



2026-2027 PROGRAM GUIDE: Master of Science - Biostatistics

Information in this document is updated annually. Please refer to the document for the year you entered the program. Student resources, policies, and procedures applicable to all School of Public Health graduate students can be found on the SPH website, <http://ohsu-psu-sph.org>.

Overview

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ohsu-psu-sph.org/ms-in-biostatistics

The Master of Science in Biostatistics program provides graduate-level training in applied biostatistics with a grounding in statistical theory. Courses emphasize intermediate to advanced applied statistical methods, statistical programming, data science, and interpretation and communication of quantitative results. The program prepares students to pursue careers as collaborative biostatisticians or data scientists in health science fields.

Our students come from very diverse backgrounds with degrees in STEM fields, public health, social sciences, business, and the humanities. The program is also appropriate for clinical and translational researchers, as well as working professionals throughout the state - including public health practitioners, laboratory scientists, data managers and database programmers, or for students who have earned a Graduate Certificate in Biostatistics and wish to pursue further training. The Biostatistics MS degree qualifies graduates for jobs in the public, private, and nonprofit sectors. Our graduates have been employed by local, state and federal public health agencies, health and medical centers, pharmaceutical and biotechnology companies, device manufacturers, contract research organizations, and research institutions.

Per OHSU policy, students have up to 6 years from the date of matriculation to complete their degree.

Program Competencies

Graduates of this program will be able to:

- Understand theoretical foundation of statistical inference and its link to applications.
- Apply data management skills and conduct statistical analysis for health sciences research projects.
- Translate broad research goals into specific questions and procedures for statistical analysis and interpret results in basic, clinical, translational, and public health research studies.
- Select and use appropriate statistical analysis software for analysis and information sharing (e.g., R, SAS, or other programs).
- Communicate statistical methods and findings to specialists and non-specialist audiences.
- Apply ethical and equitable data principles that govern statistical practice.

MS Biostatistics Program of Study

Course Number	Course Title	Credits
Required Coursework (38 Credits)		
BSTA 511	Estimation and Hypothesis Testing for Applied Biostatistics	4
BSTA 512	Linear Models	4
BSTA 513	Categorical Data Analysis	4
BSTA 514	Statistical Analysis of Time-to-Event Data	3
BSTA 517	Statistical Methods in Clinical Trial Design	3
BSTA 519	Applied Longitudinal Data Analysis	3
BSTA 535	Biostatistics Capstone	3
BSTA 550	Introduction to Probability	3
BSTA 551	Theory of Statistical Inference	4



PHE 513	Introduction to Public Health	3
EPI 512	Epidemiology I	4
<i>Elective Coursework (16 Credits)</i>		
BSTA 500	Reading and Conference	1-3
BSTA 515	Data Management and Analysis in SAS	3
BSTA 516	Design and Analysis of Surveys	3
BSTA 521	Bayesian Methods for Data Analysis	3
BSTA 522	Statistical Machine Learning and Big Data	3
BSTA 523	Design of Experiments: Statistical Principles of Research Design & Analysis	3
BSTA 526	R Programming for Health Data Science	3
EPI 513	Epidemiology II (Methods)	4
BMI 510	Introduction to Biomedical Informatics & AI	3
BMI 525	Principles and Practice of Data Visualization	3
BMI 550	Bioinformatics and Computational Biology I: Algorithms	4
BMI 551	Bioinformatics and Computational Biology II: Statistical	4
NURS 630	Advanced Measurement	3
NURS 648	Introduction to Structural Equation Modeling	3
UNI 511	Data Equity for Health Professionals	2
PSU STAT 567	Applied Probability 1	3
PSU STAT 568	Applied Probability 2	3
PSU STAT 580	Nonparametric Methods	3
	Other relevant courses with program approval	
Total Credits		54

MS Biostatistics: Recommended Course Sequencing

Below are recommended course schedules for full and part-time students.. Other schedules are possible; ***always consult your Faculty Advisor regarding your program of study and course selection to determine the schedule that best fits for your educational and professional goals.*** We recommend meeting with your Faculty Advisor quarterly. Additionally, the program director holds group advising sessions twice a year and holds office hours or sends emails as necessary around registration time that provide program updates and answer questions on course availability and selection.

If you receive federal financial aid, it's important to be aware of financial aid requirements when planning your schedule, in particular, with the significant changes to federal student loans taking effect on July 1, 2026. Federal loans require at least 1/2 time enrollment (5 credits). Please refer to the OHSU's "Student Financial Aid Explained" and "Standard Enrollment Plans for Reference" documents, paying particular attention to summer term, for more information. These documents can be found on OHSU's Financial Aid website here: <https://www.ohsu.edu/education/financial-aid>.



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MS Biostatistics: Full-time (FT) Summer Start Student Schedule

Term	Year 1			Year 2		
	Course	Credits	Student Actions	Course	Credits	Student Actions
Summer	EPI 512 Epidemiology I	4	➤ Meet with Advisor re: course selection & educational and professional goals.			➤ Check out BDP intern and research opportunities and Knight CDSSR research opportunities
	BMI 510 Introduction to medical informatics and AI	3				
Fall	BSTA 550 Introduction to Probability	3	➤ Attend SPH Fall Welcome ➤ Attend Group Advising ➤ Meet with Advisor	BSTA 514 Statistical Analysis of Time-to-Event Data	3	➤ Attend SPH Fall Welcome ➤ Attend Group Advising ➤ Meet with Advisor
	BSTA 511 Est/Hypothesis Testing for Applied Biostats	4		BSTA 517 Statistical Methods for Clinical Trial Design*	3	
	PHE 513 Intro to Pblc Hlth	3		Elective (e.g. BSTA 515, UNI 511, NURS 630)	2-3	
Winter	BSTA 551 Theory of Stat Inf	4	➤ Meet with Advisor	BSTA 519 Applied Longitudinal Data Analysis	3	➤ Meet with Advisor ➤ Apply for spring graduation
	BSTA 512 Linear Models	4		Elective(s) (e.g., BSTA 526, BSTA 522, BMI 544) as needed	3	
	Elective (e.g. BSTA 526, EPI 513, BMI 544)	3-4				
Spring	BSTA 513 Categorical Data Analysis	3	➤ Attend Group Advising ➤ Meet with Advisor	BSTA 535 Biostats Capstone	3	➤ Attend Group Advising ➤ Meet with Advisor
	Elective(s) (e.g., BSTA 504, BSTA 516, BSTA 523, BMI 525)	6		Elective as needed		

* Schedule to be finalized



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MS Biostatistics: Full-time (FT) Fall Start Student Schedule

Term	Year 1			Year 2			
	Course	Credits	Student Actions	Course	Credits	Student Actions	
Summer				Elective (e.g., BMI 510) as needed	3	➤ Check out BDP intern and research opportunities and Knight CDSSR research opportunities	
Fall	BSTA 550 Introduction to Probability	3	➤ Attend SPH Fall Welcome ➤ Attend Group Advising ➤ Meet with Advisor re: course selection & educational and professional goals.	BSTA 514 Statistical Analysis of Time-to-Event Data	3	➤ Attend SPH Fall Welcome ➤ Attend Group Advising ➤ Meet with Advisor	
	BSTA 511 Est/Hypothesis Testing for Applied Biostats	4		BSTA 517 Statistical Methods for Clinical Trial Design*	3		
	PHE 513 Intro to Pblc Hlth	3		Elective (e.g. BSTA 515, UNI 511, NURS 630)	2-3		
Winter	BSTA 551 Theory of Stat Inf	4	➤ Meet with Advisor	BSTA 519 Applied Longitudinal Data Analysis	3	➤ Meet with Advisor ➤ Apply for spring graduation	
	BSTA 512 Linear Models	4		Elective(s) (e.g., BSTA 526, BSTA 522, BMI 544) as needed	3-6		
	Elective (e.g, BSTA 526, EPI 513, BMI 544)	3-4					
Spring	BSTA 513 Categorical Data Analysis	3	➤ Attend Group Advising ➤ Meet with Advisor	BSTA 535 Biostats Capstone	3	➤ Attend Group Advising ➤ Meet with Advisor	
	EPI 512 Epidemiology I	4		Elective as needed			
	Elective(s) (e.g., BSTA 504, BSTA 516, BSTA 523, BMI 525)	3					

* Schedule to be finalized



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MS Biostatistics: Suggested Part-time (FT) Fall Start Student Schedule

Term	Year 1			Year 2			Year 3		
	Course	Credits	Student Actions	Course	Credits	Student Actions	Course	Credits	Student Actions
Summer				Elective (e.g., BMI 510) as needed	3	➤ Check out BDP intern and research opportunities and Knight CDSSR research opportunities			➤ Check out BDP intern and research opportunities and Knight CDSSR research opportunities
Fall	BSTA 511 Est/Hypothesis Testing for Applied Biostats	4	➤ Attend SPH Fall Welcome ➤ Attend Group Advising	BSTA 550 Introduction to Probability	3	➤ Attend SPH Fall Welcome ➤ Attend Group Advising	BSTA 514 Statistical Analysis of Time-to-Event Data	3	➤ Attend SPH Fall Welcome ➤ Attend Group Advising
	PHE 513 Intro to Pblc Hlth	3	➤ Meet with Advisor re: course selection & educational and professional goals.	BSTA 517 Statistical Methods for Clinical Trial Design*	3	➤ Meet with Advisor	Elective (e.g., UNI 511, BSTA 515) as needed	2-3	➤ Meet with Advisor
Winter	BSTA 551 Theory of Stat Inf	4	➤ Meet with Advisor	BSTA 519 Applied Longitudinal Data Analysis	3	➤ Meet with Advisor	Elective(s) (e.g., BSTA 526, BSTA 522, BMI 544, EPI 513) as needed	3-6	➤ Meet with Advisor ➤ Apply for spring graduation
	BSTA 512 Linear Models	4		BSTA 551 Theory of Stat Inf	4				
Spring	BSTA 513 Categorical Data Analysis	3	➤ Attend Group Advising	Elective (e.g., BSTA 504, BSTA 516, BMI 525)	3-6	➤ Attend Group Advising	BSTA 535 Biostats Capstone	3	➤ Attend Group Advising
	EPI 512 Epidemiology I	4	➤ Meet with Advisor			➤ Meet with Advisor	Elective as needed		➤ Meet with Advisor

* Schedule to be finalized



Grades

Students are not permitted to progress through the BSTA 511-513, or BSTA 550-551 course sequence unless they achieve at least a B- in each of the courses. See [Graduate Student Policies and Procedures](#) for more information on Minimum Course Grade Requirements and Academic standing.

Biostatistics & Design Program (BDP)

The Biostatistics & Design Program (BDP) is a service core that provides research design and analytic support to investigators across OHSU and beyond who are planning or conducting non-cancer research. The BDP supports research in all phases, from formulation of research questions and study design, to data acquisition or collection, analysis, and interpretation and dissemination of results. Our team, directed by Dr. Jodi Lapidus, includes biostatistics faculty members as well as PhD- and masters-level staff members who have expertise in a wide variety of statistical methods and experience in a wide range of content areas in the health sciences.

The BDP offers one internship position to a current student in the biostatistics program each academic year. Students interested in learning more about the internship position or in BDP's work are welcome to reach out to Dr. Amy Laird, Research Project Manager for the BDP (laird@ohsu.edu).

Knight Cancer Institute Cancer Data Science Shared Resource (CDSSR)

The Knight Cancer Institute Cancer Data Science Shared Resource (CDSSR) is supported by the National Cancer Institute's Cancer Center Support Grant. The CDSSR strives to enhance the quality, rigor, and reproducibility of cancer research by providing expert consultation and collaborative support to Knight Cancer Investigators during all phases of the research life-cycle. The primary aim of the CDSSR is to deliver comprehensive and integrated quantitative expertise spanning biostatistics, bioinformatics, computational biology, and machine learning to support basic, clinical, translational, and population science researchers conducting cancer research across OHSU. The CDSSR also provides students with opportunities to work on ongoing cancer research projects. Students should contact the CDSSR Directors, Dr. Jessica Minnier and Dr. Lisa Karstens, for opportunities for research experience.

Graduate Student Resources, Policies, and Procedures

[Academic resources](#) and [student support services](#) available to SPH graduate students are listed on the SPH website, www.ohsu-psu-sph.org. Please review the resources listed there.

[Policies and procedures](#) applicable to all School of Public Health graduate students can be found on the SPH website at <https://ohsu-psu-sph.org/graduate-students-policies-and-procedures/>. Please review the student policies and procedures listed there, including but not limited to the following sections:

- ☐ Advising
- ☐ Academic Standing
- ☐ Academic Dismissal
- ☐ Academic Dishonesty
- ☐ Codes of Conduct
- ☐ Educational Records Privacy
- ☐ Minimum Course Grade Requirements
- ☐ Recognition of Prior Earned Credit
- ☐ Course Waiver Policy
- ☐ Incomplete Coursework
- ☐ Course Approvals (Electives)
- ☐ Independent Study
- ☐ International Travel and Coursework



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- ☐ Continuous Enrollment
- ☐ Leave of Absence
- ☐ Withdrawal Policy
- ☐ Time Limits
- ☐ Grievance Resolution
- ☐ Degree and Certificate Conferral