Biostatistics Graduate Handbook Academic Year 2026-2027

Herbert Wertheim School of Public Health and Human Longevity Sciences at University of California San Diego

Foreword

The Biostatistics programs at the University of California San Diego are interdisciplinary programs housed within the Herbert Wertheim School of Public Health and Longevity Sciences. We aim to train the next generation of biostatisticians in the computational skills, theory and biostatistical methods and applications needed to analyze complex biomedical data. Our degree programs are distinguished by their comprehensive and didactic curriculum which allows for rigorous training in statistical computing and reproducible research practices, exposure to different domains of application in biomedical or public health sciences, ethics, and experiential learning. Our academic programs address both the challenges and opportunities facing public health professionals today and allow for mentorship related to communication, scientific writing, and interdisciplinary collaboration.

Our faculty and students work together on a wide range of research topics. Our focus areas include: clinical trials; observational studies; public health; epidemiological and medical statistics; and drug, device and biomarker development. Nearby government agencies, hospitals and pharmaceutical companies enrich the research environment found at UC San Diego, with many of our students participating in internship opportunities locally.

This handbook details the opportunities, requirements and expectations for graduate level studies with the Biostatistics programs at UC San Diego. In addition to the rules set forth in this handbook, all students are also held to the provisions required by the Division of Graduate Education and Postdoctoral Affairs (GEPA) at UC San Diego. These rules and provisions can be found on the Division of Graduate Education and Postdoctoral Affairs website.

Notable Changes for Academic Year 2026-2027

- Master of Science in Biostatistics program common requirements
- Master of Science in Biostatistics program required courses
- Master of Science in Biostatistics program elective courses
- Master of Science in Biostatistics sample program of study
- Independent study and MS Research policies
- TEA

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1. Overview

1.1 Key Contacts

The graduate advisors are students' first point of contact regarding questions and concerns, as they are most familiar with the policies and procedures at the programmatic, school and university level. Graduate advisors facilitate administrative processes and work with students, faculty and other staff to ensure smooth operation of the graduate programs. Graduate advisors assist with enrollment requests, petitions, tracking degree progress and guiding students towards resources on campus.

Education Programs and Student Affairs Manager

- **Carrie Goldsmith-Mercer,** cgoldsmith@health.ucsd.edu
    - The Education Programs and Student Affairs Manager supervises the advising team and directs the graduate program in partnership with the advisors and faculty program directors.

Graduate Program Advising Team

- **Stella Tripp:** Doctor of Philosophy in Biostatistics, sctripp@health.ucsd.edu
- **Abbie Morton:** Master of Science in Biostatistics, abmorton@health.ucsd.edu
- **General email:** biostatistics@ucsd.edu

Faculty Program Directors

- **Florin Vaida, PhD, professor:** Doctor of Philosophy in Biostatistics, fvaida@health.ucsd.edu
- **Lin Liu, PhD, professor:** Master of Science in Biostatistics, l2liu@health.ucsd.edu

1.2 Academic Integrity

The Teaching Division of Biostatistics at UC San Diego is committed to upholding standards of academic integrity set forth by UC San Diego's Academic Senate. It is an expectation that our students pursuing both masters and doctoral degrees act in an honest, responsible, fair and trustworthy manner when participating in scholarly activity, as a way to uphold academic integrity within the programs and broader community. You can find the UC San Diego Academic Integrity Policy and procedures for resolving alleged violations of the policy outlined on the Academic Senate Office Website.

1.3 Staff and Faculty Advising Standards, Student Responsibilities

The biostatistics programs align advising standards and mentorship expectations with NACADA (the global community for academic advising), which emphasizes caring, commitment, empowerment, inclusivity, integrity, professionalism, and respect. We expect our students, faculty, and staff to align with these core values when participating as mentors and mentees within the programs.

1.3.1 MS Staff and Faculty Advising Standards

Master of Science in Biostatistics students are assigned an academic advisor (faculty) and a graduate coordinator (staff). Both are responsible for guiding master's students from program entry to degree conferral. Faculty are meant to be an ongoing academic resource, ensuring students receive answers to questions related to research, course/academic content, and career advising. Staff are meant to be an ongoing administrative resource, ensuring students receive answers to questions related to degree progress and audits, and program and campus wide policies. Staff will also provide general resources to students throughout their graduate career.

1.3.2 Doctor of Philosophy Staff and Faculty Advising Standards

Doctor of Philosophy in Biostatistics students are assigned an academic advisor (faculty) and a graduate coordinator (staff). They will also maintain a dissertation advisor (faculty). All three are responsible for guiding doctoral students from program entry to degree conferral. While the program assigns both the academic advisor and the graduate coordinator, the doctoral student is responsible for obtaining a dissertation advisor prior to advancement to candidacy for the doctoral degree; determined by the evolution of their research and relationships within the program while working towards degree completion. Faculty are meant to be an ongoing academic resource, ensuring students receive answers to questions related to research, course/academic content, forming their dissertation committee, dissertation preparation and career advising. They

will also assist with Individual Development Plans (IDP) and annual evaluations. Staff are meant to be an ongoing administrative resource, ensuring students receive answers to questions related to degree progress, and program and campus wide policies. Staff will also provide general resources to students throughout their graduate career and assist with funding and employment opportunities.

1.3.3 Student Responsibilities

All students, regardless of program, are expected to make regular contact with their faculty advisor(s) and graduate coordinator each quarter. It is the students' responsibility to clarify their educational, personal, and professional goals and also share them with their advisors/coordinators as needed. By joining the program, students agree to assume responsibility for their decisions, achievements, and overall academic success. While students are responsible for tracking their own degree progress by reviewing transcripts and running preliminary degree audits as needed, they are encouraged to contact their advisors for questions related to biostatistical preparation and graduate coordinators with questions related to degree requirements and administrative processes.

2. Master of Science Biostatistics

2.1 Common Requirements for all MS Degrees

The Master of Science in Biostatistics program requires the completion of at least sixty units of course work. Graduate students must register for a minimum of twelve units per quarter. These twelve units can be made up of a combination of required course work as described below, additional elective course work, if any, and special study courses (PHB 291. PHB 293., and PHB 298.). In special cases, students with an appropriate background may waive specific courses, with permission of the program director, as long as the sixty-unit minimum for the program is met. A typical student is expected to take sixty to seventy-two units of course work during the program. All student courses, as well as any changes throughout the quarter, must be approved by a faculty advisor or your Graduate Coordinator prior to registering for classes each quarter.

2.1.1 Normative Time to Degree

The normative time for the Master of Science in Biostatistics is two years (six quarters); the total time limit is 3 years (nine quarters).

2.1.2 Required Courses (sixty units)

Required Core Biostatistics Core Courses (thirty-six units):
**all courses from the following list are required*

- PHB 221. Biostatistical Methods I (four units)
- PHB 222. Biostatistical Methods II (four units)
- PHB 223. Analysis of Longitudinal Data (four units)
- PHB 243A. Practicum in Biostatistics (four units) *or* PHB 293. Masters' Research in Biostatistics (four units)
- PHB 243B. Practicum in Biostatistics (four units) *or* PHB 293. Masters' Research in Biostatistics (four units)
- PHB 244A. Foundations in Biostatistics (four units)
- PHB 244B. Foundations in Biostatistics (four units)
- PHB 244C. Foundations in Biostatistics (four units)
- PHB 280. Biostatistics Journal Club (four quarters, one unit each)

Required Advanced Biostatistics Courses (sixteen units)
**Choose sixteen units from the following list*

- PHB 224. Biostatistical Methods in Clinical Trials (four units)
- PHB 225. Topics in Non- and Semi-Parametric Statistics and Functional Data (four units)
- PHB 226. Statistical Methods for Observational Studies (four units)
- PHB 227. Statistical Learning and Multivariate Analysis (four units)
- PHB 228. Statistical Computing (four units)
- PHB 242. Advanced Topics in Biostatistics (four units)
- PHB 245. Statistical Leadership and Drug Development (two units)
- PHB 248. Applied Survival Analysis (four units)
- PHB 281. Biostatistics Seminar (one unit)

We note that most of the biostatistics required courses carry a data analysis component. Students will be exposed to projects involving advanced data analyses to address complex life sciences problems. In particular, the Practicum in Biostatistics requirement (PHB. 243A or PHB. 293, and PHB. 243B or PHB. 293) exposes students to real-life biostatistical projects, including analyses, preparation of analysis reports, and presentation of the results. All courses except PHB 280 and PHB 281 are letter grade only.

Required Life Sciences (eight units):

Life Sciences Courses refer to four units at the upper-division or the graduate level in biomedical sciences, neurosciences, epidemiology, public health, biology, systems biology, bioengineering, or medicine, for a letter grade if possible.

- PH 200. Foundations in Public Health (four units)
- Life Sciences course (four units)

We have compiled a list of preapproved life sciences courses for students to choose from for the Life Sciences course they take in addition to PH 200. If a student wishes to request a life sciences course outside of those preapproved, they are required to submit a BMP Elective Approval Request Form and indicate they would like the course to be considered for a Life Sciences exception. Exceptions are not guaranteed.

2.1.3 Elective Courses (no minimum requirement)

- **Biostatistics and Statistical Methods Electives:**
  - MATH 280A-B-C. Probability Theory (four units each)
  - MATH 281A-B-C. Statistical Inference (four units each)
  - MATH 282A-B. Applied Statistics (four units each)
  - Any core biostatistics courses listed above, in excess of those required
- **Life Sciences Electives:**
  Any course at the upper-division undergraduate or the graduate level in biomedical sciences, neurosciences, epidemiology, public health, biology, systems biology, bioengineering, or medicine, for a letter grade if possible, in addition to the required life sciences course.
- **Other Elective Courses:**
  In addition to the courses listed above, students may take other elective courses. These include PHB 298 (an independent studies course), and any course at the upper-division (e.g., remedial courses) or graduate level in biostatistics, mathematics, computer science, life sciences as listed above, or related areas.

2.2 Master's Comprehensive Examination

A comprehensive final examination, called the master's examination, will be given at least at the end of each spring quarter. Two failures to pass the master's examination will result in a recommendation to the dean of Graduate Studies for disqualification of the student in the Master of Science in Biostatistics program. The master's examination is developed and scored by the Teaching Division of Biostatistics and Bioinformatics within the Herbert Wertheim School

of Public Health. The chair of the biostatistics graduate program committee will appoint an exam committee that will be responsible for preparing, administering, and grading the examination. The exam committee will forward its recommendation to the chair of the graduate program committee, which will be the final arbiter of pass or fail.

2.3 Sample Program of Study

The following sample program of study is divided by year and focus. Our program offers a general program of study suggestion, along with a theoretical program of study suggestion for those who are interested in pursuing doctoral studies following the completion of their Masters degree. The differentiation occurs in year 2 only.

2.3.1 Sample Program of Study Year 1

Fall Year 1	Winter Year 1	Spring Year 1
• **PHB 221** Biostat. Methods 1 • **PHB 244A** Foundations in Biostatistics • **PH 200** Foundations in Public Health • **PHB 280** Biostat. Journal Club **(1 unit)** • **PHB 281** Biostat. Seminar **(1 unit)** (encouraged)	• **PHB 222** Biostat. Methods 2 • **PHB 244B** Foundations in Biostatistics • **PHB 248** Applied Survival Analysis • **PHB 280** Biostat. Journal Club **(1 unit)** • **PHB 281** Biostat. Seminar **(1 unit)**	• **PHB 223** Longitudinal Data Analysis • **PHB 244C** Foundations in Biostatistics • **PHB 228** Statistical Computing • **PHB 281** Biostat. Seminar **(1 unit)**

2.3.2 Sample Program of Study Year 2 General Focus

Fall Year 2	Winter Year 2	Spring Year 2
• **PHB 243A** Practicum in Biostatistics • **PHB 224** Clinical Trials • **PHB 227** Stat. Learning and Multivariate Analysis • **PHB 280** Biostat. Journal Club **(1 unit)**	• **PHB 243B** Practicum in Biostatistics • **PHB 226** Stat. Methods for Observational Studies • **PHB 245** Statistical Leadership • **PHB 280** Biostat. Journal Club **(1 unit)** • **PHB 281** Biostat. Seminar **(1 unit)**	• **Life Science Elective** • **PHB 293** MS Research • **Elective**

2.3.3 Sample Program of Study Year 2 Theoretical Focus

Fall Year 2	Winter Year 2	Spring Year 2
• **PHB 227** Stat. learning and multivariate analysis • **MATH 281A** Mathematical Statistics • **MATH 282A** Applied Stat. I • **PHB 280** Biostat. Journal Club **(1 unit)**	• **PHB 243B** Practicum in Biostatistics • **PHB 226** Stat. Methods for Observational Studies • **MATH 281B** Mathematical Statistics *or* **MATH 282B** Applied Statistics II • **PHB 280** Biostat. Journal Club **(1 unit)**	• **Life Sciences Elective** • **PHB 293** MS Research • **MATH 281C** Mathematical Statistics *or* **Elective**

3. Doctor of Philosophy Biostatistics

3.1 Common Requirements for all PhD Degrees

The Doctor of Philosophy in Biostatistics is an interdepartmental program housed within the Herbert Wertheim School of Public Health, and in partnership with the main campus Department of Mathematics. The core courses are biostatistics offerings from the Teaching Division of Biostatistics and Bioinformatics, and statistics offerings within the Department of Mathematics.

Program years one and two include theoretical and applied classroom work in the core mathematical statistics and biostatistics courses, with additional electives in mathematics and/or computer science. The core courses incorporate classroom projects in theory and data analysis pertinent to biomedical data and introduce literate programming and reproducible research practices. Year two requires a set of biostatistics rotations under the tutorship of a faculty mentor, using example data drawn from collaborative projects in biomedical or public health sciences, each with required oral, written and web-based presentations. The student will select, by the end of year two, a primary advisor from among participating program faculty. Additional training in the biomedical area of application will occur in years three and four. Throughout, the student will participate in presentations and discussions in a seminar series and journal club.

The doctoral thesis, completed in years three to four and potentially five, will contain an original contribution of quality that would be acceptable for publication in the biostatistics literature, which extends the theory or methodology of biostatistics, or extends biostatistical methods to solve a critical problem in applied disciplines. A terminal master's degree in biostatistical sciences is offered for students who fail to complete the program in a timely fashion. Students are eligible to obtain the master's degree under Plan II (Comprehensive Examination) if they pass the PhD written qualifying exam at the MS level and obtained forty-eight units of core courses (including MATH 281A-B-C and PHB 221–223) with a passing grade.

Doctor of Philosophy in Biostatistics students are required to obtain sixty-four units of course work from the following courses. Full-time graduate students must register for a minimum of twelve units per quarter. These twelve units can be made up of a combination of required course work as described below, additional elective course work if any, and special study courses (PHB 241). All student course programs, as well as any changes throughout the quarter, must be approved by a faculty advisor and/or the graduate program coordinator prior to registering for classes each quarter.

3.1.1 Normative Time to Degree

The normative time for the Doctor of Philosophy in Biostatistics is five years; a student must have advanced to candidacy by the end of 11 quarters. A student is eligible for support for a maximum of five years.

Maximum registered time to complete all PhD requirements: six years.

3.1.2 Required Courses (sixty-four units)

Required (Core) Courses in the Department of Mathematics (24 units)

- MATH 281A-B-C. (Mathematical Statistics I-II (four units each)
- MATH 282A-B. (Linear Models (four units each)
- MATH 284. (Lifetime Data Analysis (four units)

Required (Core) Courses in Biostatistics (29 units) each of:

- PHB 221. Biostatistical Methods I (four units)
- PHB 222. Biostatistical Methods II (four units)
- PHB 223. Analysis of Longitudinal Data (four units)
- PHB 241. Biostatistics Rotation (two quarters, three units each)
- PHB 280. Biostatistics Journal Club (three quarters, one unit each)
- Two among the following courses:
  - PHB 224. Biostatistical Methods in Clinical Trials (four units)
  - PHB 225. Topics in Non- and Semi-Parametric Statistics and Functional Data (four units)
  - PHB 226. Statistical Methods for Observational Studies (four units)
  - PHB 227. Statistical Learning and Multivariate Analysis (four units)

We note that all of the biostatistics core courses except PHB 280 carry a data analysis component. Students will be exposed to projects involving advanced data analyses to address complex life sciences problems. All courses except PHB 280 and PHB 241 are letter grade only.

Required Life Sciences (eight units)

Two courses at the upper division or the graduate level in biomedical sciences, neurosciences, epidemiology, public health, biology, systems biology, bioengineering or medicine, letter grade if possible. Selection of all life sciences courses should be made in consultation with the dissertation advisor.

Required Elective Courses (three units)

Students are required to take at least three additional units of elective courses for letter grade from the following list.

- Biostatistics Elective Courses
  PHB 242. Advanced Topics in Biostatistics (three units). This course is taught in rotation by faculty in the Teaching Division of Biostatistics and Bioinformatics, and the curriculum will vary. Among the topics are:
    - Random field theory and applications in image analysis
    - Advanced statistical computing
    - Bayesian methods
    - Statistical collaboration in health sciences
- Statistical Methods Electives:
    - MATH 280A-B-C. Probability Theory (four units)
    - MATH 287B. Multivariate Analysis (four units)
    - MATH 287D. Statistical Learning (four units)
    - MATH 287A, C. Time Series Analysis (four units each)
    - MATH 202A. Applied Algebra I (four units)
    - MATH 240A-B-C. Real Analysis (four units)
    - MATH 271A-B-C. Numerical Optimization (four units)
    - MATH 285. Stochastic Processes (four units)
- Computer Science Electives:
    - CSE 202. Algorithm Design and Analysis (four units)
    - ECE 273. Convex Optimization (four units)
    - CSE 250B. Learning Algorithms (four units)
    - CSE 255. Data Mining and Predictive Analytics (four units)
    - CSE 260. Parallel Computation (four units)
    - CSE 283. Genomics, Proteomics, Systems Biology (four units)

3.1.3 Biostatistics Rotations (PHB 241)

The biostatistics rotations are a singular feature of this doctoral program that takes advantage of the extensive involvement of the program faculty in collaborative and interdisciplinary work within the life sciences. Students will complete at least two and up to five quarter-length rotations before advancing to candidacy, each in the form of an interdisciplinary applied data analysis project. They may work in collaboration with any UC San Diego faculty researcher who conducts studies or experiments that generate data in the medical, biological, public health, or pharmacologic sciences, and who will serve as a subject area mentor, under the primary mentorship of any biostatistics or statistics member of the interdepartmental program. Each practicum will last a minimum of ten weeks and will involve the analysis of original data. The student will

prepare or substantially contribute to a project report, which will be reviewed and signed off on by the mentor. The rotation may be conducted as part of employment as a graduate student researcher or as part of the dissertation research. A report based on an internship of at least ten weeks duration at a facility, government health office, institute, or company outside of UC San Diego focusing on biological or medical research can also be used to satisfy this requirement.

3.2 Qualifying Examinations

3.2.1 Preliminary Written Examination

The Doctor of Philosophy Written Qualifying Examination has two parts: A statistical theory part, developed and scored by the Statistics Group within the Math Department; and a biostatistics part, developed and scored by the Teaching Division of Biostatistics and Bioinformatics. The exam committees in charge may be different for each part of the exam. Whether or not students pass or fail is determined separately by the exam committees for the Statistical Theory part and the Biostatistics part of the exam. The student must pass both QEs at the PhD-provisional pass level or higher, with one QE receiving a pass grade. Each exam committee will forward its recommendation to the chair of the Graduate Program Committee, which will be the final arbiter of pass or fail.

The doctoral written qualifying examination will be given at the end of each spring quarter and also at the beginning of each fall quarter. Students in the doctoral program must attempt the exam in the spring quarter immediately after they complete both the Math 281ABC and PHB 221-223 core course series. A well-prepared student will take these exams during the first year of the program. Otherwise, they are expected to take the exams during the second year of the program. Students must pass both QEs by the end of the second year in the program. At least one of the exams must be completed with a provisional doctoral pass or better by the end of the first year. Failure to meet the passing requirements (i.e., doctoral-provisional pass or better on both QEs with at least one PhD-level pass by the end of the second year) on the QEs, may result in a recommendation to the Dean of Graduate Studies for disqualification of the student in the doctoral program and dismissal from the University.

3.2.2 Scientific Research Examination

Students in the doctoral program must also pass a Scientific Research Examination. This consists of a seminar presentation of a statistical application in a particular area of life sciences. The presentation will be evaluated by an ad-hoc committee of three faculty members, including at least one outside (non-statistician) member with expertise in the area of application. The exam is taken pass/fail. The student is allowed two attempts at taking this exam. The student should pass this requirement prior to the end of the third year of study. The presentation will be evaluated on the students' demonstration of a sufficient understanding of the area of application, and on the relevance of the statistical approach to this area.

3.2.3 Advancement to Candidacy

It is expected that by the end of the third year (9 quarters), students should have a field of research chosen and a faculty member willing to direct and guide them. A student will advance to candidacy after successfully passing the oral qualifying examination, which deals primarily with the area of research proposed. The student will also have successfully completed at least 64 units of required and elective courses within the Program. More information on the process can be found in our document on Advancing to Candidacy.

Exams taken before receiving committee membership approval from GEPA may be deemed null and void. Students must be registered during the quarters in which they take any portion of their QE. To be eligible for the QE, the student must have:

- A "B" average in all work done in graduate standing;
- Satisfied all departmental or group requirements; and
- Removed all academic deficiencies

The preparation for the exam will be done by working closely with a faculty mentor (independent study) who is a regular member of the interdepartmental Program in Biostatistics. The exam committee consists of the Doctoral Committee. The PhD Qualifying Examination examines a student on the breadth and depth of knowledge expected from the coursework taken, and a special research topic approved by the committee. The primary purpose of the QE is to validate that the student is academically qualified to conceptualize a research topic, undertake scholarly research and clearly communicate its results, and successfully produce the dissertation required for a

doctoral degree. A thirty minute presentation given by the student is followed by a question period that covers the special research topic as well as coursework in general.

The Division of Graduate Education and Postdoctoral Affairs guidelines for doctoral Qualifying Examinations apply and may be viewed onthe Advancing to Candidacy webpage. A student who passes the PhD QE is eligible for Advancement to Candidacy for the PhD degree. Title and abstract of the PhD QE presentation will be distributed to all faculty and students of the participating departments in the Program in Biostatistics, who are invited to attend the presentation portion of the examination. The subsequent question period is a closed session between the student and the committee. The student must file the appropriate paperwork with the Office of Graduate Studies (assisted by the Graduate Coordinator) and pay the candidacy fee to be promoted to Candidacy for the doctoral degree. The candidacy fee will post to the student's bill and is the student's responsibility to pay.

Qualifying Exam: Outcomes. A committee, having reached a unanimous decision, shall inform the student of its decision as “Pass” (no conditions may be appended to this decision), “Not Pass” (the Chair’s report should specify whether the student is required to retake all or part of the exam, list any additional requirements, and state the exact timeline for completion of requirements to achieve a “Pass”) or “Fail”. If a unanimous decision takes the form of “Not Pass” or “Fail”, the Chair of the QE committee must include in its report a specific statement, agreed to by all members of the committee, explaining its decision and must inform the student of its decision. Having received a “Not Pass” or “Fail”, the student may attempt the QE one additional time. After a second exam, a vote of “Not Pass” is unacceptable; only “Pass” or “Fail” is recognized. Only one retake of the QE is allowed. A student who fails the QE on the second attempt will be recommended to the Dean of Graduate Studies for disqualification from the doctoral program.

3.3 Doctoral Dissertation

The doctoral dissertation is an essential part of the doctoral program. A topic will be selected by the student, under the advice and guidance of a dissertation advisor and a dissertation committee chaired by the dissertation advisor. The committee is composed of at least four members with UC San Diego faculty appointments; at least 1 member must have a primary appointment in a different department than your chair's primary department; at least two members must be from Biostatistics. Students are encouraged to begin some research activity as early as possible during the second year of their graduate studies, and to use the Biostatistics Rotation to assess potential dissertation advisors. The dissertation must contain an original contribution of quality that would be acceptable for publication in the biostatistics literature

that extends the theory or methodology of biostatistics, or extends biostatistical methods to solve a critical problem in applied disciplines. More details on writing your dissertation.

3.4 Final Examination (Dissertation Defense)

The entire dissertation committee will conduct a final oral examination, which will deal primarily with questions arising out of the relationship of the dissertation to the field of Biostatistics. The final examination will be conducted in two parts. The first part consists of a one-hour presentation by the candidate followed by a brief period of questions pertaining to the presentation; this part of the examination is open to the public. The second part of the examination will immediately follow the first part; this is a closed session between the student and the committee and will consist of a period of questioning by the committee members. Title and abstract of the oral presentation will be distributed to all faculty and students of departments that participate in the Biostatistics.

3.5 Sample Program of Study

The following sample program of study is divided by year.

3.5.1 Sample Program of Study Year 1

Fall Year 1	Winter Year 1	Spring Year 1
• **MATH 281A** Mathematical Statistics • **MATH 282A** Applied Statistics I • **PHB 221** Biostat. Methods I • **PH 200** Foundations in Public Health • **PHB 280** Biostat. Journal Club **(1 unit)**	• **MATH 281B** Mathematical Statistics • **MATH 282B** Applied Statistics II • **PHB 222** Biostat. Methods II • **PHB 280** Biostat. Journal Club **(1 unit)** • **PHB 281** Biostat. Seminar **(1 unit)**	• **MATH 281C** Mathematical Statistics • **MATH 284** Survival Analysis • **PHB 223** Longitudinal Data

3.5.2 Sample Program of Study Year 2

Fall Year 2	Winter Year 2	Spring Year 2
• **PHB 241** Biostat. Rotations **(3 units)** • **Life Science Elective** • **PHB 280** Biostat. Journal Club **(1 unit)** • **PHB 281** Biostat. Seminar Series (1 unit) • **PHB 224** Biostat. Methods in Clinical Trials *or* **PHB 227** Statistical Learning and Multivariate Analysis	• **PHB 241** Biostat. Rotations **(3 units)** • **PHB 226** Stat. Methods for Observational Studies • **Quantitative Elective** • **PHB 280** Biostat. Journal Club **(1 unit)** • **PHB 281** Biostat. Seminar **(1 unit)**	• **PHB 241** Biostat. Rotations **(3 units)** • **PHB 225** Topics in Non- and Semi-Parametric Statistics and Functional Data • **Life Science Elective**

3.5.3 Sample Program of Study Year 3

Fall Year 3	Winter Year 3	Spring Year 3
• **PHB 298** Special Topics in Public Health **(12 units)** • **PHB 290** Seminar/JC **(1 unit)**	• **PHB 298** Special Topics in Public Health **(12 units)** • **PHB 290** Seminar/JC **(1 unit)**	• **PHB 298** Special Topics in Public Health **(12 units)**

3.5.4 Sample Program of Study Year 4

Fall Year 4	Winter Year 4	Spring Year 4
• **PHB 299** Dissertation Research **(12 units)**	• **PHB 299** Dissertation Research **(12 units)**	• **PHB 299** Dissertation Research **(12 units)**

4. Graduate Student Support (Appointments for MS)

4.1 Overview

Master's students are not guaranteed centralized funding to pursue their graduate studies. However, students at the master's level are eligible for various employment opportunities across campus so long as they meet eligibility requirements, (i.e. maintain full-time registration, satisfactory progress towards the degree and good standing and be within support time limits). Employment-based financial support is also contingent upon maintaining eligibility for employment, such as valid work authorization, completion of relevant training, and compliance with the disclosure requirement based on California Senate Bill 791. These terms and conditions for financial support are subject to change if required by law or as a result of action by Federal and/or State governments or the Administration of the University of California San Diego and/or UC Regents.

4.2 Appointment Percentage

Master's students are eligible for employment in the form of Graduate Student Research (GSR) or Teaching Assistant (TA) position, at 50% effort (20 hrs./week). While employed in these positions, students will earn a salary, with their tuition and mandatory fees remitted as well, as a benefit of employment. Master's students are also eligible for hourly positions across campus. It is up to Master's students to seek out these employment opportunities on their own, as they are not guaranteed.

4.3 Benefits

The GSR and TA positions are represented by the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW), AFL-CIO Academic Student Employees Unit. As such, these positions offer benefits such as Leaves and Support for Student Parents.

4.4 Hiring Process

The hiring process for a GSR or TA position will vary slightly, however, both positions are arranged by the program supporting employment, with the Coordinator and Director playing a central role. For each position, an official offer will be made, which the student can accept or decline.

Students who are employed in a new position, will be contacted by Academic Resource Center (ARC) and they will assist in onboarding.

4.4.1 GSR

Occasionally, faculty will have GSR positions available to MS students upon request. Offers are made to students via the Instructional Assistant (IA) portal and students are contacted via email with an offer. Students must accept or decline the offer.

4.4.2 TA

The Herbert Wertheim School of Public Health employs Academic Student Employees (ASE) (Teaching Assistants (TAs), Readers and PLAs) during each quarter of the academic year. These positions are allocated based on course enrollment, and positions are filled on a quarterly basis through an application and selection process. ASE applications posts on our Academic Student Employees website. Graduate students will be notified via email when applications open.

Biostatistics master's students may also apply to TA positions in other departments on campus. Students may view opportunities at the GEPA employment opportunities page. Our master's students are often successful in obtaining positions within the Mathematics and Psychology departments.

5. Graduate Student Support (Appointments for PhD)

5.1 Overview

The student financial support package awarded to PhD candidates is contingent upon meeting the eligibility requirements throughout graduate studies. For example, students must maintain full-time registration, satisfactory progress towards the degree, and good standing and be within support time limits. Employment-based financial support is also contingent upon maintaining eligibility for employment, such as valid work authorization, completion of relevant training, and compliance with the disclosure requirement based on California Senate Bill 791. These terms and conditions for financial support are subject to change if required by law or as a result of action by Federal and/or State governments or the Administration of the University of California San Diego and/or UC Regents.

5.2 Appointment Percentage

During their first year in the program, students are guaranteed the financial support as noted in their admission offer. Typically, academic year financial support takes the form of employment in a Graduate Student Research (GSR) or Teaching Assistant (TA) position, at 50 percent effort (20 hrs./week). While employed in these positions, students will earn a salary, with their tuition

and mandatory fees remitted as well, as a benefit of employment. During the Summer quarter students are typically employed as a GSR at 50 percent effort.

The program intends to provide financial support at or above these levels for year 2-5 contingent on availability of funds and other specifications.

5.3 Benefits

The GSR and TA positions are represented by the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW), AFL-CIO Academic Student Employees Unit. As such, these positions offer benefits such as Leaves and Support for Student Parents.

5.4 Hiring Process

The hiring process for a GSR or TA position will vary slightly, however, both positions are arranged by the program, with the Coordinator and Director playing a central role. For each position, an official offer will be made, which the student can accept or decline. Each assignment/offer is made based on a variety of factors such as academic preparation and funding constraints, but we will always try to take into consideration the students' needs.

Students who are employed in a new position, will be contacted by Academic Resource Center (ARC) and they will assist in onboarding.

5.4.1 GSR

Doctoral program leadership works closely with Biostatistics and other faculty to identify their research needs and funding capabilities. Based on these criteria, offers are made to students via the Instructional Assistant (IA) portal and students are contacted via email with an offer. Students must accept or decline the offer, though - declining the offer will result in an abdication of employment/financial support for that quarter.

5.4.2 TA

The Herbert Wertheim School of Public Health employs Academic Student Employees (ASE) (Teaching Assistants (TAs), Readers and PLAs) during each quarter of the academic year. These positions are allocated based on course enrollment, and positions are filled on a quarterly basis through an application and selection process. ASE applications posts on our Academic Student Employees website. Graduate students will be notified via email when applications open.

Biostatistics doctoral students may also apply to TA positions in other departments on campus. Students may view opportunities at the GEPA employment opportunities page. Our doctoral students are often successful in obtaining positions within the Mathematics and Psychology departments.

6. Other Important Information

6.1 Biostatistics Course Offerings List 2026/2027

6.1.1 MS

Every Quarter:

- PHB 281 Biostatistics Seminar Series
- PHB 293 MS Research
    - *Noted as PHB 291 for Fall 2026 in the Schedule of Classes*
- PHB 298 Independent Study

Fall Quarter:

- PHB 221 Biostatistical Methods I
- PHB 224 Biostatistical Methods in Clinical Trials
- PHB 227 Statistical Learning and Multivariate Analysis
- PHB 243A Practicum in Biostatistics A
- PHB 244A Foundations in Biostatistics A
- PHB 280 Biostatistics Journal Club

Winter Quarter:

- PHB 222 Biostatistics Methods II
- PHB 226 Statistical Methods for Observational Studies
- PHB 243B Practicum in Biostatistics B
- PHB 244B Foundations in Biostatistics B
- PHB 245 Statistical Leadership
- PHB 280 Biostatistics Journal Club

Spring Quarter:

- PHB 223 Longitudinal Data Analysis
- PHB 228 Statistical Computing
- PHB 248 Applied Survival Analysis
- PHB 244C Foundations in Biostatistics C

6.1.2 PhD

Every Quarter:

- PHB 241 Biostatistics Rotation
- PHB 281 Biostatistics Seminar Series
- PHB 298 Independent Study
- PHB 299 Dissertation Research

Fall Quarter:

- PHB 221 Biostatistical Methods I
- PHB 224 Biostatistical Methods in Clinical Trials
- PHB 227 Statistical Learning and Multivariate Analysis
- PHB 280 Biostatistics Journal Club

Winter Quarter:

- PHB 222 Biostatistics Methods II
- PHB 226 Statistical Methods for Observational Studies
- PHB 245 Statistical Leadership
- PHB 280 Biostatistics Journal Club

Spring Quarter:

- PHB 223 Longitudinal Data Analysis
- PHB 228 Statistical Computing

6.2 Policy for MS Research (PHB 293)

MS Research (PHB 293) is considered to be applied research performed by graduate students in Biostatistics under the direction of a Biostatistics faculty member. Under supervision, the students will participate in real-life research projects stemming from the collaborations of the supervising faculty in the Teaching Division of Biostatistics. Exact subject matter to be arranged in individual cases. This course can be repeated for up to 12 units.

Notes:

- Faculty are not required to accept MS research students, but do so as their work load permits. MS Research is intended to support student interest in pursuing independent and/or group research with faculty inside the Teaching Division of Biostatistics. If a student wishes to perform an independent study with a faculty member outside of Biostatistics, they will enroll in PHB 298. See section 6.2 above.

- This course can be taken in place of the Practicum in Biostatistics PHB 243A/B, so long as PHB 293 is repeated for 8 units.
- The MS Research course number is PHB 293, and should be requested via DocuSign prior to the start of the quarter a student intends to pursue MS Research.
- MS Research must be taken for a letter grade option.
- One unit of MS Research should equate to about 33 hours of work over the course of the quarter.

6.3 Policy for Independent Study (PHB 298)

Independent Study (PHB 298) is considered to be self-directed learning of a topic of mutual interest with a faculty member, research affiliate of the UC system, or external party, with the approval and support from a Biostatistics faculty member. PHB 298 provides an opportunity to work on topics outside the standard curriculum of the degree program, allowing for more in depth exploration of a topic in a specialized area of study deemed important to research or professional growth by the student.

A student may propose an independent study at any time during their degree program. The study should help the student build knowledge and/or develop skills necessary for their degree or their future research. As the MS program no longer requires electives for degree completion, Independent Study courses will be taken entirely on a student's own accord and these credits typically do not apply towards general degree requirements.

Faculty may sign an independent study agreement if they agree with the following:

- The topic is worth investigating
- The student has sufficient background in the topic to be successful with the agreed upon deliverables
- The topic is not covered in sufficient depth in departmental courses
- They share enough interest in the topic to sustain the project

Notes:

- Faculty are not required to accept independent study students, but do so as their work load permits. Independent study is intended to support student interest in pursuing independent research with faculty outside of Biostatistics. If a student wishes to perform MS research with a Biostatistics faculty member, they will enroll in PHB 293. See section 6.3 below.
- The Independent Study course number is PHB 298, and should be requested via DocuSign prior to the start of the quarter a student intends to pursue Independent Study.

- One unit of Independent Study should equate to about 33 hours of work over the course of the quarter.
- Independent study courses do not formally count towards degree requirements. They are taken in addition to degree requirements as a way to enhance and support student learning.

6.4 TEA Requests

Biostatistics graduate students wanting to enroll in coursework with other programs on campus, to satisfy degree requirements (i.e. life sciences), will be required to submit a request via Triton Enrollment Authorization (TEA). TEA requests are approved by the program in which they are submitted, including Public Health programs outside of Biostatistics (i.e. MPH, HSRIS, & JDP) . Approve and deny decisions are based on several factors, including academic preparedness, relevance, class capacity, etc. Students are encouraged to submit TEA requests and include their reason for the request in the notes sections, as soon as enrollment windows open, to ensure a higher spot on course waitlists for the best chance of approval. Enrollment into outside courses *is not guaranteed*.

Submitting a TEA request is not the same as booking. Getting your request approved does not automatically enroll you in the course — students still need to book it themselves unless they are requesting PHB 298 or PHB 293, which Biostatistics will book on their behalf. Students can learn more about the Triton Enrollment Authorization (TEA) via Tritonlink.

6.5 Leave of Absence Procedures

Leave of Absences are granted on an individual basis by the request of the student and are granted at the discretion of the program, graduate students in biostatistics are eligible for a maximum 3 quarters leave of absence with granted approval. To be eligible, a student must complete at least one quarter of academic residence and be in good academic standing to be granted leave. To learn more about leave of absence, please visit the official GEPA website pertaining to Leave of Absence and contact your program advisor or coordinator.