


Module Handbook




Module Schedule “Global Health - Risk Management and Hygiene Policies”, Master of Science


First Year	Module M01: Basics of Public Health and Hygiene 6 LP	Module M02: Global Health beyond Infection 6 LP	Module M03: Prevention and Control of Infectious Diseases 6 LP	Module M04: Presentation and Writing Skills in Research 6 LP	Module M05: Health Systems and Health Management Structures 6 LP	
	Module M06: Livestock and Food Safety through One Health Concept 6 LP	Module M07: Spatial Health Risk Assessment and Capacity Building in Public Health Action 6 LP	Module M08: Dimensions of Vulnerability and Risk Management 6 LP	Module M09: SDGs as Guiding Principles and Global Consent 6 LP	Module M10: Preparation for Research Projects and Leadership Development 6 LP	
	Second Year	Module M11: Internships 30 LP				
		Module M12: Master thesis 30 LP				

Module: Basics of Public Health and Hygiene					 UNIVERSITÄT BONN
Module Number M 01	Workload 180	Credits 6 CP	Study year 1	Duration 5 weeks	Compulsory Course
Person(s) in charge of the module	PD Dr. Walter Bruchhausen, Prof. Martin Exner				
Teaching Unit offering the module	Institute for Hygiene and Public Health (IHPH)				
Applicability of the Module	Study Program			Contact hours	
	Global Health - Risk Management and Hygiene Policies, M. Sc.			60	
Learning Outcomes	<p>The students know the contested meanings of International, Global and Public Health, their main concepts and actors as well as the relevant academic disciplines and core values. They can use various indicators and tools in describing and explaining the health problems of different populations.</p> <p>The students are able to identify positive and negative effects of globalization in current health inequalities and appreciate the central importance of global health equity and the human right to health.</p> <p>The students have acquired detailed and differentiated knowledge of the hygiene concepts and historical aspects of a holistic approach in developed countries. They can analyze the determinants of Global and Public Health as measured by basic indicators (infrastructure, water supply and sanitation, energy, housing, climatic effect, healthy food, access to health services). Furthermore, they can describe current models of One Health. At the end of this module students are able to attribute health inequalities to different factors amenable by health protection and health promotion.</p>				
Key competences	Applying instruments for describing, analyzing, evaluating and changing global health inequities. Able to characterize the determinants and risk factors for health in communities and societies.				
Contents	<p>The seminar "Basics of Global Health" introduces into the recent shift from international to global health policies. It familiarizes with the series of concepts, the set of academic disciplines, the international law relevant for Global Health and the variety of actors (UN organizations, bilateral cooperation, NGOs, Public Private Partnerships) which is exemplified by students' presentation on an organization of their choice. Global Health Ethics for the allocation of scarce resources, priority setting and advocacy with the final aim of health equity is discussed. Some lessons explain the different analytical tools for measuring and explaining the frequency and impact of death and disease (mortality, morbidity, burden of disease/DALYs). It gives positive and negative examples for approaches to certain issues in Global Health, especially in the competition between vertical and horizontal approaches to health. The contribution of the international, the national, the 'traditional' and the private sector to health care are considered. Integrated into the lessons are small working groups under close supervision where the participants' previous knowledge and conception of concepts and institutions in Global Health are systematized and complemented.</p> <p>The seminar "Basics of Public health and Hygiene" gives a thorough overview of the prerequisites for a healthy population. Historical development of health infrastructure and regulation in premodern and industrialized countries with excursions in the region. Milestones in the achievement for a modern Public health action and legislation, e.g. water hygiene and sanitation, urbanization, housing, hospitals, food hygiene, traffic and security, safety in working place, surveillance systems for disease entities and reporting, One health approach, communicable and non-communicable diseases. Setting political priorities and health based risk regulation advice demonstrated on hospital and drinking water regulation.</p>				


	Furthermore, students will discuss different approaches in different countries used in Public health research and methods for controlling diseases . The seminar provides a platform for students to familiarize themselves with a critical approach to Public and Global health scientific literature e.g. The Lancet Global health.			
Prerequisites	None			
Course elements	Teaching unit(s)	Group size	Contact hours	Independent Work [h]
	Basics of Global Health	20	30	60
	Basics of Public Health and Hygiene	20	30	60
Examination(s)	Type of examination(s)		Graded/ non-graded	
	Oral examination		graded	
Assignments	Attendance of workshop and excursions, completion of required presentation		non-graded	
Additional Information	<p>Recommended Reading:</p> <p>Farmer- Kleinman-Kim-Basilico, Reimagining Global Health An Introduction. ISBN: 9780520271999.</p> <p>Tulchinsky/Varavikova, The New Public Health 3rd Edition. ISBN: 9780124157668.</p> <p>Oxford Textbook of Public Health 5th Edition. ISBN: 978-0199218707.</p> <p>Maxey-Rosenau-Last, Public Health and Preventive Medicine 15th Edition Wallace ISBN: 978-0071441988.</p>			

Module: Global Health beyond Infection Non-communicable diseases – Mother and Child Health - Psycho-social support and access to controlled medicines					 UNIVERSITÄT BONN	
Module Number M 02	Workload 180	Credits 6 CP	Study year 1	Duration 5 weeks	Compulsory Course	
Person(s) in charge of the module	Prof. Wolfgang Holzgreve, Prof. Tilman Sauerbruch, Prof. Lukas Radbruch					
Teaching Unit offering the module	Internal Medicine, Palliative Medicine and of Gynecology and Obstetrics (UKB)					
Applicability of the module	Study Program				Contact hours	
	MSc in Global Health - Risk Management and Hygiene Policies				60	
Learning Outcomes	<p>The students have got an overview on aspects of globalization in various fields of medicine and health outside the control of infectious/communicable diseases. They understand how global exchange may improve the conditions for health care by transfer of knowledge, material and persons. They are able to name specific deficiencies of some world regions in selected exemplary fields (mother and child health, metabolic disorders, cancer, psycho-social support, access to controlled medicines) and apply this analytical approach to other settings. They understand how changing needs may influence health care priorities in selected fields (e.g. balancing prevention, cure and palliative care). Furthermore, they can describe those current models for the prevention and treatment of ill-health that also cover non-communicable diseases such as the health-in-all approach, Universal Health Coverage (UHC), or social marketing. At the end of this module students are able to identify specific health inequities and to design strategies to alleviate them.</p>					
Key competences	Able to identify scope and causes of gross health inequities outside the field of infectious diseases, especially in mother and child health, non-communicable diseases and palliative medicine, and to design improvement strategies.					
Contents	<ul style="list-style-type: none"> • Sexual and reproductive health • Maternal mortality and counter-measures • Etiology of non-communicable diseases (NCDs), i.e. cancer, cardiovascular disease, diabetes, respiratory diseases • Prevention of non-communicable diseases • Improving access to medical care (availability, accessibility, affordability, acceptability) • Care of the terminally ill in a global perspective • Global access to controlled medicines 					
Prerequisites	None					
Course elements	Teaching unit(s)		Group size	Contact hours	Independent Work [h]	
	Non-communicable diseases		20	20	40	
	Psycho-social support and access to controlled medicines		20	20	40	
	Maternal and Child Health		20	20	40	
Examination(s)	Type of examination(s)				Graded/ non-graded	
	Written examination				graded	
	Presentation				graded	
Assignments	attendance of workshop, completion of required presentation				non-graded	
Additional Information	Recommended Reading:					


	<p>World Health Assembly. Strengthening of palliative care as a component of comprehensive care within the continuum of care. 2014. http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_R19-en.pdf</p> <p>World Health Organisation. Integrated Management of Adult Illnesses, palliative care: symptom management and end of life care. 2004. http://www.who.int/3by5/publications/documents/imai/en/</p> <p>World Health Organization: Women and health: Today's evidence tomorrow's agenda. 2009. http://www.who.int/gender/women_health_report/full_report_20091104_en.pdf</p> <p>Research for Universal Health Coverage http://www.searo.who.int/indonesia/documents/research-for-universal-health-coverage%289789240690837_eng%29.pdf</p> <p>World health statistics 2014 http://www.searo.who.int/indonesia/documents/world-health-statistics-2014-%289789240692671_eng%29.pdf?ua=1</p> <p>Health for the world adolescents http://www.searo.who.int/indonesia/documents/health-for-world-adolescent-who-fwc-mca-14.05-eng.pdf</p> <p>Prevention and surveillance of birth defects http://www.searo.who.int/entity/child_adolescent/documents/cah-23.pdf?ua=1</p> <p>Health in germany https://www.rki.de/DE/Content/Gesundheitsmonitoring/Gesundheitsberichterstattung/GesInDtld/gesundheit_in_deutschland_2015.html?nn=2379316</p> <p>Global atlas of palliative care http://www.thewhpca.org/resources/global-atlas-on-end-of-life-care</p>
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Module: Prevention and Control of Infectious Diseases					
Module Number M 03	Workload 180	Credits 6 CP	Study year 1	Duration 5 weeks	Compulsory Course
Person(s) in charge of the module	Prof. Achim Hoerauf, Prof. Martin Exner, Dr. Laura E. Layland				
Teaching Unit offering the module	Institute of Med. Microbiology, Immunology and Parasitology (IMMIP) Institute for Hygiene and Public Health (IHPH)				
Applicability of the module	Study Program			Contact hours	
	MSc in Global Health - Risk Management and Hygiene Policies			60	
Learning Outcomes	<p>This module tackles aspects of infectious diseases and possible routes of prevention before progression to the clinical phase. At the end of this module, students should have a general knowledge about infectious diseases including epidemiology and their impact on public health. Students should be aware of the potential infectious diseases (bacteria, fungal, viral and parasitic) <u>in their own country</u> on both a regional and national level. This knowledge should encompass the life-cycles, reservoirs, transmission routes (e.g. water, air, food, vectors, contact), incubation times and clinical symptoms (e.g. respiratory, gastro-intestinal, dermal manifestations) so that they can identify <u>potentially susceptible communities in their own country</u>. Students should also be able to categorize pathogens into low, medium and high impact and be able to distinguish between constant pathogens (e.g. helminth infections) and those responsible for rapid outbreaks (e.g. Ebola). Students should be aware of the importance of surveying and the necessity of good diagnostic units and specialists to identify and report, in a timely fashion, changes in pathogen/vector prevalence and outbreaks. With regards to treatment and prevention, students will learn how pathogens can be transmitted through behavioral (e.g. syphilis) or environmental (e.g. cholera) circumstances and how to relate these aspects to hygiene policies. Students should also know the advantages and disadvantages to current treatment options, vaccinations and mass drug administration programs and the ever increasing difficulties with arising drug resistance. In essence, students should develop both academic knowledge about infectious diseases and the <u>tools for tackling such problems at the political level</u>.</p>				
Key competences	Awareness and understanding of infectious diseases (bacterial, viral, mycological and parasitological), modes of transmission, prevention, control and the effects on communities and hygiene policies.				
Contents	<p>This module first encompasses a comprehensive lecture series with accompanying practical courses on microbiology and parasitology. Here, a broad range of infectious diseases will be covered such as <i>E. coil</i>, tuberculosis, malaria, schistosomiasis etc., An equally extensive foundation will be provided for mycology and virology covering important communicable diseases such as cryptococcosis, candidiasis, MERS, Ebola etc., A deeper lecture series will then tackle aspects of vaccination and the consequences of mass drug administration, drug resistance, water and sewage related diseases, current prevention strategies for environmental and behavioral transmitted diseases, hospital hygiene, food hygiene and preparation and their relationship to hygiene policies. For this section of the course, individual students will write an essay about one of these topics that is relevant for their country. Groups of students will also given a relevant topic as a case study which they should research together and develop a hypothetical strategy/policy to prevent that disease. Findings will be then presented and discussed.</p>				
Prerequisites	None				
Course elements	Teaching unit(s)		Group size	Contact hours	Independent Work [h]


	Infectious diseases I: microbiology and parasitology	20	20	40
	Infectious diseases II: mycology and virology	20	20	40
	Implications of infectious diseases on the community level and hygiene policies	20	20	40
Examination(s)	Type of examination(s)	Graded/ non-graded		
	Written exam	graded		
Assignments	attendance of workshop, completion of required presentation	non-graded		
Additional Information	Recommended Reading: Manson's Tropical Medicine 23rd Edition. Farrar & Hotez ISBN 978-0702051029 Medical Virology. White & Ferner ISBN 978-0-12-746642-2 Principles of Molecular Virology, 5th Edition. Cann ISBN 978-0521289092 Jawetz Melnick & Adelbergs Medical Microbiology 27th Edition. ISBN 978-0071824989			

Module: Presentation and writing skills in research					
Module Number M 04	Workload 180	Credits 6 CP	Study year 1	Duration 3 to 5 weeks	Compulsory Course
Person(s) in charge of the module	Dr. Laura E. Layland, Dr. Manuel Döhla				
Teaching Unit offering the module	Institute for Hygiene and Public Health (IHPH) Institute of Med. Microbiology				
Applicability of the module	Study Program			Contact hours	
	MSc in Global Health - Risk Management and Hygiene Policies			60	
Learning Outcomes	The students learn how to collect, analyze and communicate research data. After this module, they are able to choose an appropriate design for Global Health studies. They know how to collect primary data and how to search for secondary data, they learn how to analyze data in a multi-professional environment. They know how to structure scientific papers, essays, reports, posters or presentations. They know about the differences between multidisciplinary, interdisciplinary and transdisciplinary and understand the settings for each mode. At last, they know about possible ways of data manipulation and bias to get an access to a critical assessment of published data.				
Key competences	<ol style="list-style-type: none"> 1. Using epidemiological and statistical methods in Global Health research 2. Presentation of data in written and oral communication 3. Understanding the requirements of addressing different target audiences 				
Contents	During this module, students will acquire skills in determining qualitative and quantitative research. This includes designing of experiments considering all relevant controls and the rules of good scientific practice. The module will cover methodological concepts and practical expertise for both clinical and pre-clinical experiments and the necessary ethical considerations. Students will also practice different forms of communication - writing, presentation, formal and informal discussions. This module will therefore cover necessary material for the student's upcoming thesis work.				
Prerequisites	None				
Course elements	Teaching unit(s)	Group size	Contact hours	Independent Work [h]	
	Epidemiological methods in study design, data collection, data analysis and assessment of published data.	20	30	60	
	Presentation/communication and writing skills	20	20	40	
	Multidisciplinary, interdisciplinary and transdisciplinary modes in health research.	20	10	20	
Examination(s)	Type of examination(s)			Graded/ non-graded	
	Scientific presentation			graded	
Assignments	attendance of workshops			non-graded	
Additional Information	Recommended Reading for Epidemiology: Le CT, Eberly LE (2016) Introductory Biostatistics. 2nd Edition. ISBN: 9780470905401.				


<p>Rothman KJ (2012) Epidemiology. An Introduction. 2nd edition. ISBN: 9780199754557.</p> <p>Rumsey DJ (2010) Statistics Essentials For Dummies. ISBN: 9780470618394.</p> <p>Recommended Reading for Presentation and writing skills:</p> <p>Presentation Skills for Scientists: A Practical Guide Sander & MacLeod ISBN 978-0521741033.</p> <p>It's the Way You Say It: Becoming Articulate, Well-spoken, and Clear. Flemming ISBN 978-1609947439.</p> <p>Writing & Speaking at Work 5th Edition. Bailey ISBN 978-0136088554.</p> <p>Presentation Skills: The Essential Guide for Students McCarthy ISBN 978-0761940920</p>
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Module: Health Systems and Health Management Structures					
Module Number M 05	Workload 180	Credits 6 CP	Study year 1	Duration 4 to 5 weeks	Compulsory Course
Person(s) in charge of the module	Prof. Wolfgang Holzgreve, PD Dr. Walter Bruchhausen				
Teaching Unit offering the module	Lecturers and consultants from University of Bonn, Hochschule Bonn-Rhein-Sieg, Karolinska Institute/Sweden and NGOs				
Applicability of the module	Study Program			Contact hours	
	MSc in Global Health - Risk Management and Hygiene Policies			60	
Learning Outcomes	At the end of this module, students are aware of the different functions and components of health systems, their interaction and their impacts on health system goals attainment. They are also aware of the various goals, strategies and tools for improving the range and performance of health systems. Students are able to apply their conceptual and methodological knowledge to the analysis of health systems in their home countries and elsewhere to identify health system gaps or deficiencies, specify reform needs and develop reform measures. Students have learned how to form communication lines within the health care system (government) and with the public (press, communities).				
Key competences	Students are able to independently apply their knowledge and problem-solving skills to improve health systems at national and local levels. Students have improved their communication skills by engaging in interdisciplinary group discussions, presentations, peer-to-peer learning and teamwork integrating cultural specifics in intercultural groups.				
Contents	<p>The first lecture series provides an overview about the different types of structures in health systems with regard to the relationship between preventive (including public health departments) and curative services, public and private sector, state and civil society or communities.</p> <p>A second series covers practical aspects of developing public health systems and providing universal health coverage (UHC) by measures on infrastructure, financing, epidemiological assessments, health technology assessment (HTA), staffing needs assessment, provision of pharmaceuticals and improving the quality of care (QoC) through health systems strengthening (HSS).</p> <p>A shorter third lecture series will focus on reporting and communication lines in national health systems and governmental structures and communication with press and population.</p> <p>A concluding seminar with presentations (25-30 min) and an accompanying report from each student provides in-depth studies of health system reforms in different countries.</p>				
Prerequisites	None				
Course elements	Teaching unit(s)	Group size	Contact hours	Independent Work [h]	
	Overview of different goals, types and components of health systems and the relationship between preventive and curative services	20	22	44	
	Practical aspects of strengthening health systems and providing universal health coverage (UHC)	20	30	60	

	The role of communication for improving health systems	20	8	14
Examination(s)	Type of examination(s):		Graded/ non-graded	
	Essay and presentation		graded	
Assignments	Full attendance of seminars and workshops		non-graded	
Additional Information	<p>Recommended Reading:</p> <p>Britnell, Mark (2015), In Search of the Perfect Health System, Palgrave Macmillan: Basingstoke</p> <p>World health report 2000: Health systems - improving performance</p> <p>World health report 2010: Health systems financing – the path to universal coverage</p> <p>World health report 2013: Research for universal health coverage</p> <p>Further reading will be announced prior to the start of the course.</p>			

Module: Livestock & Food Safety through One Health Concept					
Module Number M 06	Workload 180	Credits 6 CP	Study year 1	Duration 5 weeks	Compulsory Course
Person(s) in charge of the module	Dr. Ulrike Herbert, Dr. Ricarda Schmithausen, PD Dr. Judith Kreyenschmidt				
Teaching Unit offering the module	University of Bonn - Faculty of Agriculture				
Applicability of the module	Study Program			Contact hours	
	MSc in Global Health - Risk Management and Hygiene Policies			60	
Learning Outcomes	The goal of the module is to learn key approaches for safe food production and preservation in crisis situations (from farm to folk). Based on the <i>One Health</i> concept, students should be aware of the different perspectives in order to guarantee a safe food supply chain. Besides that, basic knowledge about food microbiology and quality assurance will be imparted. Students will gain an understanding about the different technologies and logistical concepts that are required to ensure optimal cold chain conditions and thus to ensure product safety and quality. At the end of the course students should have the required knowledge to react in crisis situations (incident and outbreak management) and be able to develop tailored solutions for food delivery.				
Key competences	Awareness and understanding of food microbiology and quality assurance. The ability to recognize deficits in food production and implement amendments through appropriate measures. Be prepared to execute safe food protocol requirements during a crisis.				
Contents	The <i>One Health</i> approach to sustainable food production is required to prevent potential public health problems especially in crisis situations. Therefore the module includes lectures on the following key topics: <i>One Health</i> concept; Improving Livestock & Food safety through one health concept; Zoonotic infections and transmissions (Food Safety, Antimicrobial resistance, Global health); Basic approaches for food borne disease and outbreak management; Logistic concepts regarding food delivery in crisis situations; Packaging strategies; Cooling techniques for perishable products (food/pharmaceuticals, passive and active cooling techniques); Temperature monitoring and food logistics; Quality assurance strategies (e.g. HACCP); Risk communication especially in incident and outbreak situations.				
Prerequisites	None				
Course elements	Teaching unit(s)	Group size	Contact hours	Independent Work [h]	
	Food safety and quality assurance	20	20	40	
	Food borne diseases and outbreak management	20	20	40	
	One Health, Food quality and safety	20	20	40	
Examination(s)	Type of examination(s)			Graded/ non-graded	
	Presentation			graded	
Assignments	attendance of seminars, completion of required assignments and presentation			non-graded	
Additional Information	Recommended Reading:				

	<p>Food Packaging: Principles and Practice (2012), 3rd Edition, G. L. Robertson, CRC Press</p> <p>Management of Health Risks from Environment and Food: Policy and Politics of Health Risk Management in Five Countries -- Asbestos and BSE (Alliance for Global Sustainability Bookseries)(2012), 1st Edition, Hajime Sato, Springer Verlag</p> <p>Modelling Microorganisms in Food (2007), 1st Edition, Stanley Brul, Suzanne Van Gerwen, Marcel Zwietering, Woodhead Publishing</p> <p>Shelf life assessment of food (2012), 1. Edition, Nicoli, M.C., Taylor and Francis, New York</p> <p>http://www.cdc.gov/foodsafety/foodborne-germs.html</p> <p>Food Microbiology: An Introduction 3rd Edition. Montville, Matthews and Kniel ISBN: 978-1555816360</p> <p>Engineering for Storage of Fruits and Vegetables: Cold Storage, Controlled Atmosphere Storage, Modified Atmosphere Storage. Rao ISBN: 978-0128033654.</p> <p>Public Health: An action guide to improving health 2nd Edition. Walley & Wright. ISBN: 978-0199238934.</p> <p>bulletin 2013-1. The One Health Concept: the OIE approach.</p> <p>http://www.oie.int/fileadmin/Home/eng/Publications_%26_Documentation/docs/pdf/bulletin/Bull_2013-1-ENG.pdf</p>
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Module: Spatial Health Risk Assessment and Capacity Building in Public Health					
Module Number M 07	Workload 180	Credits 6 CP	Study year 1	Duration 5 weeks	Compulsory Course
Person(s) in charge of the module	Prof. Thomas Kistemann, Dr. Peter Schmitz				
Teaching Unit offering the module	Institute for Hygiene and Public Health (IHPH), GeoHealth Centre				
Applicability of the module	Study Program			Contact hours	
	MSc in Global Health - Risk Management and Hygiene Policies			60	
Learning Outcomes	The goal of this module is to acquire skills in identifying, recording, analysing and assessing potential health risks deriving from a broad variety of factors, from local to global scale, and with a specific emphasis on the spatial perspective. Students will get to know the potential risks related to different environmental conditions (water, air, soil), to the transmission of infectious diseases, natural disasters, migration, crisis and conflict, poverty and social disparities. Furthermore students will gain insight into the effects and risks associated with poorly functioning health services, weak public health structures and the absence of effective surveillance, health information and management systems. The students will learn how to use risk assessment results within capacity and vulnerability analysis. They will learn how to involve stakeholders and communities in order to set priorities for participatory capacity building programmes.				
Key competences	Ability to assess and analyse health risks in various spatio-temporal contexts. Ability to contribute to improving surveillance systems and be familiar with collection and interpretation of epidemiological as well as managerial data on infection prevention and control. Conduct capacity-vulnerability-analysis to identify populations at risk. Be prepared for planning and implementation of risk reduction and capacity building programmes at relevant administrative levels.				
Contents	Health status of populations can be threatened by various risks including the effects of climate change, living in disaster prone regions or politically instable countries, suffering from poverty, famine or being exposed to infectious diseases. The most vulnerable groups in the particular society or community are most at risk. Once the risks are identified and vulnerabilities are known, potential capacities to cope can be developed in order to reduce the risks. Methods and methodologies to identify risks, to assess vulnerabilities and capacities, with an emphasis on health-geographic approaches, will be taught using case studies based on experiences from different countries and on specific topics or diseases. This is a prerequisite to better understand spatio-temporal conditionalities of health, ill-health and disease in order to be prepared to respond to acute disaster situations, outbreaks and epidemics, as well as to slowly emerging threats or persistent health threats caused by communicable or non- communicable diseases.				
Prerequisites	None				
Course elements	Teaching unit(s)	Group size	Contact hours	Independent Work [h]	
	Geographical methods for health: data gathering in the field, GIS, geostatistics, epidemiology, surveillance, Health Information Systems	20	20	40	
	The assessment of health status, environmental health risks (WASH)	20	20	40	

	and health system capacities in specific contexts and settings			
	Managerial aspects of the provision and monitoring of health services, prevention programmes, health-attentive regional planning	20	20	40
Examination(s)	Type of examination(s)	Graded/ non-graded		
	Written examination	graded		
	Presentation	graded		
	Essay	graded		
Assignments	attendance of seminars, workshop and excursions, completion of required assignments and presentation	non-graded		
Additional Information	<p>Recommended Reading</p> <p>I. Introductory Reading:</p> <p>Brenner MT, Schmitz KP (2009): Indicators and Reference Data: A Practical Tool for Project Managers in Humanitarian Aid. Malteser International Operational Guideline. Malteser International, 2009.</p> <p>Brown T, Moon G (2012): Geography and global health. Geographical Journal 178(1): 13-17.</p> <p>Brown TM, Cueto M, Fee E (2006): The World Health Organization and the transition from International to Global Public Health. Am. J. Public Health 96(1): 62-72.</p> <p>CSDH (2008): Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health. Chapter 6: Healthy Places Healthy People, pp. 60-71. Geneva, World Health Organization.</p> <p>John Hopkins Bloomberg School of Public, IFRC (2008)(eds.): The Johns Hopkins and Red Cross Red Crescent Public health guide in emergencies. http://www.jhsph.edu/research/centers-and-institutes/center-for-refugee-and-disaster-response/publications_tools/publications/_CRDR_ICRC_Public_Health_Guide_Book/Forward.pdf.</p> <p>Kistemann T, Dangendorf F, Schweikart J (2002): New Perspectives on the use of Geographical Information Systems (GIS) in Environmental Health Sciences, International Journal of Hygiene and Environmental Health, 205(3): S. 169-181.</p> <p>Kistemann T, Höser C, Voigt H (2011): Mapping water and health: current applications and future developments, Current opinion in Environmental Sustainability 3(6): 506-511.</p> <p>Marx M (2012): Integrated health, social, and economic impacts of extreme events: evidence, methods, and tools. Global Health Action 5. http://www.globalhealthaction.net/index.php/gha/article/view/19837.</p> <p>Spiegel PB, Checchi F, Colombo S, Paik E (2010): Health-care needs of people affected by conflict: future trends and changing frameworks. The Lancet 375(9711): 341-45.</p> <p>The Sphere Project (2011): Humanitarian Charter and Minimum Standards in</p>			

Humanitarian Response.

II. Text Books:

Brown T, McLafferty S, Moon G (2010)(ed.): A Companion to Health and Medical Geography. Oxford: Wiley-Blackwell.

Gatrell AC, Elliott SJ (2014): Geographies of Health. An Introduction. Oxford: Wiley-Blackwell.

Gesler WM, Kearns RA (2002): Culture, Place and Health. Routledge: London, New York.

Jacobsen KH (2015): Introduction to Global Health. Jones & Bartlett Publishers: Boston.

Lindstrand A, Bergström S, Rosling H, Rubenson B, Stenson B, Tylleskär T (2006): Global Health. An Introductory textbook. Studentlitteratur AB: Stockholm.

Meade M, Emch M (2010): Medical Geography. The Guilford Press: New York, London.

Rothman KJ, Greenland S, Lash TL (2013): Modern Epidemiology. Lippincott-Raven: Philadelphia.

III. Further Reading / Internet Resources:

European Commission (2014)(ed.): DG ECHO Thematic Policy Document no° 7: Health - General Guidelines.

http://ec.europa.eu/echo/files/policies/sectoral/health2014_general_health_guidelines_en.pdf.

Funari E, Kistemann T, Herbst S, Rechenburg A (2011): Technical guidance on water-related disease surveillance, Copenhagen, WHO Regional Office for Europe.

Handicap International (2012)(ed.): Disability Inclusive Community Based Disaster Risk Management A toolkit for practice in South Asia.

[http://alt.handicap-international.de/fileadmin/redaktion/pdf/Disability%20Inclusive%20Community%20Based%20Disaster%20Risk%20Management%20A%20toolkit%20for%20practice%20in%20South%20Asia%20\(Englisch\)%202012.pdf](http://alt.handicap-international.de/fileadmin/redaktion/pdf/Disability%20Inclusive%20Community%20Based%20Disaster%20Risk%20Management%20A%20toolkit%20for%20practice%20in%20South%20Asia%20(Englisch)%202012.pdf).

IFRC (2014)(ed.): World Disasters Report 2014 - Focus on Culture and Risk. Genf.

Kuban R, MacKenzie-Carey H (2001). Community-Wide Vulnerability and Capacity Assessment (CVCA). Ottawa,

http://www.gripweb.org/gripweb/sites/default/files/CVCA2001_meth.pdf.

MIRA - Multi-Cluster/Sector Initial Rapid Assessment. Philippines Typhoon Haiyan“, November 2013.

https://www.humanitarianresponse.info/en/system/files/20131129_MIRA_Report_-_Philippines_Haiyan_FINAL_0.pdf.

Semenza J, Herbst S, Rechenburg A, Suk J E, Höser C, Schreiber C, Kistemann T (2012): Climate change impact assessment of food and waterborne diseases, Critical Reviews in Environmental Science and Technology 42(8): 857-890.

UNDP (2009): Central Asia Regional Risk Assessment: Responding to Water, Energy,

and Food Insecurity, New York.

UNDP (2009): Global Risk Identification Programme – GRIP, New York.
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Module: Dimensions of Vulnerability and Risk Management					 UNIVERSITÄT BONN
Module Number M 08	Workload 180	Credits 6 CP	Study year 1	Duration 5 weeks	Compulsory Course
Person(s) in charge of the module	Dr. Zita Sebesvari (UNU)				
Teaching Unit offering the module	UNU/University of Bonn – Department of Geography				
Applicability of the module	Study Program			Contact hours	
	MSc in Global Health - Risk Management and Hygiene Policies			60	
Learning Outcomes	<ul style="list-style-type: none"> • Knowledge of vulnerability and risk frameworks in socio-economic, social and environmental dimensions • Knowledge of challenges in climate change and social mobility • Understanding on how social ecological systems are affected by environmental hazards • Understanding the development and importance of SDG´s • Understanding of international disaster management and humanitarian aid • Capability to estimate basic safety and security related aspects • Knowledge of potential and application of remote sensing and GIS in spatial epidemiology • Basics of cartography and GIS for disease mapping • Basics of Spatial Analysis • Spatial Data Infrastructures and services 				
Key competences	Capability to apply vulnerability and risk frameworks in socio-economic, social and environmental dimensions. Knowledge of the impacts and natural hazards on social-ecological systems. Comprehensive knowledge of structures, workflows, and practical challenges of international organizations, particularly UN organizations, dealing with disaster management and humanitarian response. Basic Knowledge about GIS, Remote Sensing Principles, Sensor, Platforms, Workflows and their outcome.				
Contents	<ul style="list-style-type: none"> • Conceptual frameworks and scientific methods to assess socio-economic vulnerability and risk • SDGs and their implementation (indicators and assessment frameworks) • International Disaster Management and Humanitarian Response • Vulnerability and resilience of social-ecological systems • Development pathways and shifts in risk profiles • Climate Change and Human Mobility • Global water quality monitoring (with case studies) • Safety and Security, Disaster Assessment and Coordination • Concept and application of spatial epidemiology/ spatial disease risk assessment • Remote sensing of biophysical factors in spatial epidemiology • Geospatial Technologies I - III 				
Prerequisites	None				
Course elements	Teaching unit(s)	Group-size	Contact hours	Independent Work [h]	
	Lecture Working Groups and Presentation Hands-on exercise (full scenario or tabletop)	20	40	20	
Examination(s)	Type of examination(s)			Graded/ non-graded	


	Written examination	graded
Assignments	attendance of group work and exercises, completion of paper and presentation	non-graded
Additional Information	<p>Recommended Reading: MapAction field guide to Humanitarian Mapping http://www.mapaction.org/component/mapcat/download/2426.html?fmt=pdf</p> <p>Van Westen, C. (2000): REMOTE SENSING FOR NATURAL DISASTER MANAGEMENT. International Archives of Photogrammetry and Remote Sensing. Vol. XXXIII, Part B7. Amsterdam 2000: http://www.isprs.org/proceedings/XXXIII/congress/part7/1609_XXXIII-part7.pdf</p> <p>Remote sensing and the disaster management cycle http://www.intechopen.com/books/advances-in-geoscience-and-remote-sensing/remote-sensing-and-the-disaster-management-cycle</p> <p>Have a look at www.disasterscharter.org, and https://www.disasterscharter.org/web/guest/activations/charter-activations. More information: brochure „Implementing Universal Access“ (https://www.disasterscharter.org/documents/10180/13699/CharterUniversalAccessBrochureEnglish.pdf/59f36812-1f3f-47b1-982e-5972f6dce352?version=1.0)</p> <p>UNDAC field handbook: https://docs.unocha.org/sites/dms/Documents/UNDAC%20Handbook%202013_english_final.pdf</p> <p>Sphere handbook: http://www.sphereproject.org/handbook/</p> <p>OSOCC guidelines: https://docs.unocha.org/sites/dms/Documents/2014%20OSOCC%20Guidelines_FINAL.pdf</p>	

Module: SDGs as Guiding Principles and Global Consent					
Module Number M 09	Workload 180	Credits 6 CP	Study year 1	Duration 5 weeks	Compulsory Course
Person(s) in charge of the module	Prof. Borgemeister				
Teaching Unit offering the module	University of Bonn – Center for Development Research				
Applicability of the module	Study Program			Contact hours	
	MSc in Global Health - Risk Management and Hygiene Policies			60	
Learning Outcomes	<p>Upon completion of the module, the students have gained thorough insight into the formulation of global goals, the development of indicators and their implementation and monitoring. They know the successes and failures of the MDGs and understand how these lessons can improve the implementation of the SDGs. The students are aware of the health benefits induced by the health-related SDGs, as well as understanding the role and health implications of non-health SDGs.</p> <p>Furthermore, students learned about the local and regional inequalities and how to account for these in a global framework. The students are introduced to the challenges of translating universal SDG targets into effective local actions. The role of priority setting as well as local and regional adaptations is well understood and students are aware of the tools required for its formulation. The students know the difference between top-down and bottom-up processes for target monitoring, assessment, and accountability and are sensitive to the advantages and disadvantages of each process.</p>				
Key competences	Awareness of the global public health challenges and the interactions between health and social, economic and environmental systems. Knowledge of health systems and their differences. Understanding the importance of global goals and targets as well as the need for monitoring and evaluation.				
Contents	<p>In the year 2000, the MDGs were officially introduced and significant progress has been achieved. Despite many goals being reached on a global level, regional inequalities persist. A critical review of the MDG process reveals multiple lessons that informed the post-2015 development agenda. Since 2015, the SDGs have replaced the MDGs. The SDGs entail more goals and targets compared to the MDGs, broadening the focus to include economic, social and environmental objectives. The limited focus of the MDGs has led to the verticalization of health programs and failure to strengthen health systems. The 'one-size-fits-all' approach to development planning adopted by the MDGs induced inequity, as the community needs differ starkly between and even within regions. The SDGs build upon the strengths of the MDG progress and aims to overcome its shortcomings. The integrative approach adopted by the SDGs highlights that progress towards a certain target could also induce benefits in other areas. Health, in particular is considered crosscutting, thus rendering it both a major contributor and beneficiary of sustainable development.</p> <p>The module is taught by ZEF and UNU-EHS scientists with additional contributions from the international health and development scene in Bonn (e.g. WHO, DIE, GIZ, NGOs). In a series of lectures, the students learn about the development and implementation of the SDGs as well as the successes and failures of the MDGs. Seminars and workshops teach the tools required for effective monitoring and evaluation, as well as practical guidance for the formulation of local and regional adaptations.</p>				
Prerequisites	None				
Course elements	Teaching unit(s)		Group-size	Contact hours	Independent Work [h]

	Theory and Concepts of SDG Target Formulation, Monitoring and Evaluation	20	20	40
	Implementation and Local Adaptation of SDGs in Developing Countries	20	20	40
	Practical Implementation of Monitoring and Evaluation Frameworks	20	20	40
Examination(s)	Type of examination(s)	Graded/ non-graded		
	Presentation (40%)	graded		
	Written Assignment (60%)	graded		
Assignments	attendance of special seminars/workshops, completion of required presentation and written assignment	non-graded		
Additional Information	<p>Recommended Reading:</p> <p>ICSU, ISSC (2015): Review of the Sustainable Development Goals: The Science Perspective. International Council for Science (ICSU): Paris. Available from: http://www.icsu.org/publications/reports-and-reviews/review-of-targets-for-the-sustainable-development-goals-the-science-perspective-2015/SDG-Report.pdf [January 20016].</p> <p>UN (2015) 'The Millennium Development Goals Report 2015', United Nations: New York. Available from: http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf [December 2015].</p> <p>WHO (2015) 'Health in 2015 – From MDGs to SDGs', World Health Organization: Geneva. Available from: http://apps.who.int/iris/bitstream/10665/200009/1/9789241565110_eng.pdf?ua=1 [January 2016].</p>			

Module: Preparation for Research Projects and Leadership Development					 UNIVERSITÄT BONN
Module Number M 10	Workload 180	Credits 6 CP	Study year 1	Duration 21 weeks	Compulsory Course
Person(s) in charge of the module	Dr. Laura E. Layland				
Teaching Unit offering the module	Institute for Hygiene and Public Health (IHPH)				
Applicability of the module	Study Program			Contact hours	
	MSc in Global Health - Risk Management and Hygiene Policies			60	
Learning Outcomes	Definition of Master's thesis project and required preparation. The student should provide a realistic concept of their proposed thesis to their supervisor. They should be aware of the elements that require prior organization (e.g. ethics, permissions) in their own country. Learn how to work well in a multi-cultural and multi-ethnic environment, being sensitive to cultural differences. Role playing scenarios in groups will give the opportunity to be both team player and leader.				
Key competences	Planning and organization of a research or health project. Ability to prioritize work and multitask. Identification of personal strength and weaknesses and improvement of interpersonal skills. Demonstrate the ability to be a team player and a leader.				
Contents	One to one discussions with project supervisor on the intended master thesis. The student should prepare a realistic plan for preparation including literature research, discussions with relevant departments and institutions in their own country about the potential to perform thesis work. Obtaining permission/ethical clearance for the intended project. Discussions about regulations of scientific work (plagiarism, style, contents, references etc.,).				
Prerequisites	None				
Course elements	Teaching unit(s)	Group-size	Contact hours	Independent Work [h]	
	Elements of thesis	1			
	Soft and leadership skills	20			
Examination(s)	This module is non-graded.				
Assignments	attendance of special seminars/workshops, completion of required presentation				
Additional Information	<p>Recommended Reading:</p> <p>Plagiarism: A How-Not-to Guide for Students. Gilmore ISBN: 978-0325026435.</p> <p>Human Relations for Career and Personal Success: Concepts, Applications, and Skills 10th Edition. DuBrin ISBN: 978-0132974400</p> <p>Leadership: Elevate Yourself and Those Around You - Influence, Business Skills, Coaching, & Communication. Elkins ISBN: 978-1514859117.</p> <p>Unlocking Potential: 7 Coaching Skills That Transform Individuals, Teams, and Organizations. Simpson ISBN: 978-1477824009</p>				

Module: Internships					
Module Number M 11	Workload 900	Credits 30 CP	Study year 2	Duration 24 weeks	Compulsory Course
Person(s) in charge of the module	Dr. Laura Layland, Study-Coordinator Christin Diegmann				
Teaching Unit offering the module	Institute for Hygiene and Public Health (IHPH) Institute of Med. Microbiology				
Applicability of the Module	Study Program				
	MSc in Global Health - Risk Management and Hygiene Policies				
Learning Outcomes	Translation of skills (educational and communication) learnt during the Masters course in a professional setting. Become accustomed to the different structures and workflows in professional organizations. Build collaborative networks in an international environment.				
Key competences	Gain experience whilst interacting with small and large consortiums. Develop and implement communication skills in multi-cultural environments. Become aware of potential difficulties when communicating in a multi-ethnic setting (sensitivity and respect for diversity). Development of long-lasting potential networks with international organizations.				
Contents	Placements can be at any UN organization (supported by the UNU-EHS), other national or international institutions (Ministeries or Local Health Departments) or in an organization (including Universities), in a thematic or research field related to the overall course. Students are encouraged to organize their own internship in one (6 months) or two (each 3 separately month parts)				
Prerequisites	None				
Course elements	Teaching mode	Topic	Group-size	Workload [h]	
	Internship	24 week placement	1	900	
Assessment	Project report			non-graded	

Module: Master thesis					 UNIVERSITÄT BONN
Module Number M 12	Workload 900	Credits 30 CP	Study year 2	Duration 22 weeks	Compulsory Course
Person(s) in charge of the module	Prof. Martin Exner				
Teaching Unit offering the module					
Applicability of the module	Study Program				
	MSc in Global Health - Risk Management and Hygiene Policies				
Learning Outcomes	Execute a well defined and significant research project in an independent manner.				
Key competences	Problem solving, interpretations of data, recognition of success and/or limitations of the project, discussion and implications of findings in a well written thesis.				
Contents	How to resolve problems and issues that arise during the project. Weekly contact with supervisors including progress updates Fulfillment of aims defined in during M10.				
Prerequisites	Completion of M10 and 60 CP				
Examination	Written Master thesis				graded
Additional Information	Recommended Reading: Defined previously in M10 and further reading upon discussions with supervisors				