Learn to find patterns in data using computer simulation and programming

Students in this program will gain an understanding and background in probability and mathematical statistics, followed by coursework in applied regression and generalized regression models.

This graduate certificate in statistics builds applicable skills and incorporates hands-on learning by teaching computer programming in every course. Computer simulation is used to teach probability and math statistics so students can work through the application of a theory and make it practice-based. The name of the programming software used is “R” (also R Studio), a standard tool in many industries.

In addition to learning the latest theory and methodology in the industry, you will:

• Gain R programming skills.
• Sharpen your data analysis skills – by performing data analysis using real data and working with data that is not “neat.”
• Sharpen your modeling skills – by performing regression analyses and categorical data analysis.
• Improve your quantitative reasoning skills.
• Work with case studies to learn what you can and can't do (some are students' own studies that they bring to faculty for use in class).
• Learn about modern techniques in regression and modeling.
• Learn multivariate analysis techniques (available in an elective course).
• Gain a broader knowledgebase with courses that are 1-2 credits each, allowing you to study more topics while earning your online certificate.
• Get a head start by being exposed to the many types of problems you'll encounter in industry and develop your base knowledge for how to face these problems, where to start, and how to troubleshoot solutions.

Apply credits toward your Master of Applied Statistics

This online statistics certificate is a companion to the Master of Applied Statistics (MAS) degree. Ten credits can transfer into the MAS program (with a grade of B or better) and can be applied toward the degree after formal admission per University transfer policies. However, successful completion of the courses or certificate does not guarantee admission to the degree program.
How to Apply
Theory and Applications of Regression Models - Graduate Certificate

Application Deadlines

Fall semester: **May 1**

*For full consideration, submit your application and supporting documents prior to the deadline date. The program starts each fall. Students who completed prior program coursework may be considered for admission in the spring term.*

1. **Review Minimum Admission Requirements**
   - Undergraduate degree from an accredited four-year institution
   - One course in statistics, three semesters of calculus, one semester of linear algebra
   - A cumulative GPA of 3.0 or higher from your most recent degree completed. GPAs lower than 3.0 may be considered as determined by the Graduate Program Committee. Please submit an academic performance explanation if your GPA was lower than 3.0.

2. **Prepare Application Materials**

   Prepare the materials below and upload when you apply online.
   - Resume

3. **Complete Online Application**

   Complete the [online graduate application](#) and pay the nonrefundable application processing fee (payable online). As soon as you have completed the required information, please submit your application. Your application will not be reviewed until it is complete and all required materials have been received.
   - Select “Theory and Applications of Regression Models (Certificate) – Distance” when choosing the Program of Study. (Note: You must first select “Certificate” at the top.)

4. **Request Transcripts**

   Request one official transcript of all collegiate work completed from every institution attended, whether or not you received a degree from those institutions. Transcripts from Colorado State University are not required. Official transcripts can either be mailed in or sent as e-transcripts.

   Send e-transcripts to: [gradadmissions@colostate.edu](mailto:gradadmissions@colostate.edu)

   Send paper copies to:
   Graduate Admissions
   Colorado State University – Office of Admissions
   1062 Campus Delivery
   Fort Collins, CO 80523-1062

Check Your Application Status

View your [application status](#) at any time to ensure your application checklist is complete or to check on updates. Once your complete application, including supporting materials, is received, the department admission committee will review your application and notify you of their decision.

International Students

See [website](#) for test score and transcript requirements.