Information for Prospective MS Students in Biostatistics

California State University, East Bay
Department of Statistics and Biostatistics, Hayward, CA 94542 USA
Phone: (510) 885-3435 • FAX: (510) 885-4714

FREQUENTLY ASKED QUESTIONS

In many cases more detailed answers can be found elsewhere in this brochure. (See section references.)

1. **How long does it take to finish the MS degree?**

2. **Do I have to start in Fall quarter?**

   take

   review

3. **How are job prospects for graduates?**

I. INTRODUCTION

The Department of Statistics and Biostatistics at Cal State East Bay (formerly Cal State Hayward) offers graduate study leading to the Master of Science in Biostatistics.

C. Ideal Environment

The Hayward campus of Cal State East Bay is located in the rolling foothills on the eastern shore of San Francisco Bay with magnificent views of the Bay Area. The climate is mainly dry from May through October, with rainy periods November through April. Temperatures are mild: freezing weather is rare, and usually only a few summer days exceed 90°F (32° C).

The Bay Area is a center of much cultural and statistical activity. Stanford University and the University of California, Berkeley and UC San Francisco are all within 40 miles of campus. The San Francisco Chapter of the American Statistical Association has a regular calendar of events. Also, companies in the biotechnology, pharmaceutical, computer, defense, and financial sectors participate in the statistical life of the Bay Area.

A modern computer laboratory, equipped with a wide range of statistical software, is available for Statistics classes and for student use outside of class. Important statistical software is licensed for student use off campus. Class sizes are relatively small, usually averaging 30-40 for the beginning courses in the program and often smaller for advanced graduate-level courses.

II. ADMISSION TO THE PROGRAM

Here is a step-by-step explanation of the admission process. This section explains some procedures *required* by the Department of Statistics and Biostatistics, but not included in the *Catalog*. They are intended to ensure that your application for admission receives the most prompt and favorable consideration possible.

Step A: Verify Course and Degree Requirements For Admission

The following information is provided so that you can assess whether you are eligible for admission to the Biostatistics MS Program. Admission is a two-stage process: (1) Admission to the University as a graduate student, and (2) Acceptance into the Biostatistics MS Program. The only way to know for sure whether you are qualified for admission is for the University and the Department to evaluate your transcripts, letters of recommendation, and other evidence listed below in Steps B and C. However, ***for applicants who meet the criteria below, the acceptance rate has been very high.*** Currently, there is no set maximum number of students admitted each year.

Departmental Calculus Requirement. The Department absolutely requires a back-

University Degree and GPA Requirements. University requirements for admission to graduate programs include the following:

- The University ordinarily requires a 4-year baccalaureate degree from an accredited institution.
- The University target specifies that work taken during your junior and senior years must average B (GPA 3.0) or better. In borderline cases, the Admissions Office sometimes requests an opinion from the Department of Statistics and Biostatistics based on grades in courses in mathematics, statistics, biology and other sciences, on performance in other graduate programs, or on other factors.

Additional Helpful Background. Students who have some of the following additional background may be at an advantage for admission to the program and for progress towards the degree after acceptance.

- Basic statistics and 3tance. at anoilirequca

1. APPLICATION FORM.

1. INFORMATION FROM YOUR APPLICATION. In this package, please include the following information: (1) your desired starting quarter, (2) your contact information (postal address, telephone, email address), (3) your academic history (institutions attended, dates, degrees), and (4) a list of your references. You can give us a copy of your web application or type this information on one page.

2. UNOFFICIAL COPIES OF TRANSCRIPTS. In this package, please send original or readable photocopies of transcripts. (This is *in addition* to the official transcripts you order sent to the Admissions Office.)

Some universities make it possible for you to access your courses and grades online; a clear printout of such an online list is acceptable provided it is accurate and up to date.

If a transcript from an institution you attended does not show your grade point average (GPA) in the US system (A = 4.0, B = 3.0, and so on), then provide this GPA information anucb23(id 2llnimd T(s).1437 TDs 4i.0153 TD0.b23(i5 Tw[(GPA) 1d grades o)4.2(a)-ne an)arat)4.3y2(pl)4.047s 4ius

relevant academic letters of recommendation, then please take the general GRE and have the scores sent to the Department (see below). Usually, *recent* means within five years, *informative* means providing assessments beyond what is obvious from a transcript, *relevant* means based on performance related to statistics or mathematics, and *academic* means based on coursework at a university.

6. GRADUATE RECORD EXAM (GRE) SCORES. We do not require GRE scores of all applicants. However, ***in any of the following circumstances, we ordinarily require scores for the General GRE*** (Verbal, Quantitative, Writing):

- If you cannot supply at least two academic letters of recommendation as explained in Section 5 above.
- If your average GPA in *any* of the following categories is below B (3.0): (a) All of your undergraduate work, (b) All of our courses in the mathematical sciences (including statistics and computer science) at the undergraduate level, (c) All of your post-baccalaureate work at any one institution.
- If you intend to pursue PhD work after earning your MS degree.

In evaluating you for admission to the Biostatistics MS Program, the Department will consider GRE scores along with your previous grades, letters of recommendation, and statement of purpose. In addition to providing important information for admission, GRE scores can be useful for advising students once they are admitted to the program. Also, ***a score of 4.5 or better on the writing part of the General GRE satisfies the University Writing Skills Requirement*** (see part III-A below).

Last-minute GRE? If GRE scores are available at the time you submit your packet to the Department, include a photocopy of the GRE report in your packet, and have your official scores sent to the University separately (Institution Code 4011). But ***do not delay your application waiting for GRE scores.*** If scores are not available when you send your packet, please have official scores sent to the University as soon as they are available. (Usually, upon finishing the GRE, you are given estimated scores. Please report these unofficial estimated scores to the Department Office, in terms of both points and "percent below," and let us know approximately when to expect official scores.)

III. DEGREE REQUIREMENTS

Here we give brief, informal summaries of the degree requirements. **For official information on specific requirements, consult the University *Catalog*.** (In the online *Catalog* for the academic year of your admission, or most recent re-admission, to the program, select > .)

Requirement A: University Writing Skills Requirement (UWSR)

The Writing Skills Requirement is intended to make sure students can express themselves effectively in written English both during their degree work and after graduation. It is satisfied by taking the Writing Skills Test (WST) administered by the University ***during the first quarter of residence in the program*** and, if necessary, by taking one or two designated English composition courses. In order to continue in the program, you must complete this requirement, and your status in the program will be "unclassified" until you do so. (See the *Catalog* for more information on the UWSR as it applies to graduate students.)

Sufficiently high scores on certain standardized tests may be used in place of the WST. See www.testing.csueastbay.edu/uwsr/uwsrexempt.php for information.

If you have already satisfied the Writing Skills Requirement as a graduate or undergraduate student at *any* California State University, you need not do so again.

Requirement B: Unit and Grade Requirements

The *minimal* unit and grade requirements are as follows:

- The Biostatistics MS Program consists of at least 48 quarter units of approved upper-division and graduate work. At least 44 of these units must be approved graduate (6000 level) courses.
- All work applied toward the 48 units must be at an average grade of B (3.0) or higher, and no *required* graduate-level course may be at a grade below B− (2.7).

However, depending on mathematics and statistics background before entry into the program and career objectives upon graduation from the program, many students will need or want to take more than 48 units to finish the program.

Some possible topics of these substitute or additional courses include: stochastic processes, multivariate analysis, time series analysis, Bayesian statistics, co-operative education, and occasionally-offered courses on special topics in graduate biostatistics, statistics, or probability.

In addition, it is strongly recommended that students who plan to apply for doctoral studies in statistics, biostatistics, or public health take mathematics beyond the requirements for the MS in Biostatistics, including courses in analysis and linear algebra.

Requirement D: Comprehensive Examination

The MS Comprehensive Exam tests for general knowledge of the fields of statistics and probability and an understanding of methods of application to "real world" situations—including the use of statistical software such as Minitab, SAS and R. General information about the courses and material covered is provided in advance of each offering of the MS Comprehensive Exam. In order to take this exam, students must be in good academic standing and no more than 12 units short of finishing their degree requirements.

IV. FINANCIAL AID

The *Catalog* describes various loans and scholarships that are administered by the University. You can obtain additional information from the Financial Aid Office. Within the Department, a few possibilities for limited financial support may be available for students who have proved their ability to do good work in the program.

Department Graduate Assistantships. The Department has a limited number of graduate assistantships (approximately $500 per quarter; grading for professors, etc.). Selected students who have already been in the program for at least one quarter are hired for these positions. The main selection criteria are quality of work in the program, suitability for the tasks required, and financial need. ***No teaching assistantships are available.***

Internships. In recent years, a few paid internships (course credit for on-the-job experience) have been available for advanced students. Usually, students make their own arrangements for internships in an area of personal interest, often with present or possible future employers.

Department Scholarships. Several scholarships (usually $500 or more) have been established through the generosity of alumni, faculty, staff, and friends of the Department. See www.sci.csueastbay.edu/statistics/scholarships.shtml for details.

International Students. For many years, the Department has welcomed students from countries around the world. But students who are neither citizens nor permanent residents of the US must provide evidence of financial sponsorship or of their ability to meet all tuition and living expenses from their own resources. (See II-B-4 above.)

V. FURTHER INFORMATION

If you have questions not answered here or in the university *Catalog*, you may contact the Department. (Please see the contact information at the beginning of this brochure.)

The Department Chair can be reached by email at eric.suess@csueastbay.edu. For the quickest, most relevant response, please begin the subject line of your email with `STAT-MS=Inquiry` and provide brief information about citizenship/ residency/ visa status and prior degrees/ dates/ GPA along with your questions.

VI. GRADUATE FACULTY

T. Lynn Eudey (PhD 1988, University of California, Berkeley). Biostatistics, experimental design, survey sampling, clinical trials. ***Graduate Advisor.***

Shenghua Kelly Fan (PhD 1999, University of Minnesota). Biostatistics, experimental design, Bayesian statistics, biostatistics, survey sampling.

Joshua Kerr (PhD 2006, University of California, Davis). Time series, computational statistics, Bayesian statistics.

Julia Norton (PhD 1977, Harvard University). Multivariate analysis, statistical computing**.**

Eric Suess (PhD 1998, University of California, Davis). Time series, Bayesian statistics, statistical computing, statistical consulting. ***Department Chair and Admissions Advisor.***

Bruce Trumbo (PhD 1964, University of Chicago). Probability theory, applied statistics, biostatistics, simulation, bibliography of statistics, statistical graphics, use of computers in statistics education. ***Graduate Coordinator.***

Mitchell Watnik (PhD 1996, University of California, Davis). Econometrics, statistical consulting, statistics education.

YanYan Zhou (PhD 1996, University of Maryland, Baltimore). Biostatistics, categorical data analysis, time series.