

# GRADUATE CERTIFICATE IN THEORY AND APPLICATIONS OF REGRESSION MODELS

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The Graduate Certificate in Theory and Applications of Regression Models covers applications of regression analysis, generalized regression models, probability and mathematical statistics and other topics in statistical analysis. The focus is on the practical methods in regression analysis, understanding patterns and structure in data, and the explanation of findings.

Students interested in graduate work should refer to the Graduate and Professional Bulletin (<https://catalog.colostate.edu/general-catalog/graduate-bulletin/>).

## Learning Objectives

This certificate is designed to help students acquire the background needed in regression analysis and generalized regression models, and commonly used statistical methodologies, as well as some theoretical background needed for a solid understanding of these methodologies. Students completing the certificate will be able to (a) effectively analyze data, (b) interpret results, and (c) explain the findings of statistical analyses.

## Requirements

**Distinctive Requirements for Certificate:** GSLL 3095 and GSLL 3096 (or STAT 500) are required skills courses and should be taken first. GSLL 3095 is intended not only as a review, but also as instruction in using the math skills in a statistical context. It does not replace the math prerequisites indicated. GSLL 3096 covers use of SAS and R programming. STAT 500 is a 1-credit version of GSLL 3096.

## Effective Spring 2017

**Additional coursework may be required due to prerequisites.**

Code	Title	Credits
<b>Required Credit Core:</b>		
STAA 551	Regression Models and Applications	2
STAA 552	Generalized Regression Models	2
STAA 561	Probability with Applications	2
STAA 562	Mathematical Statistics with Applications	2
<b>Select two credits from the following:</b>		<b>2</b>
STAA 565	Quantitative Reasoning	
STAA 566	Data Visualization Methods	
STAA 567	Computational and Simulation Methods	
STAA 574	Methods in Multivariate Analysis	
<b>Program Total Credits:</b>		<b>10</b>

\*This certificate may have courses in common with other graduate certificates. A student may earn more than one certificate, but a given course may be counted only in one certificate.