

# STATISTICS, CERTIFICATE

## REQUIREMENTS

### REQUIREMENTS FOR THE CERTIFICATE IN STATISTICS

The certificate requires a minimum of 13 credits.

Code	Title	Credits
<b>Introductory Statistics, complete one option</b>		<b>3-4</b>
STAT 240	Data Science Modeling I	
STAT 301	Introduction to Statistical Methods	
STAT 302	Accelerated Introduction to Statistical Methods	
STAT 324	Introductory Applied Statistics for Engineers	
STAT 371	Introductory Applied Statistics for the Life Sciences	
<b>Statistical Language</b>		<b>1</b>
STAT 303	R for Statistics I	
<b>Regression Analysis, complete one option</b>		<b>3-4</b>
STAT 333	Applied Regression Analysis	
STAT 340	Data Science Modeling II	
<b>Probability, complete one option</b>		<b>3</b>
STAT/MATH 309	Introduction to Probability and Mathematical Statistics I	
STAT 311	Introduction to Theory and Methods of Mathematical Statistics I	
MATH 331	Introductory Probability	
STAT/MATH 431	Introduction to the Theory of Probability	
MATH 531	Probability Theory	
<b>Elective, complete one option</b>		<b>3</b>
STAT/MATH 310	Introduction to Probability and Mathematical Statistics II	
STAT 312	Introduction to Theory and Methods of Mathematical Statistics II	
STAT 349	Introduction to Time Series	
STAT 351	Introductory Nonparametric Statistics	
STAT 405	Data Science Computing Project	
STAT 411	An Introduction to Sample Survey Theory and Methods	
STAT 421	Applied Categorical Data Analysis	
STAT/M E 424	Statistical Experimental Design	
STAT 433	Data Science with R	
STAT 436	Statistical Data Visualization	
STAT 443	Classification and Regression Trees	
STAT 451	Introduction to Machine Learning and Statistical Pattern Classification	

STAT 453	Introduction to Deep Learning and Generative Models
STAT 456	Applied Multivariate Analysis
STAT 461	Financial Statistics
STAT/ COMP SCI 471	Introduction to Computational Statistics
STAT 479	Special Topics in Statistics
STAT 575	Statistical Methods for Spatial Data
STAT/B M I 641	Statistical Methods for Clinical Trials
STAT/B M I 642	Statistical Methods for Epidemiology

**Total Credits** **13**

### RESIDENCE AND QUALITY OF WORK

- At least 7 certificate credits must be completed in residence
- Minimum 2.000 GPA on all certificate courses

### CERTIFICATE COMPLETION REQUIREMENT

This undergraduate certificate must be completed concurrently with the student's undergraduate degree. Students cannot delay degree completion to complete the certificate.