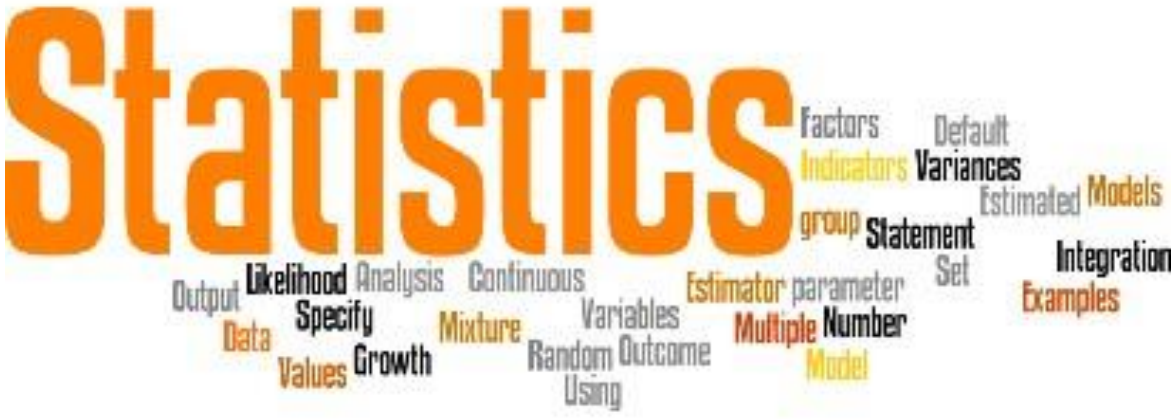
2024-2025

Data Analytics

Graduate Student Guidebook



Oregon State University

Data Analytics Ecampus Master's and Certificate Programs
2024-2025

Contents

Oregon State University
College of Science

A. INTRODUCTION

The purpose of this guidebook is to acquaint current and future students with the organization, policies, and procedures of the Data Analytics programs offered by the Department of Statistics at Oregon State University. All graduate programs at Oregon State University (OSU) fall under the authority of the Graduate School, and so students should be aware of all Graduate School policies and procedures as well. Additional material about the department, admissions, policies, and procedures can be found online.

- Statistics Department: stat.oregonstate.edu
- Ecampus: ecampus.oregonstate.edu/online-degrees/graduate/data-analytics/
- Graduate School: gradschool.oregonstate.edu/
- OSU Academic Catalog: catalog.oregonstate.edu/college-departments/science/statistics/

What is the Graduate School? The Graduate School at OSU assures quality and consistent interpretation of Graduate Council policies related to graduate education across all programs. The OSU Catalog is the official source for information regarding OSU graduate education policy and procedures. It is the student's responsibility to refer to the catalog for this information. The Graduate School supports students throughout the academic lifecycle, from admissions to degree completion. The Graduate School, and its campus partners, offer an array of professional development opportunities specific to the success of graduate students. Topics include research and ethics, teaching and facilitation, writing and communication, leadership and management, career skills, grad life and wellness. Please visit the Graduate School links to browse our student success offerings.

A.1 Fields of Study

The Department of Statistics offers online graduate programs leading to the Master of Science (MS) or Graduate Certificate in Data Analytics. The Graduate Certificate requires five core courses, which are a subset of the courses required for the MS degree.

The certificate and MS programs emphasize skills and knowledge in applied statistics. The MS program consists of 12 credits in computer science (programming, database, and machine learning) and 33 credits in applied statistics. Prior programming experience and calculus are not required.

The certificate coursework is a required 18-credit subset of the applied statistics coursework of the MS program.

Our master's program focuses on statistical methods used for big data. Students learn and use the programming languages Python, in the computer science courses, and R in the statistics courses.

A.2 Program Learning Objectives

The learning objectives for the Master's degree are:

1. Gain a thorough understanding of applied principles of statistics.
2. Demonstrate the ability to summarize a technical report and/or statistical analysis and interpret results; also, show the ability for broader implication of application in the statistical field.
3. Communicate statistical concepts clearly and professionally in oral form.
4. Demonstrate preparedness to provide guidance in statistical design and analysis.

A.3 Program Features

These cutting-edge programs in data analytics offered by Oregon State University's renowned College of Science and Department of Statistics through OSU's top-rated Ecampus, are designed for ambitious professionals who want to add more statistical or analytical skills to their repertoire and who are seeking advancement or a transition to a new functional area. The programs' key features are as follows.

Online Classroom

Our philosophy for designing online courses is to use OSU-supported technology to best deliver the content in the most flexible way while keeping the technology transparent to you. We use Canvas, a centralized platform where you can logon to your classroom. There you can get assignments, interact with faculty and peers, reply to message boards, and more.

Our courses are created in partnership with our faculty and our distance-education instructional designers to ensure a learning experience that is tailored to the subject matter and the expected learning outcomes. We approach the development of our online courses very seriously, so that they mirror the exact same quality content as you would expect on campus.

Courses are delivered in an asynchronous format that allows students to access them at their convenience during the day or evening. Online classes do have certain start and end dates that follow OSU's academic calendar (registrar.oregonstate.edu/osu-academic-calendar). While there may be time-sensitive assignments like homework, quizzes, midterms, finals or participation, students are not required to sign on at certain times in a day to watch live lectures.

Faculty Instruction

All statistics classes in our data analytics programs are developed and taught by full-time OSU faculty in OSU's Statistics Department. Our core computer science courses are taught by instructors in the College of Engineering at OSU.

Quarter System

OSU and the online program are on a quarter system. The Data Analytics curriculum begins in Fall term and is taught in Fall, Winter, and Spring terms (September-December; January-March; late March-mid June). Classes are 11 weeks long, including one week for finals. **Summer classes are not offered for this program**, except for the prerequisite course, ST 351.

Fall Quarter Admission

Newly admitted students must begin their programs in September because the foundational courses—ST 516, 517, and 518—must be taken in sequence during Fall, Winter, and Spring quarters.

Concurrent degree applicants (students who are already registered as graduate students at OSU) may apply for admission in Fall, Winter, or Spring. (More at B.2 Types of Admission.)

Time to Completion

The Master's program consists of 45 quarter credits (13 courses). It typically takes five academic quarters of full-time registration to complete. Full-time students take three classes (9 credits) per term and complete the program in approximately five terms or 15 academic months (1.5 years).

The Master's program can be taken part time, however students must remain continuously enrolled (except for summer term) once they begin the program. Part-time students take a minimum of one class (3 credits) per term and complete the program in approximately 15 terms or about 45 academic months (5 years). The maximum time allowed for completing the program is seven years.

The certificate program consists of 18 credits (5 courses) and takes five terms to complete. Students enrolled in a certificate program without concurrent enrollment in another graduate degree program are not subject to the continuous enrollment policy during the time allowed for certificate completion.

Each credit unit is equivalent to approximately three hours of study per week; therefore, a 4-credit course requires approximately 120 hours of study during the 10 weeks of instruction. The recommended course load for a first-year student who works full-time is 1-2 courses per term. Students for whom data analytics is a new field may want to consider a less than full-time course load.

OSU requires that MS students maintain a minimum registration of 3 credits per quarter during every quarter except summer session until they graduate, unless they are on a pre-approved leave of absence.

Transfer Credits

Upon completion of the first term of your program, you may petition the Data Analytics program and the Graduate School to transfer previously earned graduate-level credit to your program. Since the Data Analytics program consists of required coursework and electives, you should first discuss this with your advisor or the program director and receive their approval. In general, only courses that contain similar content to the courses in the Data Analytics program will be considered for transfer. You must submit a new or revised program of study concurrently with the petition (refer to section D). A maximum of 22 graduate-level credits may be transferred into the 45-credit Master's degree and a maximum of 9 graduate-level credits may be transferred into the 18-credit Graduate Certificate. If the credits were earned at a school other than OSU, the credits must not have been used as part of an awarded prior degree. Transfer credit must comply with all policies in the OSU Academic Catalog (catalog.oregonstate.edu/college-departments/graduate-school/#policiestext).

Capstone Project and Final Oral Examination

Master's students complete a Capstone project (ST 595) and final oral examination during their last term in the program. A written thesis is not required. **Students must be enrolled in a minimum of 3 credits in the quarter in which they take their final oral exam.**

Tuition and Fees

Ecampus tuition and fees are charged per credit. Please refer to the charts and tuition calculator on the Ecampus website for current rates (ecampus.oregonstate.edu/services/tuition). International students and domestic nonresidents are charged the same per-credit rate as Oregon residents.

Financial Aid

Domestic students who are admitted to the Master's or Graduate Certificate may be eligible for federal and state financial aid through OSU if enrolled for 5 or more credits per term. The aid may be in the form of federal loans, grants, or private scholarships. Fellowships and graduate assistantships are not available for Data Analytics students. International online students are not eligible for financial aid through OSU.

Information about options for funding a graduate program at OSU is available through the OSU Graduate Schools website (https://gradschool.oregonstate.edu/finance)

A.4 Terminology

In reading what follows, it is useful to have the following terminology:

- **Statistics Department Office:** The department office is staffed by an office manager and graduate coordinator. The staff answers questions about policies, procedures, and student resources.

- **Department Head:** The Department Head is the final arbiter of decisions within the department.
- **Director of Data Analytics (DDA):** The Director of Data Analytics is the faculty member who has most contact with students. Among other things, the DDA communicates with and counsels' prospective students, interprets departmental policy for current students, and advises students regarding their progress.
- **Advisor / Major Professor:** Master's students are assigned a faculty member as an advisor (also known as a major professor) during their first Fall term. The advisor is responsible for guiding the student through the program and should be the 'first stop' for answers to questions about academic requirements and progress toward the degree.
- **Graduate Coordinator:** The coordinator helps students interpret and follow their program's policies and procedures. The coordinator also manages administrative processes such as registration restriction overrides and the circulation of petitions for approval signatures.
- **Graduate Committee:** Master's students are assigned a graduate committee upon completion of 18 credits. The student's committee reviews their program of study and participates in their oral exam. Your graduate committee guides your course work and serves as your final examining committee. It is generally expected that all committee members or approved substitutes must be present for all formal meetings with the student (e.g. final oral exams). If you have a situation in which a committee member needs to participate remotely, you and your committee must assure that all the conditions for remote participation are met.

  If a graduate committee member is not approved for the role proposed, your major department/program director will need to nominate the proposed member to act in the specific role using the Nomination to Graduate Faculty form. Committee structure is evaluated when your program of study is received by the Graduate School and when you schedule your formal examination(s).
- **Graduate School:** The Graduate School oversees all graduate certificate and degree programs at OSU and implements the minimum policies and regulations for graduate education. Each graduate program at OSU establishes its own requirements but is also subject to all the requirements of the Graduate School. The Graduate School is the final arbiter of admission decisions and degree conferral.
- **Ecampus Student Services:** The Student Services team helps newly admitted students navigate the on-boarding process, which includes establishing a student ID, learning how to register for classes, and accessing course websites. The team also assists new and continuing students with registration issues and inter-personal conflicts with peers or instructors. Student Services operates primarily as a referral source. They identify the person or department who can resolve an issue and then liaisons with them to get the student the assistance they need.
- **Registrar:** The Office of the Registrar oversees registration, grade reporting, transcripts, commencement ceremonies and diplomas. Occasionally, Ecampus Student Services or the graduate coordinator may refer a student to the Registrar for help with an issue.

A.5 Preferred Communication

Once you register for your first term, all OSU communications are sent to your OSU ONID email address. You are expected to use your OSU email address as your primary means of communication and to check it daily.

A.6 General Contact Information

The most effective way to reach us is via email: statistics.office@oregonstate.edu. We are not always at our desk, but our email is monitored during normal business hours. Most faculty are not available during the summer (June 15 through September 16) so email serves as a written record of your request. **Please**

communicate with us by email. If you are a student in our program, please use your ONID email address when reaching out to us.

- Statistics Office: statistics.office@oregon.state.edu; (541) 737-3366
- Statistics Interim Department Head: Dr. Lan Xue (lan.xue@oregonstate.edu)
- Director of Data Analytics: Dr. Lisa Ganio (lisa.ganio@oregonstate.edu)
- Statistics Department Faculty: See list in this document and at stat.oregonstate.edu/people
- Graduate Coordinator: Lauren Hudecheck (statistics.office@oregonstate.edu)
- Course registration restriction override request: https://oregonstate.qualtrics.com/jfe/form/SV_72nCONzNUY9WwbY
- Ecampus Student Services: ecampus.ess@oregonstate.edu; (800) 667-1465 (select option 1)
- Registrar: registrar.oregonstate.edu
- Graduate School: graduate.admissions@oregonstate.edu or graduate.school@oregonstate.edu

OSU is dedicated to providing a safe and secure learning and living environment for its community members. The Department of Public Safety provides resources, information, emergency phone numbers, and protocols for maintaining personal safety. Sign up for OSU Alerts to get timely messages delivered right to your phone or inbox regarding university closures and other emergency situations.

A.7 Faculty

Professors:

- **Alix Gitelman**, PhD in Statistics, Carnegie Mellon University, 1999, Environmental and spatial statistics, statistical consulting, statistical literacy
- **Virginia Lesser,** Ph.D. in Biostatistics, University of North Carolina, 1992; Sampling methodology, and environmental statistics.
- **Lisa Madsen,** PhD in Statistics, Cornell University, Ithaca, NY, 2004; Spatial statistics, dependent data, and statistical computing.
- **Lan Xue,** PhD in Statistics, Michigan State University, East Lansing, 2005; Non-parametric and semi-parametric modeling, variable selection for high-dimensional data, Nonlinear time series analysis, Survival analysis and Analysis of longitudinal data.

Associate Professors:

- **Sharmodeep Bhattacharyya,** PhD in Statistics, University of California, Berkeley, CA, 2013; Statistical inference on networks, high-dimensional statistics, clustering, non-parametric and semi-parametric and semi-parametric methods, application to neuroscience and omics data.
- **Yanming Di,** PhD in Statistics, University of Washington, Seattle, WA 2009; Statistical genetics and genomics.
- **Sarah Emerson,** PhD in Statistics, Stanford University, Stanford, CA, 2009; Non-parametric and semi-parametric statistics, and biostatistics.
- **Claudio Fuentes,** PhD in Statistics, University of Florida, Gainesville, FL, 2011; Clustering and Classification problems, Post-selection inference, Bayesian Methods and Applied Statistics.
- **Lisa Ganio (Statistics Department Head),** PhD in Statistics, Oregon State University, Corvallis, OR, 1989; Biometrics, quantitative ecology, and study design.
- **Duo Jiang,** PhD in Statistics, University of Chicago, Chicago, IL, 2014; Statistical genetics and biology-related fields, mixed models and quasi-likelihood methods.
- **Yuan Jiang,** PhD in Statistics, University of Wisconsin-Madison, Madison, WI, 2008; Data integration, high-dimensional data, statistical genetics/genomics.
- **Katherine McLaughlin,** PhD in Statistics, University of California, Los Angeles, CA, 2016.

- **Thomas Sharpton,** PhD in Microbiology, Designated emphasis in computational biology, University of California, Berkeley, CA, 2009; Biostatistics, genomics and metagenomics, data integration, big data analysis, machine learning, network informatics.

Assistant Professors:

- **Xinzhou Ge,** PhD in Statistics, University of California, Los Angeles, 2023; Statistical modeling and algorithm development
- **Tate Jacobson,** PhD in Statistics, University of Minnesota, Minneapolis, Minnesota, 2023; High dimensional regression
- **Robert Trangucci,** PhD in Statistics, University of Michigan, Ann Arbor, Michigan, 2023; Biostatistics

Assistant Professor of Teaching

- **Surya Eada,** PhD in Statistics, University of Connecticut, Storrs Connecticut, 2024; Parameter estimation in Lévy processes
- **Kollin Rott,** PhD in Biostatistics, University of Minnesota Twin Cities, 2024; Statistical inference and linear models

Senior Instructor II:

- **Jeff Kollath,** MS, Oregon State University 1995.

Instructors:

- **Kelsi Espinoza,** MS in Statistics Montana State University, Bozeman, MT, 2016
- **Erin Howard,** MS in Statistics Oregon State University, Corvallis, OR, 2018
- **Aristides Petrides,** PhD Water Resources Engineering, Oregon State University, Corvallis, OR, 2012.
- **Casey Schafer**, MS in Statistics, Colorado State University, Fort Collins, CO

Senior Research Assistant II:

- **Lydia Newton,** MAIS Oregon State University, Corvallis, OR, 1998.

For more information on the faculty of the Department, see the Statistics Department website at: stat.oregonstate.edu/content/faculty-research-interests.

B. ADMISSION PROCESS

The Statistics Department follows OSU's graduate admission policies and procedures when selecting candidates to nominate for admission to the Data Analytics programs. OSU's Graduate School manages the graduate admission process, interprets, and enforces admission policies, and is the ultimate arbiter of admission decisions. Please review the policies and procedures here: gradschool.oregonstate.edu/future/graduate-admissions. See section B.3 for admissions requirements.

Some OSU Graduate School policies and procedures do not apply to Data Analytics applicants. This section of the guidebook is designed to help you understand and focus on the admission criteria that will be used to evaluate your application. Please read it carefully and follow the guidelines to submit a competitive application packet.

B.1 Admission Timeline

Application opens:	September

Deadline to apply*:	**April 1**
Applications reviewed:	November - June
Applicants receive a decision:	November - July
Admitted applicants submit Intent to Enroll survey:	**November-August**
Applicants' clear admission provisions:	May - August
Registration for Fall classes:	May - September
Program begins:	September

(*)All materials, including letters of reference, must be received in the online system by April 1.

B.2 Types of Admission

Full Admission

Full admission may be granted to candidates who meet all admission requirements (see next section).

Provisional Admission

Provisional admission may be granted to applicants who meet all but one admission requirement and are on track to complete the missing requirement before the first term of their program; for example, applicants who will finish their baccalaureate or the ST 351 prerequisite course before September.

International Student Admission

International students who meet the admission requirements are encouraged to apply. Please note that visa documents are not issued for the Data Analytics programs since they are offered as fully online Ecampus programs. The Graduate School enforces English language proficiency requirements: https://gradschool.oregonstate.edu/admissions/international.

Concurrent Master's Degree or Graduate Certificate

Currently enrolled OSU graduate students may apply to add the MS or the Graduate Certificate as a concurrent degree: gradschool.oregonstate.edu/progress/earning-concurrent-degrees-or-pursuing-dual-major.

To apply for concurrent enrollment in a Data Analytics program, do not use the online application; instead, complete the following:

1. Submit a Change of Degree /Major/Certificate form and program of study to the Graduate School (gradschool.oregonstate.edu/forms#change). The Graduate School will forward the form and a copy of your OSU graduate application to the department for review and approval.
2. Submit the following documents to the Statistics department office (refer to instructions in Section B.4 Application Process):
    a. ST 351 prerequisite verification
    b. Statement of preparedness
    c. OSU unofficial transcript
    d. CV/resume

The department will communicate its decision to the Graduate School, usually within one week. The Graduate School will notify you of its final decision.

B.3 Admission Prerequisites

Baccalaureate Degree

You must have a four-year baccalaureate degree (or international equivalent), a professional degree (such as BPharm, BVsc, MBBS, MD, DVM, DPharm, etc.), or an appropriate U.S./Canadian alternative degree, from a regionally accredited (US) or recognized (international) college or university to be admitted to OSU.

A three-year baccalaureate degree may be acceptable if you also hold a 45-quarter credit equivalent graduate degree, with both degrees being from a recognized college or university. Please refer to the Graduate School policy at gradschool.oregonstate.edu/admissions/academic-requirements for more information.

International students may search for specific requirements by country at gradschool.oregonstate.edu/country-requirements.

Minimum Grade Point Average (GPA)

You must have a cumulative B average (equivalent to 3.00 on a U.S. 4.00 grading scale) on the most recent baccalaureate degree or any subsequent graduate degree college or university, plus all work completed thereafter.

The Statistics Department may choose to calculate the GPA based on the last 90 quarter credits (60 semester credits [last two years on an international record]) of graded undergraduate work on the most recent baccalaureate degree, plus all work completed thereafter.

In rare instances, applicants whose cumulative GPA falls below the minimum may qualify to petition for admission. In such cases, the application must include evidence that the applicant has a strong probability of academic success in this highly quantitative program. An applicant, who obtained a BA degree in English 10 years ago with a GPA of 2.6 and has worked as a data analyst for the last 5 years might qualify to petition. Applicants with GPA's less than 3.0 should address this in their application materials. The decision to petition is made by the program.

Graduate Exams

The GRE or GMAT are **not** required for this program.

English Language Proficiency

International applicants who did not receive a degree in the U.S. or a country where English is the official medium of instruction must submit English language proficiency test scores, e.g., TOEFL scores. Scores must be no more than two-years old at the time of the applicant's first term of registration.

Please refer to the Graduate School's guidelines for information on exceptions, minimum scores, and more: gradschool.oregonstate.edu/admissions/international.

ST 351 (Introduction to Statistics) or Equivalent

An upper-division undergraduate statistics course at the level of ST 351 (Introduction to Statistical Methods) or equivalent with a grade of C or better is a prerequisite for the program.

ST 351 is an upper-division course in statistics that includes the use of a statistical computing package (e.g. R, SAS, SPSS) to carry out basic statistical analyses. The course topics include study designs, descriptive statistics and exploratory data analysis tools, data collection and recording, probability distributions, sampling distributions for means and proportions, hypothesis testing and confidence intervals for means and proportions in one- and two-sample inference, and chi-square tests. Students who have completed such a course should be able to do the following:

1. Describe the characteristics of, and explain the process involved in, crafting a sound research question.
2. Identify appropriate data collection methods and justify your reasoning as to why a particular method may be considered appropriate for the stated research question.
3. Display the data in a manner that provides information that can be used to help answer the research question.
4. Obtain and evaluate statistical evidence (e.g. a confidence interval) that can be used along with exploratory tools to answer research questions.
5. Use statistical evidence and exploratory data analysis tools to answer a research question and communicate the answer in an accurate and interpretable fashion.

Students should have experience carrying out data analysis using a mainstream statistical programming package (e.g. SAS, SPSS, R, JMP).

The admissions committee determines if you meet the required prerequisites. There are several ways to fulfill the ST 351 prerequisite if you have not already completed the course:

- **Take ST 351 online concurrently with your application for admission.** Check the Ecampus schedule of classes for the next course offering (ecampus.oregonstate.edu/soc). Then apply for admission to OSU as a non-degree student ($35 fee, transcripts not required) and register (https://ecampus.oregonstate.edu/about/admissions-requirements.htm).

Fulfill the ST 351 requirement with an articulated course. Use the Single-course search tool available on OSU's website devoted to transfer credits (https://transfer.oregonstate.edu/transfer-credit-central) to check if OSU has evaluated a statistics course you took at another school and deemed it equivalent to ST 351

- **Fulfill the ST 351 requirement with unarticulated coursework.** In your application for admission, you may request that the Data Analytics admissions committee evaluate unarticulated statistics coursework you completed outside of OSU for equivalency to ST 351. The statistics coursework must have these features:

    - Offered as an upper-division (typically numbered 300-499) or graduate course.
    - Offered by an accredited college (not a MOOC).
    - Taken for academic credit and completed with a grade of C or better.
    - Learning outcomes are substantially similar to five listed at the top of this section.

- **Demonstrate that you possess equivalent skills by virtue of prior course work plus professional work experience.** If you feel that you meet the ST 351 prerequisite by virtue of a combination of work experience and course work, please describe the relevant experience and explicitly relate it to the five ST 351 learning objectives listed above. Use the upload button at the end of the online application to provide supporting documentation. Note that your experience must include training in the concepts, assumptions of, and application of statistical methods.

You must submit your request for a prerequisite's evaluation *with your application for admission*. (Refer to the Application Process section for documentation guidelines.) Please do not request an evaluation before

you apply. The admissions committee cannot make equivalency determinations for prospective applicants due to the high volume of requests.

B.4 Application Process

Online Application

Applications for graduate admission are accepted online at oregonstate.force.com/AppLogin. Application materials may be scanned in PDF and uploaded into your online application. All materials must be received in the online system by the application deadline in section B.1 Admission Timeline.

Application Materials

The following documents are required for the application.

☐ **ST 351 Prerequisite Verification**
Please provide documentation that shows you completed the ST 351 prerequisite or equivalent. The documentation requirements vary depending on how the prerequisite is being fulfilled.

- ST 351 taken at OSU: Submit transcript showing the course was completed or is in progress.
- Equivalent or potentially equivalent course: Enter the course details in the space provided on the application and upload one of the following:
  - Printout from OSU's Transfer Course Search page showing equivalency (see Section B.3).
  - Course syllabus obtained from the school/department that offered the course.
- Professional experience: Describe relevant experience using the space provided on the application and upload any supporting documents. Be sure to relate your experience to the learning outcomes described in the previous section.

☐ **Statements of Preparedness**
Provide statements of your career and academic objectives and preparedness. Please address each of the following questions succinctly in the online application. Enter your responses in the fields provided on the application.

1. What do you hope to get out of this graduate program?
2. Describe your mathematics training including academic coursework or employment-related training. Please be specific.
3. Describe your current familiarity and experience with the following mathematical tools: exponents, logarithms, quadratic equations and systems of linear equations.
4. Describe your education or training in the use of statistical methods including any employment-related training, or academic education via a course that is not clearly identified as statistics in its course title.
5. Describe your experience and familiarity with applying confidence intervals and statistical hypothesis testing to address applied questions. Please provide specific examples if you have them.
6. Describe your experience with computing and programming using statistical software (e.g. SPSS, JMP, R).

☐ **Transcripts**
Transcripts from **all** educational institutions you attended after high school are required for the application review. If you have a GPA below 3.0, we strongly recommend that you discuss it in your statement of preparedness (see above).

Unofficial transcripts are accepted for the preliminary departmental review of your application. An unofficial transcript is a *copy of all pages (front and back) of an official* transcript (see below). Web or kiosk (self-service) copies of academic records are not accepted. Your application may not be reviewed if transcripts do not meet these requirements.

Official transcripts are required for admission. Upon your nomination for admission, the Graduate School will ask you to have your schools send official transcripts to OSU. Official transcripts must have the following:

- The name of the school, college seal, date issued, and the Registrar's signature.
- A complete record of all the credit-bearing coursework you attempted or completed.
- The cumulative GPA and the date the degree was conferred, if applicable.
- Numbered pages, and a legend on the back side.

If the educational institution is outside the United States, both an original language version and certified English translation of all academic records and degree statements are required. Please include certificates/diplomas for all degrees earned.

Electronic transcripts should be directed to "Oregon State University - Graduate Admissions.**"** Mailed transcripts can be sent to:

Graduate School
Oregon State University
Heckart Lodge2900 SW Jefferson Way
Corvallis, OR 97331

If you have additional questions regarding your transcripts, please contact Graduate Admissions at graduate.admissions@oregonstate.edu.

☐ **Letters of Reference (3)**

Letters of reference/recommendation are a significant part of your application for graduate admission. Please provide three references. The reference providers are not required to be from a university setting but they should be able to independently evaluate your qualifications for graduate school and your work ethic. It is usually not appropriate to ask friends or family to provide references.

When reading your letters of reference, the admissions decision-makers are looking for evidence of critical thinking skills, problem solving and quantitative skills, motivation, persistence, ability to learn and excellent communication skills.

Your choice of letter writers and how you communicate with them influences the quality and relevance of your letters. To assure your letters are helpful to your application for admission, remember to:

1. Ask only people who know you well and can address the points mentioned above—writers should be professional and academic contacts; do not include personal references which are irrelevant to application reviewers.
2. Contact potential letter writers well ahead of your application deadline, preferably two months in advance and tell the writer your deadline.
3. Do not assume the person will write a letter. Ask them to confirm their willingness to write a letter for you.

4. Make writing the letter as convenient as possible and provide the following to your letter writers:
    - Describe the program at Oregon State to which you are applying. Explain that the Data Analytics program is a non-thesis, fully online program. Explain to them what the admissions decision makers will be looking for in their letter.
    - Provide the writer with your current resume or CV so they have information readily available.
    - Explain the process for submitting the letter to your letter writer. They will be able to upload their letter into our system.

You will be asked to enter the names and email addresses of your reference providers into the application system. The letter of reference system triggers an email to each reference writer and enables them to submit a confidential electronic letter for you. Upon receipt, electronic letters are added to your file in 3-5 working days.

If you choose to not use our letter of reference system, please ask your letter writers to mail confidential letters to the Graduate School. In most cases, these will be added to your file within one week of receipt. The Data Analytics program does not accept unofficial letters (unsealed letters in your possession). Mailed letters can be sent to:

Graduate School
Oregon State University
Heckart Lodge
2900 SW Jefferson Way
Corvallis, OR 97331

You should login to your application periodically to check that letters have been submitted, to resend reference requests or add new recommenders if needed. *We cannot review your application until 3 letters have been received.*

☐ **International Student Documents**
International students must submit English language test scores unless they qualify for a waiver. Conditions under which a waiver can be considered are described on the Graduate School's international admissions webpages which are linked below. English language test scores must be no more than two-years old when you start the Data Analytics program. Unofficial test scores will be accepted for the review. The ETS institution code for OSU is **004586.** A department code is not necessary. Please refer to the Graduate School's guidelines for more information: gradschool.oregonstate.edu/admissions/international.

Financial documentation is not required at the time of application. Proof of funding is not required if you will not be entering the U.S.; however, the Graduate School may ask you to complete a certification form if you are admitted.

☐ **Resume / CV**

☐ **Cover Letter or Supplemental Documents (Optional)**
You may upload a cover letter (1-2 pages) or supplemental documents to your application. This is your opportunity to provide *factual* information that did not fit in elsewhere. For example: Attach a syllabus for previous coursework that you think might be equivalent to the ST 351 admission prerequisite.

Application Fee

Please see the Graduate School site for current fee and fee waiver information: gradschool.oregonstate.edu/admissions/process.

Late or Missing Materials

All materials must be received in the online system by the application deadline listed in section B.1 Admission Timeline. Please keep this deadline in mind when requesting letters of reference. The time between requesting a letter from a reference and the letter being added to your application can be longer than a month.

Once you have submitted your application, you should return to the site to verify that your application materials were received. It is your responsibility to check that your application is complete. *We cannot review your application if it is missing critical documents.* See here for instructions on how to add documents after submission: gradschool.oregonstate.edu/admissions/after-you-apply.

Decision Notifications

The Graduate School will email you an admission decision on your application. If you are admitted, you will also receive instructions for accepting admission and submitting official transcripts.

Intent to Enroll Survey

The Graduate School emails admitted students an Intent to Enroll Survey asking if they plan to accept the offer and enroll at Oregon State. A link to the survey will be available inside the online application as well. You must accept admission via the survey before you can begin the orientation and onboarding processes.

Clearing Admission Provisions or Conditions

You may be admitted with a provision or condition or both. Generally, provisions must be cleared before the student starts their first term in the program. Typical provisions are "submit official transcripts" or "finish baccalaureate in progress" or "complete ST 351 or equivalent." Please contact the Statistics Office immediately if you need clarification about provisions and the steps you must take to clear them; also, notify the office once you have cleared a provision.

Conditions generally must be cleared while the student is in the program. A typical condition is "obtain a B grade in every course for the first 18 credits." If a student fails to satisfy a condition by the deadline, a registration hold is placed on the student's account and they must meet with their advisor and the program director to discuss next steps, which can range from following plan of study under the close supervision of their advisor to dismissal from the program.

C. STUDENT ONBOARDING AND SUPPORT

Data Analytics students are supported by the Graduate School, Ecampus, and the Statistics Department. Your Statistics graduate coordinator is your go-to person if you are unsure about whom to contact for support.

You should start the onboarding process a few business days after you accept the offer of admission (refer to Intent to Enroll Survey in previous section).

C.1 Orientations

Ecampus Orientation

Ecampus orientation is conducted remotely via webpages and videos. Topics covered include:

- Setting up your ONID (OSU Network ID)
- Applying for financial aid

- Talking to an academic advisor [see Statistic Department Onboarding below]
- Registering for classes
- Navigating the Canvas learning management system
- Tuition, fees and billing
- Ordering your OSU ID card

The online orientation materials are available on demand. To access the materials, start here:

"Getting Started: Degree-seeking Graduate Students"
ecampus.oregonstate.edu/students/newly-admitted/graduate.htm
Some orientation topics apply to undergraduates or specific programs only. Please disregard any references to the MyDegrees system or graduate teaching assistantships; they do not apply to Data Analytics students. Additional information about registration can be found on the Registrar's website: https://registrar.oregonstate.edu/registration

Graduate School Orientations

Graduate School orientations are conducted via webpages, video tutorials, and on-campus gatherings that you are welcome to attend if you live in the Corvallis area. Please click the links below for more information.

"New Graduate Students: Admitted Student Checklist"
gradschool.oregonstate.edu/graduate-student-success/new-graduate-students
Some of the checklist items won't apply to you as an online student or you may have completed them during the Ecampus onboarding.

"Grad Welcome Week and Orientation"
https://gradschool.oregonstate.edu/current-students/new-graduate-students/grad-welcome-week-2024
Participation in these activities is optional. You must register for workshops to receive the Zoom links. See Section C.2 for more information about Zoom access for OSU students.

Statistics Department Orientations

This guidebook you are reading comprises the Statistics Department orientation for Data Analytics students.

We may email you reminders or policy updates periodically via our general department mailbox (*statistics.office@oregonstate.edu*) or our listserv (*data_analytics_online_students@lists.oregonstate.edu)*. You do not need to join the listserv; we will subscribe you. Be sure to add our email addresses to your safe-senders list so important announcements don't get caught in your spam filter.

C.2 Preparing for the First Day of Class

1. **Registration and Course loads:** The OSU Schedule of Classes is available online and contains academic regulations and registration procedures that apply to all students in the university, as well as the final examination week schedule. The online catalog is the source for up-to-date changes for the current and immediately upcoming term. It is your responsibility to register for the appropriate number of credits that may be required for any funding eligibility and/or to meet the requirements of the continuous enrollment policy. Problems arising from registration procedures, such as late registration, adding or withdrawing from courses after deadlines, or late changes from letter or S/U grading are resolved through the petition for late change in registration filed with the Graduate School. A late registration fee may be applied.

Students are responsible for staying current on registration requirements that may supersede the Graduate School requirements (i.e., international, financial aid, veteran's).

Course load requirements for graduate students are established by the Registrar and the Graduate School. You are considered a "full-time" graduate student if you are registered for 9–16 credits in a given academic term. You are considered a "part-time" graduate student if you have less than nine credits. If you are a degree-seeking student, you must be registered for a minimum of three graduate credits in any term you wish to be enrolled and access university resources, including the term of the final defense.

Students are responsible for staying current on course load requirements that may supersede the Graduate School requirements (i.e., international, financial aid, veteran's)

2. Check academic calendar, note first day of classes: https://registrar.oregonstate.edu/osu-academic-calendar . **Please also note the deadlines for adding and dropping classes with tuition refunds**.
3. Complete Ecampus "Starting Your Course" checklist: ecampus.oregonstate.edu/services/start/checklist.htm
4. Sign up for OSU's Zoom for videoconferencing with your advisor and professors: is.oregonstate.edu/zoom/zoom-learning
5. Once your classes begin, login to the Canvas platform and explore the course sites: canvas.oregonstate.edu
    - Read the Syllabus, noting assignments and reading deadlines, exam policies, and timing.
    - Get to know your instructors and peers.
    - Email with your academic advisor.
    - Start your first lesson.

C.3 Department Resources and Services

The Statistics Department offers a list of graduate student tools and resources on its website: https://stat.oregonstate.edu/. Also, the graduate coordinator can assist you with the below.

OSU Email

All OSU students are assigned an ONID (one-id) email address. You are required to use your OSU email address when corresponding with your advisor, any OSU office, or others at OSU. Any information from OSU or the department, will always be sent to your OSU email address. OSU spam filters may block your incoming messages from non-OSU email addresses so we may not receive your message if you don't send it via your @oregonstate.edu email address. We don't send a lot of emails but please check your OSU email regularly and at least every 48 hours. Some of our messages may require your response in a timely manner.

Registration Overrides

OSU courses have restrictions that prevent students from registering if they haven't met certain prerequisites or conditions. When you are blocked from registering in a restricted course, you will see a restriction code such as "SAPR-Department Approval Required." If you think the restriction was applied to you in error or should be waived for good reason, contact the department offering the course to request an override (i.e., permission to enroll). The contact information is at the bottom of the expanded course description on the schedule of classes. If requesting an override for a Statistics ("ST") course, please visit our 'Request for Overrides' webpage (https://stat.oregonstate.edu/services/request-incompletes-overrides) and submit an override request form.

Form/Petition Processing

You might submit several petitions (requests) to the Graduate School for approval during your program. Graduate School forms are available at: gradschool.oregonstate.edu/forms. Examples of forms you will need during your program include the Program of Study form and the diploma application form. Please familiarize yourself with these forms so you can find them when needed.

Most forms are digital and will be automatically routed through OSU's electronic signature software, DocuSign, for departmental approval upon submission. A few forms must be downloaded and routed via email. To submit a downloaded petition, complete the form, save it as a PDF (recommended) and email it to the graduate coordinator (statistics.office@oregonstate.edu). The coordinator will route the form to you and the approvers through DocuSign for signature, and then will submit the form to the Graduate School on your behalf. (Recommended: Add the DocuSign domain to your email safe-senders list so notifications don't go to your spam folder.)

C.4 Campus Resources and Services

OSU offers a wide array of academic and support resources designed to meet graduate student needs. Some of the more commonly used resources are included below. For a more complete list, please visit the Graduate School's Student Resources web page. Note that some services are campus-specific. See also OSU Cascades Campus Life and Ecampus Student Services for services specifically provided to graduate students pursuing degrees or certificates via those specific venues.

Campus Safety – Emergency phone numbers, university alerts
Career Development Center – Resume/CV, networking, job search strategies
Childcare and Family Resources – University child care centers, child care assistance
Counseling and Psychological Services (CAPS) – Individual and group counseling
Cultural Resource Centers – Cultural based community centers, social support
Disability Access Services (DAS) – Academic accommodations
Equal Opportunity and Access (EOA) – Employment accommodations, discrimination or bias response
Financing your education – Funding options and information, graduate awards
Graduate Student Commons – Lounge, study space, reservable meeting rooms
Graduate Writing Center – Writing workshops, groups, and 1:1 writing coaching
Health Insurance – Plans for graduate students and graduate employees
Human Services Resource Center (HSRC) – Food pantry, housing and food stamp assistance
Institutional Review Board (IRB) – Review for human subjects research
Office of International Services (OIS) – Visa and immigration advising
Ombuds Conflict Management Services – Informal, impartial conflict resolution advising
Recreational Sports – Dixon Recreation Center, intramural sports
Statistics Consulting Service – Graduate student research statistical advising
Student Health Services (SHS) – Clinic and pharmacy
Student Multimedia Services (SMS) – Poster printing, equipment and laptop loans
Transportation Services – Parking permits, bike, bus, SafeRide
Valley Library – Reference and research assistance, study spaces, research tools

C.5 External Resources

Professional Societies

Students are encouraged to join one or more professional societies as student members. Students who wish to join the Institute of Mathematical Statistics (IMS), the American Statistical Association (ASA), or Biometric

Society (WNAR) should go to the website of the appropriate society (ask advisor if help is needed). Membership is either free or very inexpensive for students.

D. THE MS DEGREE IN DATA ANALYTICS

It is your responsibility to be aware of and to satisfy all policies and requirements pertaining to graduate study at OSU and your Master's program. University policies govern all graduate programs are set forth in the following:

- Graduate Program Policies: https://catalog.oregonstate.edu/college-departments/graduate-school/#policiestext
- Academic Regulations: catalog.oregonstate.edu/regulations/
- MS Steps to Completion required by OSU Graduate School: https://gradschool.oregonstate.edu/current-students/masters-students

The Statistics Department has certain requirements of its own in addition to those of the University. These departmental requirements are set forth in this guidebook.

D.1 Degree Requirements

The MS degree requires a total of 45 credit hours. The curriculum includes:

- 6 required core courses in statistics, for a total of 21 credit hours.
- 4 elective courses in statistics, for a total of 12 credit hours
- 3 required core courses in computer science, for a total of 12 credit hours.

Core Courses in Statistics (21 credits):

ST 516	Foundations of Data Analytics (4 credits)
ST 517	Data Analytics I (4 credits)
ST 518	Data Analytics II (4 credits)
ST 566	Time Series Analytics (3 credits
ST 558	Multivariate Analytics (3 credits)
ST 595	Capstone project (3 credits)

Core courses in Computer Science (12 credits):

CS 511	Programming Concepts for Non-majors (4 credits)
CS 512	Data Science Tools and Programming (4 credits)
CS 513	Applied Machine Learning (4 credits) (renumbering to CS 513 in progress)

Elective courses in Statistics (12 credits):

ST 515	Design and Analysis of Planned Experiments (3 credits)
ST 525	Applied Survival Analysis (3 credits)
ST 531	Sampling (3 credits)
ST 536	R Programming for Data
ST 537	Data Visualization (3 credits)
ST 538	Modern Analytical Methods for Large and Complex Datasets (3 credits)
ST 539	Survey Methods (3 credits)
ST 591	Introduction to Quantitative Genomics (3 credits)
ST 592	Statistical Methods for Genomic Research (3 credits) (Taught odd winter terms)

Courses are only taught once per year so you will need to plan ahead to determine which courses to take in which terms. In the rare event that electives listed above are not available, students may, with **prior** approval

from their advisor, substitute 1-2 data analytics courses offered outside the Statistics Department for some of the electives. Data Analytics students must meet the required prerequisites for these electives. The courses must be graduate-level courses (numbered 500-699) and have substantial data analytics content. To request approval, obtain a recent syllabus from the department offering the course and submit it to your advisor, along with 1-2 paragraphs about how the course fits with your research interests.

You may also need the offering department's approval to register for a course. This may or may not be stated in the course description. If you encounter a restriction while attempting to register, follow the instructions in Section C above for requesting a registration override.

To find potential electives, filter OSU's academic catalog for graduate Ecampus courses that include data management, data analysis or data analytic methods. (Ecampus courses will have a 400-section number.) Examples:

ECON 524	Introduction to Econometrics
GEOG 560	GIScience I: Introduction to Geographic Information Science
GEO 561	GIScience II: Analysis and Applications
PPOL 521	Understanding Social Research

D.2 Degree Timeline

The table below breaks Master's degree progress into four stages and lists key steps for each. See also: https://gradschool.oregonstate.edu/current-students/masters-students

First Term	At 18 Credits	Penultimate Term	Final Term
▪ Start planning your program of study in consultation with your advisor. ▪ Submit the transfer credit form (if applicable).	▪ Submit program of study form. **Failure to submit the Program of Study before 15 weeks prior to your final exam can result in an additional term of attendance. Please submit this form early.** *Certificate students:* ▪ Before completing 18 credits, submit form to change major to the MS (if applicable).	▪ To be eligible to take your final oral exam, clear all remaining degree requirements and any program deficiencies, e.g., courses with "Incomplete" grades. ▪ Submit updated program of study (if applicable). The program of study form must be submitted to the Graduate School at least 15 weeks prior to your final exam.	▪ Register for a minimum of 3 credits (typically, ST 595 Capstone Project) during the term in which you plan to take your final oral exam; you must be registered to take the exam. ▪ Complete ST 595 Capstone Course. ▪ Submit required diploma application. * ▪ Schedule final oral examination with committee and Graduate School no later than 2 weeks prior to the exam. * **We encourage you to contact your committee EARLY in your final term to schedule your exam as professors' schedules are quite busy in the latter part of each term.** ▪ Pass final oral examination. ▪ Participate in commencement (optional). ▪ Complete exit surveys. *(*) See Graduate School website for deadlines: gradschool.oregonstate.edu/progress/deadlines*

D.3 Course Offerings

Generally, Statistics and Computer Science planned course offerings for current academic year follow the schedule below, however, it is subject to change.

Academic Quarter	Fall	Winter	Spring
Statistics core:			
ST 516	X		
ST 517		X	
ST 518			X
ST 558	X		
ST 566		X	
ST 595	X	X	X
Computer Science core:			
CS 511	X		
CS 512		X	
CS 513 / 519			X
Statistics electives:			
ST 515		X	
ST 525	X		
ST 531	X		
ST 536	X		
ST 537			X
ST 538			X
ST 539		X	
ST 591	Fall of odd-numbered calendar years		
ST 592		X	

D.4 Recommended Schedule for Your First Year in the Master's Program

Term	1 Class	2 Classes	3 Classes
Fall	ST 516	ST 516, CS 511	ST 516, CS 511, ST 591 (or approved elective)
Winter	ST 517	ST 517, CS 512	ST 517, CS 512, ST 539
Spring	ST 518	ST 518, CS 519 (513)	ST 518, CS 519 (513), ST 537

D.5 Advising

Each Master's student is assigned an advisor at the start of their first Fall term. The role of the advisor is to assist the student in the selection of courses if questions arise, to help solve procedural problems, and to interpret department policy on matters not covered by this guidebook. Each student should communicate with their advisor before registration each quarter and any other time advice is needed. The Director of the Data Analytics program is also available to help with these matters.

Note that advisors are not available during winter or spring University breaks, during the program's summer hiatus, and when they are on sabbatical leave.

D.6 MS Program of Study and Graduate Committee

You must file a Program of Study with the Graduate School and your graduate committee, around the time you complete 18 graduate credits and no later than 15 weeks prior to your final term and oral examination. **Failure to submit the Program of Study before 15 weeks prior to your final exam can delay your final exam and could result in an additional term of attendance.** Please submit this form as soon as possible. The Program of Study is a list of the courses you will complete to graduate from your program. Please note that when filling out the Program of Study, you may list ST 599 Capstone as the Ethical Research training.

Your Program of Study helps you define your path to degree completion. It lists the courses you will take and the members of your graduate committee. You will outline your plan in consultation with your advisor/major professor and committee members, and then submit it to the Graduate School for approval. You must use the Graduate School's digital program of study form to document your plan: https://gradschool.oregonstate.edu/forms.

When creating your plan of study, start by discussing your goals and expectations with your advisor. Consider program requirements, the timing of course offerings, and when you intend to complete your capstone requirement (usually during your final term in the program unless your advisor recommends otherwise).

Around the time you complete 18 graduate credits, the Statistics Office will assign two additional faculty members to serve with your advisor/major professor on your graduate committee. You must list your committee members on your program of study form.

Once you submit your program of study form, it will be forwarded to your committee members, the department head, and the Graduate School for approval. The Graduate School will notify you when your plan has been approved.

Grade Requirements for the Program of Study: A grade-point average of 3.00 is required: 1) for all courses taken as a degree-seeking graduate student, and 2) for courses included in the graduate degree or graduate certificate program of study. Grades below C (2.00) cannot be used on a graduate program of study. A grade-point average of 3.00 is required before the final oral or written exam may be undertaken. Enforced graduate-level prerequisite courses must be completed with a minimum grade of C.

You must update your Program of Study if coursework or committee members change after it has been approved. To make changes, file a digital Petition for Change in Program form. The form can be found here: https://gradschool.oregonstate.edu/forms. (If an online version of the form is available when you want to submit a change, please use it instead of the downloadable form.)

D.7 Petitions and Grievances

All students desiring to appeal matters relating to their graduate degree should follow the Grievance Procedures for Graduate Students. These procedures are available at https://gradschool.oregonstate.edu/progress/grievance-procedures. Graduate assistants, whose terms and conditions of employment are prescribed by the collective bargaining agreement between OSU and the Coalition of Graduate Employees, American Federation of Teachers Local 6069, should also refer to that document and seek guidance from OSU's Office of Human Resources.

A student who wants to deviate from department requirements should first discuss the matter with their advisor or the Director of Data Analytics. A written petition, signed by the student and the advisor, is then sent to the Director of Data Analytics. The petition must be specific about the requirements involved and the circumstances that justify deviation from these requirements. The Director will review the petition with the Data

Analytics Graduate Committee. If the Data Analytics Graduate Committee denies the petition, its decision may be appealed to the Department Chair.

D.8 Annual Review of Student Progress

A student's academic progress is continually monitored. A special review of a student may be conducted at the discretion of the Director of Data Analytics. A student whose academic progress is unsatisfactory may be dismissed from the program. Please refer to Section F for more information.

D.9 Capstone Project (ST 595)

Under the direction of an advisor, the capstone project provides an opportunity for students to integrate and apply the analytics skills learned in the Data Analytics program to solve real-world problems and to interpret and communicate results. Student teams will engage in the entire process of solving data science projects in realistic settings, from placing the problem into appropriate statistical framework to applying suitable analytic methods to the problem. Problem solving, written and oral communication skills will be emphasized. The capstone course is the last class the student should take. **The capstone project will require a registration override for enrollment.** To receive the override, the Capstone Project (ST 595) should be taken in the term in which the student will hold their final examination (that is, in their last term of enrollment) and the approved program of study recorded at the Graduate School.

D.10 Final Oral Examination

Overview: A 2-hour final oral examination is required by the Graduate School for all Master's programs. The exam will assess the learning, skills and knowledge acquired by the student from their MS coursework and capstone project. Mastery of skills and knowledge, as demonstrated by the student's responses to questions during the oral exam, is needed to successfully pass the exam and complete the MS degree. The final oral exam is taken in the last term of enrollment, after the student has completed or is in the process of completing all the courses on their program of study. Students must be enrolled for at least three credits in order to take their final exam. The exam is conducted by the student's graduate committee which consists of the major advisor plus two additional members of the graduate faculty.

Scheduling and Exam Scheduling Form: The student is responsible for scheduling the exam with the Graduate School and their committee. The scheduling process is as follows.

a) Early in their final term of enrollment, the student contacts all of the members of their Master's committee to determine a mutually agreeable examination date, keeping in mind that each faculty member serves on several student committees and that the end of the term tends to be busy for this reason.
b) No later than two weeks prior to the examination, the student files an Event Scheduling Form with the Graduate School for the mutually agreed upon date. Failing to adhere to this deadline can delay your graduation. The student is responsible for creating a zoom link and distributing the link to all their committee members via email well in advance of the exam. The student should send an email reminder to their committee members 24 to 48 hours prior to the exam along with a copy of their presentation.

Required Student Preparation and Exam format: Students may be questioned on any course material that was part of their MS coursework.

- Students should study and be prepared to answer exam questions without referring to notes on all their coursework with special emphasis on the core courses of ST 516, 517, 518.
- The first 20 to 30 minutes of the 2-hour examination will be a project presentation by the student. This is typically an extension (expansion) of a project the student developed for a previous course with additional work done during the capstone course (ST 595).
- Following the presentation, the examining committee will ask questions about the methods and analysis used in the project. After this round of questioning is complete, additional questions will be asked related to other coursework.
- The student is expected to respond to questions without having to look up answers. It is common for questioners to ask why a certain analysis was chosen over other alternatives**. Students should be prepared to explain how methods work (not how to program the method), what assumptions are assumed by a method or analysis and why other methods were not appropriate or used.**

D.11 Diploma

You must formally apply to graduate by completing and submitting the diploma application form with the Graduate School to receive your diploma: gradschool.oregonstate.edu/forms#diploma. You are expected to submit the diploma application early in the term in which you intend to finish your program. Students who wish to attend commencement must submit the form by the Registrar's early deadline – usually around April 1. See their page for more details: https://gradschool.oregonstate.edu/current-students/commencement .

E. THE GRADUATE CERTIFICATE IN DATA ANALYTICS

It is your responsibility to be aware of and to satisfy all policies and requirements pertaining to graduate study and your Certificate program. University policies govern all graduate programs are set forth in the:

- Graduate Program Policies: https://catalog.oregonstate.edu/college-departments/graduate-school/#policiestext
- Academic Regulations: catalog.oregonstate.edu/regulations/
- Certificate Steps to Completion required by OSU Graduate School: https://gradschool.oregonstate.edu/current-students/certificate-students

The Statistics Department has certain requirements of its own in addition to those of the University. These departmental requirements are set forth in this guidebook.

E.1 Certificate Requirements

The requirements for admission to the Graduate Certificate in Data Analytics program are the same as the Master's program.

The Graduate Certificate requires ST 516, ST 517, and ST 518, as well as ST 566 Time Series Analytics and ST 558 Multivariate Analytics for a total of 18 credits.

E.2 Course Schedule for Your First Year in the Certificate Program

Academic Quarter	Data Analytics Certificate Classes
Fall	516, 558 (or 2nd year)
Winter	517, 566 (or 2nd year)
Spring	518

E.3 Advising

The curriculum for the certificate program is fully stipulated, thus an advisor is not assigned. The Director of the Data Analytics program is available to help with respond to any questions on the program.

E.4 Certificate Program of Study

You must file a digital Program of Study form with the OSU Graduate School during your first few terms to ensure you will meet the required number of credits and any other requirements to earn the certificate. The Program of Study lists the courses you must take to complete the certificate. You can find a link to the digital Program of Study form, and more information about this at the Graduate School's Program of Study webpage (https://gradschool.oregonstate.edu/current-students/program-study) . You can find all forms on the Graduate School's Forms and Policy page (https://gradschool.oregonstate.edu/current-students#forms) . Contact the Statistics Office if you need advising about the courses or process.

Grade Requirements for the Program of Study: A grade-point average of 3.00 is required: 1) for all courses taken as a degree-seeking graduate student, and 2) for courses included in the graduate degree or graduate certificate program of study. Grades below C (2.00) cannot be used on a graduate program of study. A grade-point average of 3.00 is required before the final oral or written exam may be undertaken. Enforced graduate-level prerequisite courses must be completed with a minimum grade of C.

E.5 Petition for Change of Major to MS

You may request a change of major to the Master's **before** you complete the Certificate. (If you do not request the change before you complete the Certificate you will have to apply for admission to the Master's program.) Credits earned for the Graduate Certificate can be applied towards the Master's degree if the Director of Data Analytics and the Graduate school approve the change in program. (See the transfer credit rules discussed in A.3.)

To petition for a change of major, submit the form to the Graduate School:
https://gradschool.oregonstate.edu/forms#degree

E.-6 Certificate Completion

You must formally apply to graduate at the beginning of the term you plan to complete your certificate. Please submit the "Apply to Graduate – Diploma Application" form which is accessible via the Graduate School's 'Forms' page: https://gradschool.oregonstate.edu/forms . This will let the Graduate School know to complete a final audit of your coursework and award the certificate. The certificate is not awarded unless you apply to graduate.

F. ACADEMIC POLICIES

This section describes the critical academic policies you must comply with to maintain good standing and eligibility to stay in the Data Analytics program. You are responsible for knowing and following the policies in this section. The key points are summarized here.

To remain in the program, you must:

- Maintain continuous enrollment, with a minimum enrollment of 3 credits per term (excluding summer sessions or while on approved leave of absence).
- Arrange for a leave of absence if an absence is needed.
- Maintain a 3.0 GPA.
- Make satisfactory academic progress toward the degree or certificate.

F.1 Continuous Enrollment

All graduate students enrolled in a degree program must register continuously for a minimum of 3 graduate credits each term (fall, winter, and spring terms) until all degree requirements are met, regardless of student's location. Students on approved leave are exempt from the continuous enrollment policy for the term(s) they are on leave.

Graduate students who use facilities or faculty/staff time during summer session are required to register for a minimum of 3 credits during the summer session. Students defending in the summer term are required to register for a minimum of 3 graduate credits.

If extraordinary circumstances arise, students may appeal the provisions of the continuous graduate enrollment policy by submitting a detailed request in writing to the Dean of the Graduate School. Scheduling difficulties related to the preliminary oral exam or the final oral exam are not considered an extraordinary circumstance.

Graduate assistantship eligibility requires enrollment levels that supersede those contained in this continuous enrollment policy. Various agencies and offices maintain their own registration requirements that may exceed those specified by the continuous enrollment policy (e.g., those of the Veterans Administration, Immigration and Naturalization Service for international students, and those required for federal financial aid programs.) Therefore, it is the student's responsibility to register for the appropriate number of credits that may be required for funding eligibility and/or compliance as outlined by specific agency regulations under which they are governed.

NOTE: **Students who are pursuing a certificate only are not subject to the continuous enrollment policy.**

Read the policy: catalog.oregonstate.edu/college-departments/graduate-school/.

F.2 Unauthorized Break in Registration

Degree seeking graduate students who take an unauthorized break in registration relinquish graduate standing at the University.

5To have graduate standing reinstated after an unauthorized break, students are required to reapply to their program (complete the online graduate admission application, pay the application fee, and may be required to register for three graduate credits for each term of unauthorized break in registration). It is advisable that

students in this situation state that they are applying for readmission in the application packet. A reapplication does not ensure admittance to the program.

Read the policy: https://catalog.oregonstate.edu/college-departments/graduate-school/#continuous-enrollment

F.3 Leave of Absence from Program

If you must interrupt your studies for one or more terms (excluding summer session) but plan to resume your studies after the break, you must apply for a leave of absence—prior to the leave period—to avoid an unauthorized break in registration and loss of graduate standing.

Leave of Absence status is available to eligible students who need to suspend their program of study for good cause. The time the student spends on approved leave will be included in any time limits prescribed by the university relevant to degree completion. Students on approved leave may not a) use any university facilities, b) make demands upon faculty time, c) receive a fellowship or financial aid, or d) take course work of any kind at Oregon State University.

Leave of Absence/Intent to Resume Graduate Study Forms must be received by the Graduate School at least 15 working days prior to the first day of the term involved. Family Medical Leave (FML) may be granted at any point during a term. FML inquiries should be directed to medical.leave@oregonstate.edu. **NOTE:** Students who are pursuing a certificate only are not subject to the Leave of Absence Policy.

Note the following:

- The time you spend in approved on-leave status will count toward the seven-year time limit for completing your degree or certificate.
- While on leave, you may not
    - use any university facilities;
    - make demands upon faculty time;
    - receive a fellowship or financial aid;
    - enroll in any course work of any kind at Oregon State University.

Read the policy: https://catalog.oregonstate.edu/college-departments/graduate-school/#leave-of-absence

F.4 Drop/Withdraw from a Course or Term

You may withdraw from a course or an entire term. The timing of the withdrawal may impact the following:

- "W" on transcript
- Tuition/fee refund (full, partial, or none)
- Eligibility for current and future financial aid

Generally, withdrawing from the current term is not an unauthorized break in registration and does not affect your ability to enroll in the next term. However, there are limits on how often you can withdraw.

Read the policies:
https://registrar.oregonstate.edu/drop-class
https://registrar.oregonstate.edu/withdrawing-classes-or-terms

F.5 Grades

Grading Options

The grading options are Letter grade, Pass/No Credit, and Satisfactory/Unsatisfactory. Courses have a default grade type but may offer one or two additional options. Be sure to review the options at registration and choose carefully.

Graduate students may use courses taken at OSU on a Pass/No Credit basis in their graduate certificate or graduate degree programs. Grades of P or N have no grade-point equivalents; therefore, they are not included in the computation of grade-point averages.

Graduate students may elect to take courses on a Satisfactory/Unsatisfactory basis **only** if those courses are not used in their graduate certificate or graduate degree program or are not required for the removal of deficiencies. Be aware of the quarterly deadline for changing the grading basis for a course (refer to the Academic Calendar).

Read the policy: https://catalog.oregonstate.edu/college-departments/graduate-school/#policiestext

Minimum GPA

A grade-point average of 3.00 (a B average) is required for the cumulative GPA earned on all courses taken as a degree-seeking graduate student. The Statistics Department and Graduate School monitors grades at the end of each term, places holds, and sometimes requests performance improvement plans if your GPA falls below 3.0.

To be considered for inclusion on a graduate program of study, OSU courses, whether taken as either an enrolled graduate student or before graduate admission, must have an earned grade of C or better. To be considered for inclusion on a graduate program of study, courses transferred from another institution must have an earned grade of B minus or better. Grades below C (2.00) cannot be used on a graduate program of study. A grade-point average of 3.00 is required before the final oral or written exam may be undertaken. Enforced graduate-level prerequisite courses must be completed with a minimum grade of C.

"Incomplete" Grade

A student may ask an instructor to grant an "Incomplete" grade for a course that has not been completed. The instructor may grant the request if the reasons for the incomplete are acceptable, and the student is passing the course at the time of the request. When an "I" is granted, the instructor also enters the grade the student would have received if no additional work was ever completed. Students have up to one year to complete the required work and earn a better grade. If a student does not complete the work within one year, the "I" grade is replaced by the grade determined by the instructor at the time the "I" grade was entered. It is recommended that when an "I" is granted the instructor and student complete a Contract for Completion of I Grade to define the terms under which the coursework will be completed: https://registrar.oregonstate.edu/incomplete-grades

F.6 Satisfactory Progress

A student is expected to make satisfactory academic progress toward a degree:

1. Maintain a cumulative GPA in graduate course work of 3.0 or higher by the end of the first year of study.
2. File a timely program of study form if they are in the MS program.
3. Complete the MS requirements in a reasonable length of time.

A student whose progress is unsatisfactory may be dismissed from the program.

F.7 Student Conduct

Graduate students enrolled at Oregon State University are expected to conform to basic regulations and policies developed to govern the behavior of students as members of the university community. The Office of Student Conduct and Community Standards (SCCS) is the central coordinating office for student conduct-related matters at Oregon State University.

Choosing to join the Oregon State University community obligates each member to a code of responsible behavior which is outlined in the Student Conduct Code. The assumption upon which this Code is based is that all persons must treat one another with dignity and respect in order for scholarship to thrive.

All users of OSU computing resources are required to abide by the OSU Acceptable Use of Computing Resources policy found at https://policy.oregonstate.edu/UPSM/08-005_acceptable_use_computing_resources .

Violations of the regulations subject a student to appropriate disciplinary action.

Academic Dishonesty

Academic Dishonesty is defined as an act of deception in which a student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another. It includes:

- CHEATING — use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.
- FABRICATION — falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
- ASSISTING — helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).
- TAMPERING — altering or interfering with evaluation instruments or documents
- PLAGIARISM — representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.

Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Sexual Harassment

The OSU Office of Equal Opportunity and Access defines sexual harassment as the following:

- Unwelcome* sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature when:

- Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education;
- Submission to or reject of such conduct by an individual is used as the basis for employment of education –related decisions affecting such an individual; or
- Such conduct is sufficiently severe or pervasive that is has the effect, intended or unintended, of unreasonably interfering with an individual's work or academic performance because it has created an intimidating, hostile, or offensive environment and would have such an effect on a reasonable person of that individual's status.

**Employee conduct directed towards a student – whether unwelcome or welcome – can constitute sexual harassment under OAR.*

There are two confidential resources to discuss reporting options: Center Against Rape and Domestic Violence (CARDV) provides 24/7 confidential crisis response at 541-754-0110 or 800-927-0197, and OSU Sexual Assault Support Services is available weekdays at 541-737-7604.**Discrimination and Sexual/Gender-Based Misconduct.** Any unwelcome conduct or action, based on actual or perceived status (gender, gender identity or expression, race, color, age, genetic information, national or ethnic origin, physical or mental disability, veteran status, religion, sexual orientation or other protected statuses), which is sufficiently severe, persistent or pervasive that it unreasonably interferes with a person's academic or work performance, or limits or denies a person their ability to fully participate in or benefit from the university's programs, services, opportunities, or activities.

F.8 Dismissal from Program

If the Director of Data Analytics decides that a student's progress is not satisfactory, and if the Department Chair agrees, then the student is notified and is given the opportunity to submit a written explanation to the Graduate Committee concerning any special circumstances that he or she would like to be considered. The Data Analytics Graduate Committee reviews the case and takes its recommendation to the Department Chair, which makes the final decision on whether or not to dismiss the student from the program. A student who has been dismissed from the Department may continue to take courses only if he or she is accepted into another program or if the Graduate School grants the status of special student.

F.9 Student Files

Both federal and state laws permit Oregon State University staff to release directory information (e.g. name, address, degree program, birth date) to the general public without your consent. You can prohibit the release of directory information to the public by signing the Confidentiality Restriction form available from the Registrar's Office. It will not prohibit the release of directory information to entities of Oregon State University that have a "need to know" to accomplish their required tasks. It further will not prohibit Oregon State University departments from including your name on mailing lists for distribution of materials that are essential to your enrollment at Oregon State University.

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