kroeger) Special infectious diseases: Rabies (Panning)	Important pathogens and infections for urban planning I: Salmonella and other water/food-borne pathogens (Häcker) Important pathogens and infections for urban planning II: Influenza and other viruses (Hengel)	Water & Sanitation (Kroeger) Important pathogens and infections for urban planning III: Tuberculosis (Lange/Wagner)	Vaccination strategies (Hengel) Malaria (Lengeler)		
Afternoon	Self-Study	Self-Study	Self-Study	Special infectious diseases: STIs other than HIV (Rieg)	Visit to diagnostic lab (Panning & Häcker)		
			Week 2				
	Mon – 16/01/23	Tue – 17/01/23	Wed – 18/01/23	Thurs – 19/01/23	Fri – 20/01/23		
Morning	HIV/AIDS pandemic (Callejas, WHO)	More on emerging viral diseases (Panning) Antimocrobial resistance as a global threat (Grundmann)	Urban epidemics: Dengue and other emerging viruses, alarm signals and response (Kroeger) The Covid-19 pandemic (Grundman, Kern & Kroeger)	Important pathogens and infections for urban planning III: air-borne & infections other than influenza (Kern) Important pathogens & infections IV: miscellaneous vector-borne infections (Kern)	Assessment Communicable Diseases: Ppt. presentations		
Afternoon	Group Work on HIV/AIDS (Callejas, WHO)	Preparation for ppt	Preparation for ppt	Preparation for ppt			



Sub-Module 1.2: Needs assessment, planning tools and quality assurance in health systems for the urban poor

Module convener: Sonia Diaz- Monsalve

Duration: 2 weeks

Lecturers: S. Diaz-Monsalve, A. Kroeger, A. Maun External Experts: V.Doyle (Liverpool), M.Otmani (WHO)

Learning Objectives:

At the end of the module participants will be able to:

- Apply the elements of planning and quality assurance in health programs taking notice of social and gender planning.
- Initiate the process of monitoring through defined indicators for their own institutions, including data collection, data analysis, interpretation and dissemination.
- Use the information as a quality assurance tool to aid local decision making.
- Encourage an interdisciplinary approach and team work in solving problems related to quality of health service delivery.
- Create a "culture of quality", sensitive to clients' needs (urban poor/displaced).

Contents:

- 1) Concepts, QA models and management tools:
 - Key terminology and conceptual frameworks and models
 - QA cycle
 - Management tools
- 2) Applying tools at local urban level;
 - Nine epidemiological questions
 - Risk approach
 - Causal Models
- 3) Identifying areas for quality improvement and measuring progress at urban level:
 - Developing and monitoring defined indicators
 - Sources of Information, how to analyze, present data and disseminate information to different actors
 - Barriers and enabling factors when establishing QA systems
- 4) Digital Medicine
- 5) Primary Health Care
- 6) Social Planning recognizing gender aspects

Learning Methods:

The following learning methods are applied in this sub-module:

- Formal lectures, interactive lectures with discussions
- Group exercises
- Home assignments and/or self-directed-studies

Module Assessment:

Details on Essay (covering 1.1 and 1.2):

Situational analysis of your chosen disease and formulate the operational plan (see below). Participants write an essay about the following case study:

You are the health manager of an urban district. Take the communicable disease of your choice (see 1.1) and work through the following questions:



- 1. Describe the health risks, health services and health in your district in a tabular form with s short summary
- 2. How would you improve the health and health services situation of your district?
- 3. How would you reduce health inequalities?
- 4. How would you show to the political actors that you are a "good" manager?

Recommended Readings:

- Diaz S., Kroeger A. Needs Assessment and Planning Tools. A Workbook. (will be provided on ILIAS)
- Green A. 2009. An Introduction to Health Planning for Developing Health Systems. 4th edition. Oxford.

- Massound M R et al (2016). How do we learn about improving health care: a call for a new epistemological paradigm. International Journal for Quality in Health Care, 2016, 1–5 doi: 10.1093/intqhc/mzw03

- Tulloch O (2015) What does 'adaptive programming' mean in the health sector, ODI, UK. https://www.odi.org/publications/10228-adaptive-programming-health-sector

- Donabedian, A. (1992) The Lichfield Lecture. Quality assurance in health care: consumers' role. Quality & Safety in Health Care, 1, pp. 247-251. http://qualitysafety.bmj.com/content/1/4/247.full.pdf+html

- Further reading materials to be presented at the beginning of the module.

Timetable Module 1.2: Needs Assessment, planning tools and quality assurance in health systems for the urban poor								
	Week 1							
Mon – 23/01/23 Tue – 24/01/23 Wed – 25/01/23 Thurs – 26/01/23 Fri – 27								
Morning	Introduction to the Module (Diaz) Needs Assessment and planning tools 1 (Diaz, Kroeger)	Needs Assessment and planning tools 2 (Diaz, Kroeger)	Needs Assessment and planning tools 3 (Diaz, Kroeger)	Self-Study	Improvement Science and team work (Maun)			
Afternoon	Continued (Diaz, Kroeger)	Self-Study	Continued (Diaz, Kroeger)	Primary Health Care (Maun)	Self-Study			
	Week 2							
	Mon – 30/01/23	Tue – 31/01/23	Wed – 01/02/23	Thurs – 02/02/23	Fri – 03/02/23			
Morning	Core concepts & models for QA and improvement Defining the role of the client in QA (Doyle)	Case study: embedding quality in community health services in Kenya (Doyle)	Summary of SQALE Program Communication approaches for QA Challenges of institutionalizing QA in urban health settings (Doyle)	Social Planning & Qualitative research (Otmani)	Recognition of gender issues in planning (Otmani)			
Afternoon	Continued (Doyle)	Continued (Doyle)	Self-Study	Continued (Otmani)	Self-Study			



Advanced Module 2: Environmental Management and control of Non-Com Diseases (NCDs) in urban areas	municable
Diseases (NCDs) in urban areas	
General Description: The first part of the module focuses on the assessment and measurement of environmental risk factors and health impact. These are: air and water pollution, noise exposure, heat (in relation to climate change), environmental modifications within urban development and local legislations, building plans as a threat or as a positive determinant to health. The second part of the module addresses the impact of climate change, unhealthy environments and unhealthy behavior (eating, physical inactivity) on health dealing with the complexity and interrelations of NCDs' factors and shows possible mitigation and solution strategies from healthy city programs.	Duration: 4 weeks total
Assessment Advanced Module 2: Main assessment tool for both sub-modules is Oral Presentation of 10 min duration. The modules' assessment mark will be an average mark of two oral presentations, of e (descriptions below). Total weighing factor Module 2 assessment = 12 (6 for each sub-module) This means that the mark of the module contributes 12% to the total mark of the MSc. *One combined mark – average (50%)	each submodule
Sub-Module 2.1: Environmental determinants of health in urban are	as
Module convener: Armin Schuster Lecturers: A. Christen, H. Fünfgeld, M. Garcia-Käufer, I. Nazarenko, C. Schultz, A. Schuster External Experts: G. Alabaster (UN Habitat, Geneva), K. Geffert (Würzburg), K. W. Zacher (Bonn)	Duration: 2 weeks
 Learning Objectives: At the end of the module, participants will be able to: Define major types, sources and spatial distribution of environmental agents an Recognize and use environmental indicators Describe how the agents and environmental conditions (e.g. heat) interact widescribe the mechanisms by which they exert adverse effects Use models for predicting the magnitude of adverse effects in biological system Identify gaps in current knowledge concerning health effects of environmental agents in di Formulate practical interventions to improve environmental problems in the process 	ith systems and s agents fferent settings
 Contents: 1) Concepts and challenges in environment and urban health: Key terminology and conceptual frameworks and models Sustainable development 	

- Current debates in environment and human health
- Regional concepts of environmental protection
- Urban Geography



2) Key environmental and human challenges in urban health:

- Environmental pollution (air, water and soil)
- Noise
- Housing conditions
- Microclimate in urban environments and climate change
- Biodiversity, climate change and resilience
- Climate change and health
- Human health policies

3) Measuring environmental factors and health effects:

- Environmental pollution (air, water): Measurement and health effects
- Noise: Measurement and health effects
- Environment-related syndromes (MCS, IEI, SBS, CFS, CS, BS)

4) Interventions at micro and macro level:

- Healthy housing
- Indicators for healthy housing
- Fauna and Flora in urban environments
- Recycling

Learning Methods:

The following learning methods are applied in this sub-module:

- Formal lectures, interactive lectures with discussions
- Group exercises
- Home assignments and/or self-directed-studies

* The module includes field trips to Forchheim (Water purification plant), Vauban and St.Peter

Recommended Reading:

- WHO. 2012. Measuring Health Gains from Sustainable Development. Public Health and Environment Department (PHE), WHO. Geneva. http://www.who.int/hia/green_economy/en/index.html

- WHO. 2011. Health in the Green Economy: Health Co-benefits of Climate Change Mitigation-housing Sector. PEH, WHO. Geneva.

- Rothenberg R, Stauber C, Weaver S, Dai D, Prasad A and Kano M. 2015. Urban Health Indicators and Indices — Current Status. *BMC Public Health*, 15, 494.

- Schwela D. 2000. Air Pollution and Health in Urban Areas. Rev Environ Health, 15 (1-2), 13-42.



Timetable Module 2.1: Environmental determinants of health in urban areas						
Week 1						
	Mon – 13/02/23	Tue – 14/02/23	Wed – 15/02/23	Thurs – 16/02/23	Fri – 17/02/23	
Morning	Introduction to the Module and students presentation Environmental determinants of health in Urban areas (Schuster)	Planetary Health (Geffert)	Water & sanitation in urban LMICs (Alabaster)	Urban climate & micro-climate (Christen)	Contribution of environmental factors to cancer risk (Nazarenko) Measuring environment. determinants of health: practical aspects: (Schuster)	
Afternoon	Introduction to student presentation for following week (Schuster)	Indoor and ambient air pollution (Schuster)	Self-Study	Climate change and health (Zacher)	Urban planning in Freiburg: visit to Vauban (Lutz)	
		١	Neek 2			
	Mon – 20/02/23	Tue – 21/02/23	Wed – 22/02/23	Thurs – 23/02/23	Fri – 24/02/23	
Morning	Urban development and planning (Fuenfgeld)	Geography of Global Change (Fuenfgeld)	Biodiversity and Health: Theory and Field Visit (Scherer- Lorenzen)	Environmental determinants of health in urban areas: exercise (Nazarenko, Schuster)	Assessment: Students' presentations	
Afternoon	Waste Water Treatment Plants. Example: AZV-Plant in Forchheim (Schuster)	Bismarckalle: Research Ethics (Korinthenberg)	Self-Study	Self-Study		



Sub-Module 2.2: Social Determinants and Behavioral Risk Factors of Non-Communicable Diseases

Module convener: Eva Maintz

Lecturers: U. E. Lamy; J. Lindenmeier; K.O. Schwab External Experts: A.C. Beermann (FÖS), Mumm (Robert-Koch Institute), Nasser (Brazil), Prado (USP, Brazil), P. Philipsborn (Münich), Steiger Stiftung, A. Ullrich (WHO).

Learning Objectives:

At the end of the module, participants will be able to:

- Describe main health conditions & risk factors of diseases defined as Non-Communicable Disease (NCDs).
- Critically assess the relationship between the burden of NCDs and inequalities existing in urban and rural areas including political, social, environmental and economic inequalities.
- Use different research methods and sources of information (including epidemiological data) when assessing, designing and implementing NCDs prevention projects/programs and/or research;
- Practice an interdisciplinary approach (political science, public health, environmental health and marketing) when implementing NCDs prevention projects/programs and/or research;
- Understand different prevention approaches (environmental change or behavioral change) in different target audiences and at different levels;
- Assess different aspects that influence policy and response strategies a global and local levels to tackle the burden of NCDs.

Contents:

1) Concepts of NCDs in Global Urban Health:

- Key terminology
- Burden of NCDs

2) Determinants of NCDs:

- Social inequalities & Risk factors
- Political, economical challenges of NCD management
- The global food system and healthy diets
- Environmental factors
- 3) Prevention and control measures of NCDs:
 - Healthy and sustainable diets
 - Enhancing physical activity
 - Surveillance of child growth and development, detecting growth and developmental disorders
 - Treatment measures of NDCs in a public health perspective
 - Psychological frameworks in social marketing to promote behavior change
 - Concepts of emergency rescue services
- 4) Political frameworks and action plans
 - Global strategies & national programs
 - Intersectoral approach
 - Community based initiatives

Recommended Reading:

- Magnusson, R. (2007) Non-Communicable diseases and global health governance: enhancing global processes to improve health development. *Globalization and Health*, 3:2.
- Swinburn et al. (2019) The Global Syndemic of Obesity, Undernutrition and Climate Change: The Lancet Commission report. *Lancet*, 393: 791-846.

Duration: 2 weeks



- Willett W, Rockström J, Loken B, et al.: Food in the Anthropocene: The EAT–Lancet Commission on healthy diets from sustainable food systems. The Lancet 2019; 393(10170): 447–92.
- World Health Organization. (2013). Global action plan for the prevention and control of noncommunicable diseases 2013-2020. World Health Organization. <u>https://apps.who.int/iris/handle/10665/94384</u>

Timetable Module 2.2: Social Determinants and Behavioral Risk Factors of Non-Communicable Diseases

Week 1						
	Mon – 27/02/23	Tue – 28/02/23	Wed – 01/03/23	Thurs – 02/03/23	Fri – 03/03/23	
Morning	Introduction to the Module/Overview of NCDs & Risk Factors (Maintz) Global Health Agenda & NCDs; WHO strategies to reduce NCD risks (Ullrich)	Cardiovascular Diseases	Health Behaviour Models (Lindenmeier) Non-profit and Public Sector Marketing (Müller)	Stunting/ Overweight & Malnutrition and the Global South (Mumm) Practical workshop on anthropometric measuring (Mumm)	Diabetes - Obesity from a pediatric perspective (Schwab)	
Afternoon	Self-Study		Tackling NCDs in development (Nasser)		Zumba	
Week 2						
	Mon – 06/03/23	Tue – 07/03/23	Wed – 08/03/23	Thurs – 09/03/23	Fri – 10/03/23	
Morning	Introduction to food system approach and healthy diets (Philipsborn) Policy Tools for dietary changes (Beermann)	Diet, secondary plant compounds and cancer	Global Aspects of Emergency Rescue		Assessment: Students'	
	The power of cities to support healthy and sustainable diets (Philipsborn)	prevention (Lamy)	Services (Steiger Stiftung day)		presentations	

Prado)

Advanced Module 3: Migration, Violence and Mental Health Issues among the Urban Poor

General Description:

In the first part, the global burden of mental illnesses, diagnosis at primary healthcare level and the management of treatment and care of affected patients in resource poor settings is illustrated and discussed. Particularly the psychosomatic problems due to factors like rural-urban migration, disintegration of families, increase of population density and other phenomena of urbanization are discussed. The second part of the module focusses on different aspects and influencing factors of migration illustrated with practical examples from Freiburg and surrounding areas. Strategies of management and prevention of specific issues such as children without parents, adolescents and intercultural conflicts and violence among heterogeneous groups are discussed.

Duration: 4 weeks total

Assessment Advanced Module 3:

The modules' assessment tools consist of a **poster presentation** (oral presentation of 10 minutes) and a **concept paper** (written assignment). The final mark for the module will be considered with the average mark of the two assessments (50% of the Mark for the Concept Paper and 50% of the mark for the Poster).

The students will develop a concept paper for seed money as a written assignment. The student needs to write a brief proposal for a one-year pilot project on community mental health for a migrant population. A poster will be prepared on the same topic as the concept paper.

Further details on the seed paper and poster will be given during the module.

Total weighing factor Module 3 = **12**. This means that the mark of the module contributes 12% to the total mark of the MSc.

Sub-Module 3.1: Mental health in urban environments				
Module convener: Peter Scheib	Duration: 2 weeks			
Lecturers: K. Fritzsche, C. Lahmann, P. Scheib, G. Salunkhe, S. Schmidt,				
External Experts: K. Böge (Berlin Charite), S. Harch (Educational University, Freiburg), J. Hillebrecht (Refugium Freiburg), N. Ko (South Korea), R. Sandermann (Checkpoint e.V. Freiburg), L. Wolfski (Münich),				
Learning Objectives:				
At the end of the module, participants will be able to:				
Describe the burden of disease related to mental health;				
Recognize bio-psycho-social factors of urban health in different cultural contexts;				
 Identify psychosomatic problems and practice professional communication te Use an interdisciplinary approach when designing and implementing mental h projects/programs; 	•			
• Develop and implement mental health programs in urban settings particularly for vulnerable populations such as displaced populations and migrants.				
Contents:				
1) Global Burden of Mental Health:				
Prevalence of disorders across the lifespan				

- Prevalence of disorders across the lifespan
- Treatment gap



- Challenges and innovations
- Critiques and challenges in Global Mental Health

2) Factors underlying mental wellbeing and mental disorders ("Bio-Psycho-Social Systems Model"):

- Physical factors
- Psychological factors
- Social Factors (i.e. the critical role of families, migration)

3) Factors impacting mental wellbeing or mental distress

- COVID-19 pandemic
- Culture
- Lifestyle choices (eating habits, occupation)
- Trauma
- Aging societies

4) Interventions at micro and macro levels

- Professional communication to aid recognition and treatment of psychosomatic problems
- Collaboration between mental health care systems
- Key elements to consider when preparing a community mental health care plan/project
- Anti-stigma activism and public engagement
- Digital mental health interventions

Learning Methods:

The following learning methods are applied in this sub-module:

- Formal lectures, interactive lectures with discussions
- Group exercises
- Home assignments and/or self-directed-studies

* The module includes field trips to Glotterbad Rehabilitation Centre in the Blackforest.

Recommended Reading:

- Patel, V., Saxena, S., Lund, C., Thornicroft, G., Baingana, F., Bolton, P., ... & UnÜtzer, J. (2018). The Lancet Commission on global mental health and sustainable development. The Lancet, 392(10157), 1553-1598.

- Patel V, Prince M. 2010. Global Mental Health. A New Global Health Field Comes of Age. JAMA, 303(19), 1976-1977. doi:10.1001/jama.2010.616.

- Fritzsche K., McDaniel S.H., Wirsching M. (eds). 2014. Psychosomatic Medicine. An International Primer for the Primary Care Setting. Heidelberg, London, New York.

- APA. (2013). Diagnostic and statistical manual of mental disorders; DSM-5. Washington, DC: American Psychiatric Publishing.

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Timetable Module 3.1: Mental health in urban environments						
Week 1						
	Mon – 20/03/23	Tue – 21/03/23	Wed – 22/03/23	Thurs – 23/03/23	Fri – 24/03/23	
Morning	Introduction to the Module & Assessment instructions (Scheib) The Global Burden of Mental and substance use disorders (Salunkhe)	Leaving no mind behind (Salunkhe)	Mental Health Promotion in Schools (Harsch) Sexuality and Mental Health: breaking the stigma through conversation (Sandermann)	Embodiment – the body of Psychosomatic Medicine (Lahmann) Eating Disorders (Ko)	The Bio-Psycho- Social Model and psychosomatic medicine (Fritzsche) Group work: The bio-psycho- social anamnesis (Fritzsche)	
Afternoon		Self-Study	Self-Study	Mindfulness to combat stress (Schmidt)	Excursion to Glotterbad Rehabilitation Clinic (Menne)	
			Week 2			
	Mon – 27/03/23	Tue – 28/03/32	Wed – 29/03/23	Thurs – 30/03/23	Fri – 31/03/23	
Morning	The impact of COVID- 19 on Mental health: a LMIC perspective (Bhatia)	Trauma and Post Traumatic Stress Disorder (Hillebrecht)	MEHIRA: A Stepped Care Model supporting Mental Health in Refugees and Asylum Seekers (Böge)	Aging Cities and Mental Health (Wolfski)	The road forward is digital: cultural adaptation of E- Mental Health services (Spanhel)	
Afternoon	Family systems medicine (Scheib)	Self-Study	Self-Study	Self-Study		





Module conveners: Laura Wall and Sonia Diaz-Monsalve	
	Duration:
Lecturers: T. Epkenhans; P. Jung; A. Scherr	2 weeks
External Experts: A. Dohmen; S. Heneka; R. Jung-Hecker; B. Huschka; A. Linz; M.	
Maclaren; H. Serra; J. Wägerle, L. Wall	
Learning Objectives:	
At the end of the module, participants will be able to:	
 Understand the key aspects of the relationship between migration, politics, ir 	nequalities and health
related issues at global, regional, national and local levels.	
• Differentiate the terms of migration in terms of motives and dynamics.	
Recognize the interplay of migration with social mobility, poverty, violence, ic	lentity, gender, urban
space and health.	
 Apply relevant interdisciplinary interventions to deal with migration and men countries 	tal nealth challenges in
countries	
Contents:	
1) Concepts, history and challenges of global migration:	
 Key terminology, definition of "migrants", forced migration", "refugee", et 	С.
 Migration flows and processes (including economic, demographic, ideolog 	
approaches)	
• Brain drain and migration in the public health arena	
2) Institutional frameworks: Models for primary mental care in urban settings:	
State Policy, legal and institutional framework	
 International frameworks for migrant / refugee care and Violence Protecti 	on- Trauma therapy
for migrants	
 Structures for addressing Trauma in migrant and refugee populations 	
3) The effects of migration:	
 Change in fertility, mortality and other health indicators 	
Culture and Identity	
 Mental health and well-being 	
Violence and its determinants	
Interventions at macro and micro level:	
Options for intervention	
Raising public awareness	
 Addressing irregular/forced migration 	
 Challenges on health (particularly mental health) problems of migrant and 	refugee populations
Learning Methods:	
The following learning methods are applied in this sub-module:	
Formal lectures, interactive lectures with discussions	
Group exercises	
Home assignments and/or self-directed-studies	
* The module includes field trips to private and public initiatives taking care of refuge	es



- Bommes M, Thränhardt D. 2010. National Paradigms of Migration Research. 1st edition. (IMIS-Schriften Bd. 13). Osnabrück. Introduction pp. 9-38.
- Caglar A, Glick Schiller N (eds). 2010. Locating Migration: Rescaling Cities and Migrants. Ithaca.
- Düvell F, Triandafyllidou A, Vollmer B. 2009. Ethical Issues in Irregular Migration Research in Europe. *Population Space and Place* 16.3, 227–239.
- Genova, N de. 2009. Conflicts of Mobility, and the Mobility of Conflict: Rightlessness, Presence, Subjectivity, Freedom. *Subjectivity*, 29.1, 445–466.
- Lipphardt A, Schwarz I. 2015. Follow the People! Examining Migration Regimes through Emerging Trajectories of Unauthorized Migrants. In: Andreas Pott et al. (ed.) *Migration Regimes. Approaches to a Key Concept*, pp... Wiesbaden.
- Zetter R. 2014. Protection in Crisis: Forced Migration and Protection in a Global Era. Download: <u>http://www.migrationpolicy.org/research/protection-crisis-forced-migration-and-protection-global-era</u>
- Castles S. 2017. Towards a Sociology of Forced Migration and Social Transformation. (will be provided at Online-Platform ILIAS).Betts A. What History Can Teach Us About the Worst Refugee Crisis Since WWII. September 2015 (http://www.huffingtonpost.com/entry/alexander-betts-refugeeswwii_55f30f7ce4b077ca094edaec).

Timetable Module 3.2: Migration and violence in urban settings						
	Week 1					
	Mon – 17/04/23	Tue – 18/04/23	Wed – 19/04/23	Thurs – 20/04/23	Fri – 21/04/23	
Morning	Migration and Global Health Module Introduction: Core Concepts and Interdisciplinary aspects (Wall)	Causes, reasons and forms of forced migration (Scherr)	Migration: National and International Policy Frameworks (Maclaren)	Religious responses to implications of labor migration in post- Soviet Central Asia (Epkenhans)	Violence Protection Standards in German refugee camps (Wall)	
Afternoon	Refugee Camp Walk (Wall)	Self-Study	Self-Study	Self-Study	Self-Study	
	Week 2					
	Mon – 24/04/23	Tue – 25/04/23	Wed – 26/04/23	Thurs – 27/04/23	Fri – 28/04/23	
Morning	Primary Health Care for Migrants: A Life Course Perspective (Jung)	Working Example: Project Developing and Planning Workshop (Serra)	Air Pollution in India (GH Elective student: Grossmann) The Refugee experience (Wall)	Migration: Human trafficking and exploitation (Wirsching - KOK) Supporting female victims of sexual exploitation – best practice example (Huschka – FreiJa)	Female reproductive health of migrants in Germany (contraception, abortion, STDs) (Wägerle)	
Afternoon	Health Interventions in the slums of Kalkutta und Nairobi (Linz) German Doctors in Bangladesh and Greece (Dohman)	Self-Study	Self-Study	Migration and Prostitution: an alternative reality (Heneke - Pink)	Self-Study	



The Research Project - Overview

Conveners: Axel Kroeger, Sonia Diaz-Monsalve, Hajo Grundmann

Duration: 4 months

Description:

The research project offers the opportunity to apply the methods and skills acquired during the program to a concrete project. First information and possible topics of the research project will be introduced during the core module at the beginning of the course (possible topics, arrangements, requirements, marking) and will be followed throughout the whole course. By this way, the participants have sufficient time to choose a theme and to become familiar with the field. The students also get the opportunity to propose own topics and research ideas, for example questions from their individual professional background. Each student will be guided by a personal supervisor who will determine or help to define the research question and accompany and support the project throughout the whole process. The students will have three months for the preparation, data collection, analysis and writing. The format and the regulations for subsequent marking of the Master's thesis are described in the study and examination regulations.

The supervisors come mainly from the Faculty of Humanities (for social sciences subjects), Faculty of Medicine (for subjects with a focus on health) and Economics and Behavioral Sciences (cost analysis, economic analysis and behavioral change). There are also external supervisors from other countries and Universities, such as Bonn, Münich (Germany), Penn State University (USA) and South Korea.

Weighing factor of the Research Project:

The mark for the research project includes:

- The mark of the **Final Oral examination** done in May Oral PowerPoint presentation and questions regarding the thesis and the course content with maximum duration of 30 minutes with questions weigh factor 5;
- **Research Design** weigh factor 5 This is the research protocol presented to ERC and includes also a ppt presentation in January or February.
- Final mark of the Master Thesis weigh factor 28.

The total weight of the research project is 38. This means that the marks of the research project (including thesis, oral exam and research design) contributes 38% to the total mark of the MSc. The oral exam in May has a weighing factor of 5. The marking of the research proposal submitted to the ethics committee has a weighing factor of 5 and the Master's Thesis a weighing factor of 28.

Regarding the assessment of the master thesis:

Check the Study and Exam Regulations for the MSc GUH Program and Thesis timeline on pg. 18.

Recommended Reading:

Reading materials will be discussed with the thesis tutor of each individual participant. *More information available in the Master Thesis Guidelines.



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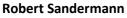
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