

Translation of
Module Manual for the Consecutive
Master's Program in Epidemiology
(By Alisha Hall and Philipp Heumann, MSE16)

[Hier eingeben]

Table of Contents for the Core Modules and Elective Modules

Core Modules:

Abbreviation	Content/Topic	ECTS
CM 1	Introduction to Epidemiology, Biostatistics and Skills	9
CM 2	Epidemiological Study Designs and Statistical Methods	9
CM 3	Planning, Conducting and Analysing Epidemiological Studies	9

Total **27 ECTS**

Elective Modules:

Topics for the specialization *Population Studies (PS)*

Abbreviation	Content/Topic	ECTS
PS 1	Epidemiology of Infectious Diseases	3
PS 2	Prevention and Health Promotion	3
PS 3	Genetic Epidemiology	3
PS 4	Social Epidemiology	3
PS 5	Radiation Epidemiology	3
QS*	Advanced Methods in Clinical Research and Epidemiology	3

Topics for the specialization *Clinical Research (CR)*

Abbreviation	Content/Topic	ECTS
CR 1	Diagnostic and Prognostic Studies	3
CR 2	Therapy Studies and Evidence-Based Medicine	3
CR 3	Pharmacoepidemiology and Secondary Data	3
CR 4	Epidemiology of Chronic Diseases	3
CR 5	Cancer Registration	3
QS*	Advanced Methods in Clinical Research and Epidemiology	3

*Advanced Methods in Data Analysis and Epidemiology can be attended by both specializations and is therefore referred to as a cross-sectional course.

A total of 6 topics must be covered

18 ECTS

Skill Modules

Abbreviation	Content/Topic	ECTS
Skill 1	Database Management, Documentation, Designing Questionnaires, Medical and Biological Basics, Journal Club (english)	10
Skill 2	Critical Reading in Epidemiology, Literature Research, Reference Management, Scientific Writing, Scientific Communication, Presentation	10

Total **20 ECTS**

Internship

Length of duration: 10 weeks

14 ECTS

Additional Module with courses from other subject areas:

Abbreviation	Content/Topic	ECTS
EgV	Prevention, Rehabilitation, Movement and Health: - Institute of Sport Sciences	depends
EgV	Physiological, anatomical and pharmacological basics - Institute of Clinical Pharmacy - Institute of Physiology	depends
EgV	Social and Behavioral Sciences: - Institute of Political Science - Institute of Sociology	depends

Total **15 ECTS**

Final Module and Exam:

Abbreviation	Content/Topic	ECTS
Kolloq	Colloquium for master thesis, Institute colloquium, Advanced seminar for epidemiology, biometrics and bioinformatics	5
ABM	Master thesis Final oral exam	16 5

Total **26 ECTS**

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Module: Introduction to Epidemiology, Biostatistics and Skills (S)

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
CM 1	270 h	1 semester	1 st semester	9
1. Forms of teaching		Teaching time	Self-study	Credits
Lecture: Introduction to Epidemiology and Biostatistics (P)		21h	88 h	2
Small groups with exercises: Introduction to Epidemiology and Biostatistics (P)		31,5h		3
Lecture: Interdisciplinary Principles (P)		10,5h	88 h	1
Small groups with exercises: Interdisciplinary Principles (P)		31,5h		3
2. Group size				
According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3. Learning goals/Competencies				
After completion of the module students should know/be able to: - important concepts of epidemiology - important historical and current epidemiological studies - critically evaluate epidemiological publications - apply and interpret the measures of incidence, prevalence and mortality - research published data in national and international databases - the possibilities of measuring exposure and risk factors for epidemiological studies - different causal models in epidemiology - the application of epidemiology to the fields of public health and related areas - principles of obtaining data relevant to public health (S) - basic concepts of mathematics (S) - basic understanding of statistics (S) - basic skills in SAS and in R (S) - basic understanding of biology and medicine (S) - scientific communication (S)				
4. Contents				
The module provides a fundamental introduction to epidemiological research in a national and international context. Students learn about different causal models in epidemiology as well as basic measures and their application. Furthermore, mathematical and statistical basics are acquired. There will be an introduction to SAS and R.				
5. Applicability of the module				
Consecutive master's degree and postgraduate master program				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
None				
8. Proof of participation				
8.1. Active participation				
Group discussions, short presentations, presentation of results				
8.2. Course achievement(s)				
8.3. Module exam				
Written exam: 90 minutes in English				
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
Weighted share of the ECTS in relation to the total number of ECTS				
10. Frequency of the offer				
Winter semester (annual rotation)				

[Hier eingeben]

Module: Introduction to Epidemiology, Biostatistics and Skills (S)

11.	Tutors
	Dr. Merzenich, Dr. Hollinderbäumer
12.	Other information
	Literature references: -Buck C. Poppers philosophy for epidemiologists. International Journal of Epidemiology 1975;4:159-168. -Gordis L. Epidemiology, 5th Edition, Elsevier Saunders 2014. -Krieger N, Zierler S. The need for epidemiological theory. Epidemiology 1997;8:212-14. -Pearce N. Traditional epidemiology, modern epidemiology and public health. American Journal of Public Health 1996;86:678-83. -Rose G. Sick individuals and sick populations. International Journal of Epidemiology 1985;14:32-8. -Rothman KJ. Epidemiology. An introduction, 2nd Edition. Oxford: Oxford University Press 2012

[Hier eingeben]

Module: Epidemiological Study Designs and Statistical Methods

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
CM 2	270 h	1 semester	1 st semester	9
1. Forms of teaching	Teaching time		Self-study	Credits
Lecture: Study design (P)	21h	88 h		2
Small groups with computer: Study design (P)	31,5h			3
Lecture: Statistical Methods in Epidemiology (P)	10,5h	88 h		1
Small groups with computer: Statistical Methods in Epidemiology (P)	31,5h			3
2. Group size	According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf.			
3. Learning goals/Competencies	After completion of the module students should know/be able to: - fundamental concepts and principles (environmental studies, cross-sectional studies, cohort studies, case-control studies, clinical trials, intervention studies). - identify errors in epidemiologic studies (confounding, bias, misclassification) and apply methods to control for these errors. - collect, summarize and describe data. - understand the concept of 'randomness'. - assign data to an appropriate distribution. - select and apply estimation and testing principles. - understand and apply correlation and regression analyses (Poisson regression, logistic regression, loglinear regression). - examine and evaluate confounding and interactions. - interpret results of analyses. - understand and apply survival analyses (including Cox regression).			
4. Contents	The module provides the knowledge necessary for planning, analyzing and interpreting studies using cross-tabulations, stratification and regression analyses. Students acquire fundamental knowledge of statistics and probability, knowledge of different study concepts as well as principles and methods in epidemiology.			
5. Applicability of the module	Consecutive master's degree and postgraduate master program			
6. Recommended prerequisite(s) for participation	None			
7. Admission requirement(s)	None			
8. Proof of participation	8.1. Active participation Group discussions, exercises on the computer (statistical analysis), field exercise (project planning, data collection, data entry and analysis), presentation of results 8.2. Course achievement(s) Prepare exercise protocols for data analysis, 3 protocols must be passed 8.3. Module exam Written term paper/assignment			
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs	Weighted share of the ECTS in relation to the total number of ECTS			
10. Frequency of the offer	Winter semester (annual rotation)			
11. Tutors				

[Hier eingeben]

Module: Epidemiological Study Designs and Statistical Methods

PD Dr. Spix, Prof. Dr. Singer

12. Other information

Literature references:

- Beaglehole R, Kjellström T. Basic epidemiology. World Health Organisation 1993.
 - Fletcher RH, Fletcher SW, Wagner EH. Clinical epidemiology: The essentials. Baltimore: Williams & Williams 1996.
 - Gordis L. Epidemiologie. Marburg: Verlag Kilian 2001.
 - Rothman KJ, Greenland S. Modern epidemiology. Second edition. Philadelphia: Lippincott-Raven 1998.
 - Bernhard Rosner. Fundamentals of Biostatistics. Verlag Thomson Learning 2005.
 - Kleinbaum D G. Logistic Regression. Springer Verlag New York 1994.
 - Altman D. Practical Statistics for medical research. London, Tokyo: Chapman & Hall/CRC 1991.
 - Clayton D, Hills M. Statistical methods in epidemiology. Oxford: Oxford University Press 1993.
 - Coltin T. Statistics in medicine. Boston: Little, Brown 1975:237-50.
 - Hartung J, B. Elpelt, Klösener K-H „Statistik“ (Lehr- und Handbuch der angewandten Statistik), Oldenbourg Wiss. Verlag, 2005
 - Holford T. Multivariate methods in epidemiology. Oxford University Press 2002.
 - Sakai H, Kurshid A. Statistics in epidemiology. Methods, techniques and applications. London, Tokyo: Chapman&Hall/CRC Press 1995.
 - Woodward M. Epidemiology. Study design and data analysis. London, Tokyo Chapman&Hall/CRC 1999.
- <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-0470582472.html>

[Hier eingeben]

Module: Planning and Evaluation of Epidemiological Studies

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
CM 3	270 h	1 semester	2 nd semester	9
1. Forms of teaching		Teaching time	Self-study	Credits
Lecture: Data Analysis (P)		10,5h	78 h	1
Small groups with computer: Data Analysis (P)		31,5h		3
Lecture: Planning and conducting epidemiological studies (P)		10,5h	108 h	1
Small groups with computer: Planning and conducting epidemiological studies (P)		31,5h		4
2. Group size				
According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3. Learning goals/Competencies				
After completion of the module students should know/be able to: - use statistical software (SAS) practically - plausibility checks and study data - program databases with SQL - select, plan and apply statistical methods - apply concepts of epidemiology independently to epidemiological questions - understand and apply different conceptual options and international guidelines - formulate research questions - select a suitable study design to answer the research question - systematically assess relevant scientific publications - calculate sample size and power - special characteristics in planning systematic reviews and meta-analyses - budget planning for research projects - writing applications for research funding - writing study protocols and statistical analysis plans, writing workflow manuals - ethical guidelines for conducting a study - distinguish risk communication strategies				
4. Contents				
It provides in-depth work with Statistical Analysis System (SAS). Students gain a better understanding of causal inference with an emphasis on advanced methods analysis in epidemiology. Scientific and methodological skills necessary to independently plan and conduct epidemiological studies are taught. Students are required to write a research proposal.				
5. Applicability of the module				
Consecutive master's degree and postgraduate master program				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
None				
8. Proof of participation				
8.1. Active participation				
Group discussions, exercises on the computer, short presentations, presentation of results				
8.2.Course achievement(s)				
8.3. Module exam				
Term paper/assignment: Preparation of a DFG proposal				

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Module: Planning and Evaluation of Epidemiological Studies

9.	Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs
	Weighted share of the ECTS in relation to the total number of ECTS
10.	Frequency of the offer
	Summer semester (annual rotation)
11.	Tutors
	Prof. Dr. Blettner, Prof. Dr. Singer
12.	Other information
	Literature references: -Hosmer D, Lemeshow A, Kim S. Applied survival analysis: regression modelling of time to event data. Wiley series in probability and statistics. New York: John Wiley & Sons 2002. -Delwiche L, Slaughter S. The little SAS book. New York: Oxford University Press. 2004. -Der G, Everitt BS. A handbook of statistical analyses using SAS, second edition. London, Tokyo: Chapman & Hall/CRC 2001. -Ahrens W, Pigeot (eds). Handbook of Epidemiology. Berlin, Heidelberg, New York: Springer Verlag 2005. -Altman, D. Statistics and ethics in medical research: How large a sample. BMJ 1982; 281:1336-8. -GEP (long version). April 2004. http://www.medweb.uni-muenster.de/institute/epi/dae/ -Guyat S, Sackett D, Cook D. User's guide to the medical literature. JAMA 1993; 271:59-63. -Merkblatt und Leitfaden für die Antragsstellung. Deutsche Forschungsgemeinschaft. http://dfg.de/forschungsförderung.

[Hier eingeben]

Topics for the specialization *Population Studies* (PS 1 – PS 5 and QS)

Module: Epidemiology of Infectious Diseases				
Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
PS 1	90 h	6 days	2 nd or 3 rd semester	3
1. Forms of teaching		Teaching time	Self-study	Credits
Lecture: Epidemiology of Infectious Diseases (WP)		10,5 h	58,5	1
Small groups with exercises: Epidemiology of Infectious Diseases (WP)		21 h		2
2. Group size				
According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3. Learning goals/Competencies				
After completion of the module students should know/be able to: - understand epidemiological terminologies of infectious diseases - name, understand and apply concepts for causes, disease emergence, and epidemiology of infectious diseases (bacterial, viral and parasitic) - explain and apply the 'host-parasite-environment' - name and understand models for disease outbreaks - calculate transmission probabilities - analyze data sets for transmission routes and spread of diseases				
4. Contents				
The students will learn about relationships in infectious epidemiology (cross-sectional studies, cohort studies, case-control studies). Research questions in infectious epidemiology (strengths, weaknesses, methodological constraints, practical issues) will be identified and analyzed. In addition, students will obtain insight into the mathematical models for epidemiologists and learn about disease outbreak patterns.				
5. Applicability off the module				
Consecutive master's degree and postgraduate master program				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
Completion of CM 1 and CM 2 as well as enrollment in CM 3				
8. Proof of participation				
8.1. Active participation				
Group discussions, short presentations, presentation of results				
8.2.Course achievement(s)				
8.3. Module exam				
Written term paper or oral examination				
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
Weighted share of the ECTS in relation to the total number of ECTS				
10. Frequency of the offer				
Winter semester or summer semester (annual rotation)				
11. Instructor				
Prof. Dr. Blettner				

[Hier eingeben]

Module: Epidemiology of Infectious Diseases

12. Other information

Literature references:

- Anderson RM, May RM. Infectious disease of humans – dynamics and control. Oxford, New York: Oxford University Press 1991.
- Giesecke J. Modern infectious disease epidemiology. Second edition. Oxford: Oxford University Press 2002.
- Gregg MB. Field epidemiology. Second Edition. Oxford: Oxford Science publications 2002.
- Krämer A, Reintjes R (eds). Infektionsepidemiologie. Methoden, Moderne Surveillance, Mathematische Modelle, Global Public Health. Berlin: Springer Verlag 2003.
- Teutsch ST, Churchill RE. Principles and practice of Public Health surveillance. Oxford: Oxford Science Publisher 2000.

[Hier eingeben]

Module: Prevention and Health Promotion

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
PS 2	90 h	6 days	2 nd or 3 rd semester	3
1. Forms of teaching		Teaching time	Self-study	Credits
Lecture: Prevention and Health Promotion (WP)		10,5 h	58,5	1
Small groups with exercises: Prevention and Health Promotion (WP)		21 h		2
2. Group size				
According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3. Learning goals/Competencies				
After completion of the module students should know/be able to: - risk factors for specific diseases - different prevention strategies - development of preventive interventions - evaluation of the efficiency of prevention concepts - age-specific prevention approaches for infants and children, adolescents, adults and elderly persons				
4. Contents				
The students will develop an understanding of the concepts and foundations in prevention. They will get insights into the application of the learned concepts. This course is an introduction into recent prevention research. The contents can be divided into the following units: - Age-specific preventive interventions - Assessment and evaluation of risk factors - Skills to apply prevention methods with practical examples				
5. Applicability of the module				
Consecutive master's degree and postgraduate master program				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
Completion of CM 1 and CM 2 as well as enrollment in CM 3				
8. Proof of participation				
8.1. Active participation				
Group discussions, short presentations, presentation of results				
8.2.Course achievement(s)				
8.3. Module exam				
Written term paper or oral examination				
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
Weighted share of the ECTS in relation to the total number of ECTS				
10. Frequency of the offer				
Winter semester or summer semester (annual rotation)				
11. Instructor				
Prof. Dr. Urschitz				

[Hier eingeben]

Module: Prevention and Health Promotion

12. Other information

Literature references:

-Hurrelmann K, Klotz T, Haisch J. Lehrbuch Prävention und Gesundheitsförderung. 2.überarbeitete Auflage.
Bern: Verlag Hans Huber, Hofgrede AG 2007.

[Hier eingeben]

Module: Genetic Epidemiology

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
PS 3	90 h	6 days	2 nd or 3 rd semester	3
1. Forms of teaching		Teaching time	Self-study	Credits
Lecture: Molecular and genetic epidemiology (WP)		10,5 h	58,5	1
Small groups with exercises: Molecular and genetic epidemiology (WP)		21 h		2
2. Group size				
According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3. Learning goals/Competencies				
After completion of the module students should know/be able to: - principles of modern molecular and genetic technologies - application of these technologies to measure risk categories, effects - susceptibility and biomarkers - specific methodological topics in the use of biomarkers in epidemiology (selection of biomarkers, biological sample collection, processing and storage, study design) - understand Mendelian inheritance theory - principles of quantitative genetics - apply statistical analysis methods for genetic studies of families and genome studies				
4. Contents				
The students will develop an understanding of the principles and foundation of genetic and molecular epidemiology and statistical analysis. They will get to know the current laboratory methods in the field of genetic epidemiology and their use for the measurement of biomarkers. The contents can be divided into the following units: - molecular epidemiology of study designs - research with biomarkers - linkage, association and genotypic analysis - modern molecular and genetic laboratory procedures				
5. Applicability of the module				
Consecutive master's degree and postgraduate master program				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
Completion of CM 1 and CM 2 as well as enrollment in CM 3				
8. Proof of participation				
8.1. Active participation				
Group discussions, short presentations, presentation of results				
8.2. Course achievement(s)				
8.3. Module exam				
Written term paper or oral examination				
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
Weighted share of the ECTS in relation to the total number of ECTS				
10. Frequency of the offer				
Winter semester or summer semester (annual rotation)				
11. Instructor				
Prof. Dr. Binder				

[Hier eingeben]

Module: Genetic Epidemiology

12. Other information

Literature references:

- Hulka BS. Epidemiologic studies using biological markers; issues for epidemiologists. Cancer Epidemiology Biomarkers & Prevention 1991;1:13-19.
- Rothman KL, Stewart WF, Schulte PA. Incorporating biomarkers into cancer epidemiology: a matrix of biomarker and study design categories. Cancer Epidemiology Biomarkers & Prevention 1995;4:301-11.
- Schulte PA, Perera FP. Molecular epidemiology. Principles and practices. San Diego: Academic Press 1993.
- Toniolo P, Buffets P, Shuker DEG, Rothman N, Hulka B, Pearce N (eds). Application of biomarkers in cancer epidemiology. IARC Scientific Publications No. 142. International Agency for Research on Cancer, Lyon 1997.

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Module: Social Epidemiology

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
PS 4	90 h	6 days	2 nd or 3 rd semester	3
1. Forms of teaching		Teaching time	Self-study	Credits
Lecture: Social Epidemiology (WP)		10,5 h	58,5	1
Small groups with exercises: Social Epidemiology (WP)		21 h		2
2. Group size				
According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3. Learning goals/Competencies				
After completion of the module students should know/be able to: - define goals of social epidemiological research - overview of the historical development of social epidemiology in the international perspective - understand basic sociological concepts of social inequality - overview of the sociological discussion about approaches to the structure of social inequality - describe theoretical and methodological aspects of important current studies in social epidemiology - overview of data sources, research institutes and scientific journals involved in social epidemiological research - explanatory approaches to health inequalities - concepts of prevention and health promotion - evaluation of projects that aim to reduce health inequalities - critical reading of scientific publications that concern themselves with social epidemiological research results				
4. Contents				
The students will be given an introduction to the central research questions of social epidemiology as well as the most important historical and current studies in social epidemiology. They will learn sociological and psychological concepts of social inequality and social stratification to apply to research questions about health inequalities. Methodological and theoretical aspects of more recent international social epidemiological studies will be discussed as well as current research gaps. Furthermore, concepts of prevention and health promotion will be presented, and projects that aim to reduce health inequalities will be discussed. The contents can be divided in the following units: - concepts and terminology in social epidemiology and the sociology of social inequality and social stratification - historical and state of current social epidemiological research - explanatory approaches (e.g., material, cultural-behavioral, psychosocial, social selection, life course approach) - strategies to reduce health inequalities with an international perspective				
5. Applicability of the module				
Consecutive master's degree and postgraduate master program				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
Completion of CM 1 and CM 2 as well as enrollment in CM 3				
8. Proof of participation				
8.1. Active participation				
Group discussions, presentations, role-playing about the implementation of social epidemiological findings in the real political decision-making; literature research/review				
8.2. Course achievement(s)				
8.3. Module exam				
Written term paper or oral examination				
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
Weighted share of the ECTS in relation to the total number of ECTS				

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Module: Social Epidemiology

10.	Frequency of the offer
	Winter semester or summer semester (annual rotation)
11.	Instructor
	Prof. Dr. Singer
12.	Other information
	Literature references: -Judge, K et al. Health Inequalities: a Challenge for Europe, online: http://www.dh.gov.uk/assetRoot/04/12/15/83/04121583.pdf, 2006. -Mackenbach, J. Health Inequalities: Europe in Profile, online: http://www.dh.gov.uk/assetRoot/04/12/15/84/04121584.pdf, 2006. -Marmot M, Wilkinson RG (ed.). Social Determinants of Health. Second Edition. Oxford: Oxford University Press 2006. -Oakes, JM, Kaufman JS (ed.). Methods in Social Epidemiology. Jossey-Bass. 2006.

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Module: Radiation Epidemiology

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
PS 5	90 h	6 days	2 nd or 3 rd semester	3
1. Forms of teaching		Teaching time	Self-study	Credits
Lecture: Radiation epidemiology (WP)		10,5 h	58,5	1
Small groups with exercises: Radiation epidemiology (WP)		21 h		2
2. Group size				
According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3. Learning goals/Competencies				
After completion of the module students should know/be able to: - principles of the physics and biology of radiation - the most important radiation-induced health effects and risk estimation - critical review and communication of results of radiation epidemiological studies - methods and challenges of retrospective and prospective exposure measurement - important cohorts for the investigation of the consequences of ionizing radiation - important national and international bodies of scientific investigation and evaluation of radiation-associated health risks and radiation protection				
4. Contents				
This module will provide students with the foundations of radiation physics, biology and epidemiology as well as proven radiation-induced health effects. Students will learn about radiation epidemiological studies in the field of ionizing and non-ionizing radiation and mathematical models.				
5. Applicability of the module				
Consecutive master's degree and postgraduate master program				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
Completion of CM 1 and CM 2 as well as enrollment in CM 3				
8. Proof of participation				
8.1. Active participation				
Group discussions, short presentations, presentation of results				
8.2. Course achievement(s)				
8.3. Module exam				
Written term paper or oral examination				
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
Weighted share of the ECTS in relation to the total number of ECTS				
10. Frequency of the offer				
Winter semester or summer semester (annual rotation)				
11. Instructor				
Prof. Dr. Blettner				

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Module: Radiation Epidemiology

12. Other information

Literature references:

- Committee to Assess Health Risks from Exposure to Low Levels of Ionizing Radiation. Health Risks from exposure to low levels of ionizing radiation BEIR VII-Phase 2. Washington, D.C.: The National Academies Press; 2006.
- UNSCEAR or United Nations Scientific Committee on the Effects of Atomic Radiation. Sources and Effects of Ionizing Radiation - Report to the General Assembly, with Scientific Annexes. 2000. New York, NY 10017, United Nations. Ref Type: Serial (Book, Monograph)
- IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Ionizing Radiation, Part 1: X- and Gamma (g)-Radiation, and Neutrons. [75]. 2000. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Ref Type: Serial (Book, Monograph)

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Module: Advanced Methods in Clinical Research and Epidemiology

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
QS	90 h	6 days	2 nd or 3 rd semester	3
1. Forms of teaching	Teaching time		Self-study	Credits
Lecture: Advanced Methods in Data Analysis and Epidemiology (WP)	10,5 h			1
Small groups with exercises: Advanced Methods in Data Analysis and Epidemiology (WP)	21 h		58,5	2
2. Group size	According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).			
3. Learning goals/Competencies	After completion of the module students should know/be able to: - practical application of selected methods to analyze missing data - identify special research problems, research focus and methodological challenges - methodological difficulties in studies of the epidemiology of chronic diseases - different levels of analysis - DAGs			
4. Contents	Students will deepen their understanding of the foundations of data analysis and learn complex study designs and DAGs. The contents can be divided into the following units: - Advanced study designs in clinical and population studies - DAGs			
5. Applicability of the module	Consecutive master's degree and postgraduate master program			
6. Recommended prerequisite(s) for participation	None			
7. Admission requirement(s)	Completion of CM 1 and CM 2 as well as enrollment in CM 3			
8. Proof of participation	8.1. Active participation Group discussions, short presentations, presentation of results 8.2. Course achievement(s) 8.3. Module exam Written term paper or oral or written examination			
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multibsubject programs	Weighted share of the ECTS in relation to the total number of ECTS			
10. Frequency of the offer	Winter semester or summer semester (annual rotation)			
11. Instructor	Prof. Dr. Blettner			

[Hier eingeben]

Module: Advanced Methods in Data Analysis and Epidemiology

12. Other information

Literature references:

- Allison PP. Missing data. Thousand Oaks, CA: Sage 2002.
- Carroll RJ. Measurement error in epidemiological studies. In: Armitage P, Colton T (eds). "Encyclopaedia of Biostatistics". New York: Wiley 1998: 2491-2519.
- <http://www.stat.tamu.edu/~carroll/eiv.SecondEdition/>
- <http://www.biostat.harvard.edu/robins/publications/causaldia.pdf>
- Kuh D, Ben-Shlomo Y (eds). A life course approach to chronic disease epidemiology. Oxford: Oxford University Press 1997.
- Little RJA, Rubin DB. Statistical analysis with missing data. New York: John Wiley & sons 2002.
- Molenberghs G, Thijs H, Jansen I, Beunckens C, Kenward MG, Mallinckrodt C, -Carroll RJ. Analyzing incomplete longitudinal clinical trial data. Biostatistics 2004;53:445-64.
- Twisk JW. Applied longitudinal data analysis for epidemiology: A practical guide. Cambridge University Press 2003.
- Grobbee D.E.; Hoes A.W., Clinical Epidemiology: Principles, Methods, and Applications for Clinical research, 2 Ed. Jones & Bartlett Learning.Burlington.2015

[Hier eingeben]

Topics for the specialization *Clinical Research* (TB 1 CR – TB 5 CR)

Module: Diagnostic and Prognostic Studies					
Abbreviation		Workload	Duration of module	Usual semester	Credits (ECTS)
CR 1		90 h	6 days	2 nd or 3 rd semester	3
1.	Forms of teaching		Teaching time	Self-study	Credits
	a) Lecture: Diagnostic and Prognostic Studies (WP)		10,5 h	58,5	1
	b) Small groups with exercises: Diagnostic and Prognostic Studies (WP)		21 h		2
2.	Group size				
	According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3.	Learning goals/Competencies				
	After completion of the module students should know/be able to: - differences/similarities between the concepts of diagnosis and prognosis - evaluation strategies for new diagnostic procedures - reliability and validity, application of Bayes Theorem - development, evaluation and application of prognosis scores and prognosis models - diagnosis and prognosis as the basis of clinical decision processes				
4.	Contents				
	This module will introduce students to the theoretical foundations of medical/clinical work in the fields of diagnostics and prognostics and their meaning for the treatment of patients. Common evaluation concepts, study designs and analysis strategies for diagnostic studies will be presented. In addition, the differences to prognostic studies and their meaning, implementation and analysis will be taught. This includes the evaluation and application of prognosis scores and models.				
5.	Applicability of the module				
	Consecutive master's degree and postgraduate master program				
6.	Recommended prerequisite(s) for participation				
	None				
7.	Admission requirement(s)				
	Completion of CM 1 and CM 2 as well as enrollment in CM 3				
8.	Proof of participation				
	8.1. Active participation				
	Group discussions, short presentations, presentation of results				
	8.2. Course achievement(s)				
	8.3. Module exam				
	Written term paper or oral examination				
9.	Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
	Weighted share of the ECTS in relation to the total number of ECTS				
10.	Frequency of the offer				
	annual				
11.	Instructor				
	Prof. Dr. Urschitz				

[Hier eingeben]

Module: Diagnostic and Prognostic Studies

12. Other information

Literature references:

- Grobbee D.E.; Hoes A.W., Clinical Epidemiology: Principles, Methods, and Applications for Clinical research, 2 Ed. Jones & Bartlett Learning. Burlington. 2015

[Hier eingeben]

Module: Therapy Studies and Evidence-Based Medicine

Abbreviation		Workload	Duration of module	Usual semester	Credits (ECTS)
CR 2		90 h	6 days	2 nd or 3 rd semester	3
1.	Forms of teaching		Teaching time	Self-study	Credits
	a) Lecture: Therapy Studies and Evidence-Based Medicine (WP)		10,5 h	58,5	1
	b) Small groups with exercises: Therapy Studies and Evidence-Based Medicine (WP)		21 h		2
2.	Group size <i>According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).</i>				
3.	Learning goals/Competencies After completion of the module students should know/be able to: - design and analyze therapy studies and evaluate results - comprehend intended and unintended effects and distinguish between the two - understand and correctly apply the meaning of control groups, randomization and blinding - describe the background and basic procedures in evidence-based medicine - conduct a simple pooled example analysis and use the appropriate statistical procedures - describe critical aspects of pooled analyses (e.g., heterogeneity, influence of individual studies) and integrate into own work				
4.	Contents The contents can be divided into the following units: - foundations of clinical therapy studies, the most important study types and design options - bias and confounding in therapy studies - principles of evidence-based medicine - systematic review and meta-analyses - practice of systematic literature research for systematic review - statistical methods for meta-analyses - investigation of heterogeneity and sensitivity analyses				
5.	Applicability of the module Consecutive master's degree and postgraduate master program				
6.	Recommended prerequisite(s) for participation None				
7.	Admission requirement(s) Completion of CM 1 and CM 2 as well as enrollment in CM 3				
8.	Proof of participation 8.1. Active participation Group discussions, short presentations, presentation of results 8.2. Course achievement(s) 8.3. Module exam Written term paper or oral examination				
9.	Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs Weighted share of the ECTS in relation to the total number of ECTS				

[Hier eingeben]

Module: Therapy Studies and Evidence-Based Medicine	
10.	Frequency of the offer annual
11.	Instructor Prof. Dr. Urschitz
12.	Other information Literature references: -Sackett DL, Rosenberg WMC, Gray JAM et al. Evidence based medicine: What it is and what it isn't. British Medical Journal 1996;312: 71-72. -Mulrow CD, Cook DJ, Davidoff F. Systematic reviews: critical links in the great chain of evidence. Annales of Internal Medicine 1997;126: 389-391.

[Hier eingeben]

Module: Pharmacoepidemiology and Secondary Data					
Abbreviation		Workload	Duration of module	Usual semester	Credits (ECTS)
CR 3		90 h	6 days	2 nd or 3 rd semester	3
1.	Forms of teaching		Teaching time	Self-study	Credits
	Lecture: Pharmacoepidemiology and Secondary Data (WP)		10,5 h	53,25	1
	Small groups with exercises: Pharmacoepidemiology and Secondary Data (WP)		26,25 h		2
2.	Group size <i>According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz.</i> (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3.	Learning goals/Competencies After completion of the module students should know/be able to: - development of drugs, phase 1-4 studies, ‚safety‘ studies - problems in observational studies of drug safety, ‚confounding by indication‘ - meaning, methods and analyses in pharmacoepidemiology - principles of signal generation for the detection of side effects - types and use of secondary data in pharmacoepidemiology - concrete examples of pharmacoepidemiological work				
4.	Contents This module introduces students to the principles of the development of drugs, studies of drug safety as well as the application and suitability of epidemiological study design in pharmacoepidemiology. They will learn about risk models, propensity scores and drug monitoring from a scientific, industrial and regulatory perspective.				
5.	Applicability of the module Consecutive master's degree and postgraduate master program				
6.	Recommended prerequisite(s) for participation None				
7.	Admission requirement(s) Completion of CM 1 and CM 2 as well as enrollment in CM 3				
8.	Proof of participation <i>8.1. Active participation</i> Group discussions, short presentations, presentation of results <i>8.2. Course achievement(s)</i> <i>8.3. Module exam</i> Written term paper or oral examination				
9.	Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs Weighted share of the ECTS in relation to the total number of ECTS				
10.	Frequency of the offer Winter semester or summer semester (annual rotation)				
11.	Instructor Prof. Dr. Urschitz				

[Hier eingeben]

Module: Pharmacoepidemiology and Secondary Data

12. Other information

Literature references:

- Hartzema, AG, Porta MM, Tilson HH (eds). Pharmacoepidemiology. An Introduction. Third edition, Harvey Whitney Books Company 1998.
- Strom, BL (ed). Pharmacoepidemiology. Third Edition, Chichester u.a John Wiley & Sons 2000.
- Bégaud B. Dictionary of Pharmacoepidemiology. Chichester u.a.: John Wiley & Sons 2000.
- Last JM. Dictionary of Epidemiology. 4th Edition, Oxford: Oxford University Press 2001.
- Epidemiology for the Uninitiated (BMJ). <http://bmj.bmjjournals.com/epidem/epid.html>
- Principles of Epidemiology, Second Ed. (Atlanta: CDC). http://www.phppo.cdc.gov/PHTN/catalog/pdf-file/Epi_Course.pdf
- Public Health Training Network – Resource Catalog. <http://www.phppo.cdc.gov/PHTN/media.asp>

[Hier eingeben]

Module: Epidemiology of Chronic Diseases

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
CR 4	90 h	6 days	2 nd or 3 rd semester	3
1. Forms of teaching		Teaching time	Self-study	Credits
Lecture: Epidemiology of Chronic Diseases (WP)		10,5 h	53,25	1
Small groups with exercises: Epidemiology of Chronic Diseases and Secondary Data (WP)		26,25 h		2
2. Group size				
According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3. Learning goals/Competencies				
After completion of the module students should know/be able to: - principles of epidemiological studies of chronic diseases - literature about the epidemiology of chronic diseases - leading causes of mortality and morbidity of chronic diseases - develop determining factors for the geographical, chronological and social distribution of selected chronic diseases (i.e., cancer, chronic obstructive lung disease) - evaluate epidemiological research of the causes of breast and skin cancer. Students will learn methods that improve early cancer detection, prevention and treatment and evaluation quality of life and other results. - application and constraints of methods of exposure measurement for different etiological factors such as diet, alcohol, tobacco, physical activity, psychological stress, and environmental factors - special research problems, important topics of research and methodological challenges - methodological problems in epidemiological studies of chronic diseases				
4. Contents				
This module will help students understand epidemiological relationships (cross-sectional studies, cohort studies, case-control studies) with regards to chronic diseases. They will learn how to identify and analyze epidemiological research questions (strengths, weaknesses, methodological constraints, practical considerations). They will receive an overview of the models for exposure assessment and analysis of results.				
5. Applicability of the module				
Consecutive master's degree and postgraduate master program				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
Completion of CM 1 and CM 2 as well as enrollment in CM 3				
8. Proof of participation				
8.1. Active participation				
Group discussions, short presentations, presentation of results				
8.2. Course achievement(s)				
8.3. Module exam				
Written term paper or oral examination				
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
Weighted share of the ECTS in relation to the total number of ECTS				

[Hier eingeben]

Module: Epidemiology of Chronic Diseases

10.	Frequency of the offer
	Winter semester or summer semester (annual rotation)
11.	Instructor
	Dr. Zeißig M.Sc.
12.	Other information
	Literature references: -Adami HO, Hunter D, Trichopoulos D. Textbook of cancer epidemiology. Oxford: Oxford University Press 2002. -Brownson RC, Memington PI, Davis JR (eds). Chronic disease epidemiology and control. Second edition. Washington DC: American Public Health Association 1998. -Kelsey JL, Whittemore A, Evans AS, Thompson WD. Methods in observational epidemiology. Second edition. New York, Oxford: Oxford University Press 1996. -Tsuan MT, Tohen M, Zahner GEP. Textbook in psychiatric epidemiology. New York: John Wiley & Sons 1995. -Willet WC. Nutritional epidemiology. Second edition. New York: Oxford University Press. 1998. -Dos Santo Silva I. Cancer Epidemiology: Principles and Methods. IARC Press. 1999.

[Hier eingeben]

Module: Cancer Registration

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
CR 5	90 h	6 days	2 nd or 3 rd semester	2
1.	Forms of teaching	Teaching time	Self-study	Credits
	a) Lecture: Cancer Registration (WP)	10,5 h		1
	b) Small groups with exercises: Cancer Registration (WP)	21 h	58,5	2
2.	Group size <i>According to current statutes</i> on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf .			
3.	Learning goals/Competencies After completion of the module students should know/be able to: - current status of cancer registration in Germany, Europe and worldwide - biological and medical principles of cancer formation - classification systems for coding - descriptive analyses. Cluster analyses and time trend analysis. - risk communication - data protection, cryptography and record linkage			
4.	Contents The content of this module can be divided into the following units: This module introduces students to the biological and medical foundations of cancer formation. Students will learn classification systems for coding, statistical analysis methods, data protection guidelines and cryptography.			
5.	Applicability of the module Consecutive master's degree and postgraduate master program			
6.	Recommended prerequisite(s) for participation None			
7.	Admission requirement(s) Completion of CM 1 and CM 2 as well as enrollment in CM 3			
8.	Proof of participation 8.1. Active participation Group discussions, short presentations, presentation of results 8.2. Course achievement(s) 8.3. Module exam Written term paper or oral examination			
9.	Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs Weighted share of the ECTS in relation to the total number of ECTS			
10.	Frequency of the offer annual			
11.	Instructor PD Dr. Kaatsch, Dr. Zeiig MSc.			
12.	Other information			

[Hier eingeben]

Module: Skill 1 – Database Management, Documentation, Questionnaire Construction, Medical and Biological Foundations, Journal Club (English)				
Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
SM_1	300 h	1 semester	1 st semester	10
1. Forms of teaching	Teaching time		Self-study	Credits
Lecture with excursion: Medical basics (P)	31,5 h		28,5 h	3
Sem: Journal Club in English (P)	10,5 h		49,5 h	2
Lecture: Database Management, Documentation, Questionnaire Construction (P)	10,5 h		49,5 h	2
Small groups with exercises: Database Management, Documentation, Questionnaire Construction (P)	21 h		69 h	3
2. Group size	According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).			
3. Learning goals/Competencies	After completion of the module students should know/be able to: - use medical databases and create and evaluate simple databases themselves - describe medical aspects of epidemiological research projects and take them into account in the planning process - independently develop, apply and evaluate questionnaires according to good epidemiological practice - actively participate in journal clubs in English			
4. Contents	The content of this module can be divided into the following units: - basics of medical databases, database systems - practice of documentation in medical and epidemiological research - journal club in English - development, application and evaluation of questionnaires - basics of anatomy, physiology and clinical medicine			
5. Applicability of the module	Consecutive master's degree			
6. Recommended prerequisite(s) for participation	None			
7. Admission requirement(s)	None			
8. Proof of participation	8.1. Active participation Group discussions, presentation of results 8.2. Course achievement(s) None 8.3. Module exam Project work in the field of database management, documentation, questionnaire construction			
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs	Weighted share of the ECTS in relation to the total number of ECTS			
10. Frequency of the offer	Winter semester (annual rotation)			
11. Instructor	Ms. Kaiser, Dr. Hollinderbäumer			
12. Other information				

[Hier eingeben]

Module: Skill 2 – Critical Reading in Epidemiology, Literature Research, Reference Management, Scientific Writing, Scientific Communication, Presentation				
Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
SM_2	300 h	2 semesters	3 rd semester	10 (5+5)
1. Forms of teaching		Teaching time	Self-study	Credits
(Part 1) Lecture: Reference management, critical reading, scientific writing (P)		21 h	97,5 h	2
Small groups with exercises: Reference management, critical reading, scientific writing(P)		31,5 h		3
(Part 2) Lecture: Scientific communication, presentation, poster creation (P)		10,5 h	108 h	2
Small groups with exercises: Scientific communication, presentation, poster creation (P)		31,5 h		3
2. Group size				
According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz. (http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf).				
3. Learning goals/Competencies				
After completion of the module students should know/be able to: - create different types of scientific papers - find and structure topics independently - find and evaluate scientific literature - use citation techniques confidently - know and be able to create the structure and core elements of a scientific paper - present a scientific paper and a poster in an appropriate way				
4. Contents				
The course provides an overview of the different stages of the research process as well as the approach to scientific texts and their generation. Students learn and practice the appropriate presentation of results in lecture and poster.				
5. Applicability off the module				
Consecutive master's degree				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
None				
8. Proof of participation				
8.1. Active participation				
Active participation in the form of group discussions, literature research, poster and lecture preparation and their presentation				
8.2.Course achievement(s)				
None				
8.3. Module exam				
Creation of a poster, presentation of a poster and a short scientific presentation/talk (duration 10-15 min.)				
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
Weighted share of the ECTS in relation to the total number of ECTS				
10. Frequency of the offer				
Summer semester (annual rotation)				

[Hier eingeben]

Module: Skill 2 – Critical Reading in Epidemiology, Literature Research, Reference Management, Scientific Writing, Scientific Communication, Presentation	
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11.	Instructor
	Dr. Hollinderbäumer
12.	Other information

[Hier eingeben]

Research internship				
Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
Praktikum	423,5 h	10 weeks	2 nd semester	14
1. Forms of teaching	Teaching time	Self-study	Credits	
Internship (P)	385 h	38,5 h	14	
2. Group size				
3. Learning goals/Competencies				
4. Contents	The content of this module can be divided into the following units:			
5. Applicability of the module	Consecutive master's degree			
6. Recommended prerequisite(s) for participation	None			
7. Admission requirement(s)	None			
8. Proof of participation	8.1. Active participation 8.2. Course achievement(s) 8.3. Module exam Preparation of an internship report ungraded			
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs	None			
10. Frequency of the offer	annual rotation			
11. Instructor	Prof. Dr. Blettner			
12. Other information				

[Hier eingeben]

Supplementary Module: Courses from other subject areas

Abbreviation	Workload	Duration of module	Usual semester	Credits (ECTS)
ErgM	450 h	1 semester	3 rd semester	15
1. Forms of teaching		Teaching time	Self-study	Credits
A current list of courses offered by subjects can be viewed at the academic coordinator's office and will be sent to students at the beginning of the registration period. The following departments and subjects offer courses:				
Prevention, rehabilitation, exercise and health: - Institute of Sport Sciences				
Physiological, anatomical and pharmacological principles: - Institute of Clinical Pharmacy - Institute of Physiology				
Social and behavioral methods: - Institute of Political Science - Institute of Sociology				
2. Group size				
Is determined by the respective subject				
3. Learning goals/Competencies				
Qualification objectives/learning skills are specified by each department.				
4. Contents				
The contents are specified by the individual departments.				
5. Applicability of the module				
Consecutive master's degree				
6. Recommended prerequisite(s) for participation				
None				
7. Admission requirement(s)				
None				
8. Proof of participation				
8.1. Active participation				
Is defined by the individual departments.				
8.2. Course achievement(s)				
Is defined by the individual departments.				
8.3. Module exam				
Is defined by the individual departments.				
9. Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs				
Weighted share of the ECTS in relation to the total number of ECTS				
10. Frequency of the offer				
Summer and winter semester				
11. Instructor				
Prof. Dr. Blettner				
12. Other information				

[Hier eingeben]

Module: Final Module – examination area

Abbreviation ABM	Workload	Duration of module	Usual semester	Credits (ECTS)
		1 semester	4 th semester	5+21 (for final exam)
1.	Forms of teaching	Teaching time	Self-study	Credits
	Seminar: Colloquium for the master thesis (P)	10,5 h	79,5 h	2
	Seminar: Institute Colloquium (P)	10,5 h	49,5 h	1
	Seminar: Oberseminar Epidemiology, Biometrics and Bioinformatics (P)	10,5 h	79,5 h	2
2	Group size <i>According to current statutes on the supervision ratios of courses in bachelor's and master's degree programs and on the determination of standard values for the educational effort (curricular standard values) of the Johannes Gutenberg-University Mainz.</i> http://www.uni-mainz.de/studlehr/ordnungen/CNW_Satzung_aktuell.pdf .			
3.	Learning goals/Competencies After completion of the module students should know/be able to: - active engagement with current research topics - the oral form of scientific discourse - the ability to summarize one's own work briefly and comprehensibly and to present it to an expert audience - to independently lead a discussion in depth of research - writing the scientifically qualified thesis (Master thesis)			
4.	Contents The content of this module can be divided into the following units: - presentation of modern, current research approaches in epidemiology - participation in research-oriented discussions - application and consolidation of the knowledge and skills acquired in Skill Modules 1 and 2 - presentation of the concept of the own Master thesis			
5.	Applicability of the module Consecutive master's degree			
6.	Recommended prerequisite(s) for participation None			
7.	Admission requirement(s) Successfully completed basic modules and elective modules			
8.	Proof of participation 8.1. Active participation 8.2. Course achievement(s) Presentation of the master thesis in the Oberseminar after the registration of the master thesis. If the scientific events cannot be attended due to the preparation of the Master's thesis outside the IMBEI, a certificate of attendance of 10 colloquia/seminars at the institution of the master thesis must be submitted. 8.3. Module exam Master thesis, final oral exam			
9.	Relevance of the grade in the final grade for single-subject programs or subject grade for multisubject programs Weighted share of the ECTS in relation to the total number of ECTS			
10.	Frequency of the offer Every semester			
11.	Instructor Prof. Dr. Blettner			
12.	Other information			

[Hier eingeben]

Explanatory Notes:

Legend:

P	=	Mandatory event
WP	=	Elective course