2021-2022 Curriculum Guide for Master of Public Health degree program with a specialization in Biomedical Informatics

The Master of Public Health (MPH) degree is intended for students whose interests in Biomedical Informatics (BMI) are oriented towards professional practice within the public health and/or healthcare domains.

Students admitted to the Master of Public Health (MPH) degree program are assigned a faculty advisor who will provide guidance throughout the program. This document serves as a resource to be used by the student and the advisor in planning a program with a specialization in Biomedical Informatics, but is not inclusive of all important degree, college, and university requirements.   All students are expected to be familiar with the College of Public Health (CPH) *Graduate Student Handbook*: http://cph.osu.edu/students/graduate/handbooks the *Graduate School Handbook:* http://www.gradsch.ohio-state.edu/ and the CPH competencies: https://go.osu.edu/competencies.

PROGRAM OF STUDY

The MPH-BMI curriculum consists of a minimum of 45 credits organized into five curricular domains:

1. MPH Integrated Foundational curriculum (12 credits)
2. Specialization courses (19-20 credits)
3. Elective courses (8-9 credits)
4. Applied Practice Experience (2 credits)
5. Integrative Learning Experience (3 credits)

MPH Integrated Foundational curriculum (12 credits)

Every student in the MPH-BMI program must take the following MPH Integrated Foundational curriculum:

PUBHTLH 6001	Methods in Quantitative Data Analysis	4 credits
PUBHLTH 6002	History, Values and Essential Services of the U.S. Public Health System	2 credits
PUBHLTH 6003	Methods in Public Health Planning and Evaluation	2 credits
PUBHLTH 6004	Essentials of Population Health	4 credits

Required Specialization courses (19-20 credits)

PUBHBIO 6211	Design & Analysis of Studies in the Health Sciences II	3 credits
BMI 5710	Introduction to Biomedical Informatics	3 credits
BMI 5740	Introduction to Research Informatics	3 credits
BMI/PUBHLTH 5760	Introduction to Public Health Informatics	3 credits
BMI 7000+	Advanced Coursework in Biomedical Informatics	3 credits
BMI 7891	Seminars in Biomedical Informatics	2 credits

Ethics course requirement
Select one course:

BIOETHIC 6010	Biomedical Research Ethics	3 credits
BIOPHARM 7510	Professional and Ethical Issues in Biomedical Sciences	2 credits
NURSING 7781	Responsible Conduct of Research	3 credits
SURGERY 8814	Responsible Conduct of Research: Human Participants and the Use of Animals in Biomedical Research	2 credits

Recommended Electives** (8-9 Credits)

BMI 5730	Introduction to Bioinformatics	3 credits	BMI 8040	Special Topics in Clin. & Transl. Informatics	Varies
BMI 5750	Methods in Biomedical Informatics	3 credits	BMI 8050	Special Topics in Biomed Data Sci	Varies
BMI 5770	Health Analytics	3 credits	BMI 8130	Analysis and Applications of Genome-Scale Data	3 credits
BMI 7040	Clinical Informatics	3 credits	BMI 8150	Rigorous and Reproducible Design & Data Analysis	3 credits
BMI 7810	Design and Methodological Approaches in BMI	3 credits	PUBHBIO 6250	Regression Methods for the Health Sciences	3 credits
BMI 7830	Adv. Topics in Bioinformatics	3 credits	PUBHBIO 6270	Intro to SAS for Pub Hlth Students	2 credits
BMI 8030	Special Topics in Comp. Biol	Varies	PUBHHMP 7678	Approaches to Health Services Research	3 credits
BMI 8140	Measuring patient experiences and preferences	3 credits	PUBHHMP 7682	Info Sys for Health Service Org	3 credits
PUBHEPI 6412	Prin Clinical & Transl. Science	2 credits	CSE 5231	Software Engineering Techniques	2 credits
PUBHEPI 6413	Conduct & Comm Research in CTS	2 credits	CSE 5241	Introduction to Database Systems	2 credits
PUBHEPI 6431	Design & Implement Health Surveys	3 credits	CSE 5521	Survey of Artificial Intel I: Basic Tech	2 credits
CSE 5522	Survey of Artificial Intel II: Adv Tech	3 credits			

*Students with a background in public health or medicine are encouraged to focus on computer science (CSE) electives to enhance their computational abilities. Similarly, students with backgrounds in computer science, electrical engineering, or information technology are encouraged to focus their electives to enhance their understanding of medicine and public health. Students should work with staff and faculty advisors in the Department of Biomedical Informatics to identify suitable electives.

Applied Practice Experience (2 credits)

PUBHLTH 7189	Applied Practice Experience in Public Health	2 credits

Integrative Learning Experience (3 credits)

PUBHLTH 7998	Integrative Learning Experience in Public Health	3 credits

Sample Curriculum Plan for the Master of Public Health in Biomedical Informatics

Year 1 Autumn	PUBHLTH 6001	Methods in Quantitative Data Analysis	4 credits	AU
	PUBHLTH 6002	History, Values and Essential Services of the U.S. Public Health System	2 credits	AU
	BMI 5710	Introduction to Biomedical Informatics	3 credits	AU, SP
	BMI 7891	Seminar in Biomedical Informatics	0-1 credit	AU, SP
Year 1 Spring	PUBHLTH 6003	Methods in Public Health Planning and Evaluation	2 credits	SP
	PUBHLTH 6004	Essentials of Population Health	4 credits	SP
	PUBHBIO 6211	Design & Analysis of Studies in the Health Sciences II	3 credits	AU, SP
	BMI 5740	Introduction to Research Informatics	3 credits	SP
	BMI 7891	Seminar in Biomedical Informatics	0-1 credit	AU, SP
Year 1 Summer	PUBHLTH 7189	Applied Practice Experience	2 credits	ANY
	ELECTIVE	Recommend: BMI 5750 Methods in Biomedical Informatics	3 credits	ANY
Year 2 Autumn	BMI/PUBHLTH 5760	Introduction to Public Health Informatics	3 credits	AU
	BMI 7000+	Advanced Biomedical Informatics Coursework	3 credits	AU
	ELECTIVE		3-4 credits	ANY
	BMI 7891	Seminar in Biomedical Informatics	0-1 credit	ANY
	ETHICS COURSE		2-3 credits	ANY
Year 2 Spring	PUBHLTH 7998	Integrative Learning Experience in Public Health	3 credits	ANY
	ELECTIVE		3-4 credits	ANY
	BMI 7891	Seminar in Biomedical Informatics	0-1 credit	ANY

Grade Policy:

In addition to the general Graduate School requirements of a cumulative grade point average of 3.0 or higher, students must meet specific college policies regarding grades in Foundation and specialization courses. Students should familiarize themselves with Section 11 of the College of Public Health Graduate Student Handbook.

College of Public Health - Office of Academic Programs and Student Services (OAPSS)

OAPSS staff are available to provide assistance with College, Graduate School and University policies and procedures.

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