

APPLIED DATA SCIENCE, UNIVERSITY CERTIFICATE

Program Requirements

CIP Code: 27.9999

Code	Title	Hours
Certificate Requirements		
<i>Introductory Statistics Requirements</i>		
STA 270	Applied Statistics	3-4
or STA 215	Introduction to Statistical Reasoning	
<i>Core Courses</i>		
MAT 234	Calculus I	4
DSC 580	R and Introductory Data Mining	3
or STA 580	R and Introductory Data Mining	
Choose from one of the following:		3
CSC 170	Intro to Game Programming	
CSC 174	Introduction to Programming for Science & Engineering	
CSC 189	Computing Concepts and Programming	
CSC 190	Object- Oriented Programming I	
MAT 239	Linear Algebra and Matrices	3
or STA 340	Applied Regression Analysis	
<i>Statistics/Data Science Elective</i>		
Choose from three hours of the following:		3
DSC 390	Sports Analytics	
STA 375	Sampling Methods	
STA 480	Seminar in ___ (approved topics)	
STA 570	Quality Control & Reliability	
STA 575	Statistical Methods Using SAS	
<i>Domain Knowledge Electives</i>		
Choose two courses from one of the following categories:		6-7
<i>Anthropology and Sociology:</i>		
ANT 371	Primate Ecology & Sociality	
SOC 232	Social Statistics	
SOC 310	Population and Society	
SOC 395	Research Methods in Sociology	
<i>Biology and Environmental Health Sciences:</i>		
EHS 280 & EHS 370	One Health: Global Environmental Public Health and Environmental Disease Detectives: Epidemiology	
BIO 315 & BIO 533	Genetics and Bioinformatics: Principles and Applications ¹	
BIO 316 & BIO 532	Ecology and Conservation Biology ¹	
<i>Computer Information Systems:</i>		
CIS 335	Data Base Management ¹	
CIS 430	Business Data Mining	
or BUS 304	Essentials of MIS	
<i>Computer Science and Informatics:</i>		
CSC 310	Data Structures ¹	
CSC 313	Database Systems ¹	

CSC 581	Machine Learning
INF 314	MS Office & Data Analysis ¹
<i>Government:</i>	
POL 280	Research and Writing in Political Science ¹
POL 400W	Capstone Course in Political Science
POL 440	Public Opinion & Voting Behavior
<i>Geosciences:</i>	
GEO 351	Geoscience Data and Techniques ¹
GEO 353	Geographic Information Systems
GEO 453	Advanced GIS
GEO 456	Remote Sensing
GEO 458	Advanced Geographic Imagery
<i>Physics:</i>	
PHY 315	Electrical Circuits ¹
PHY 406	¹
PHY 460	Classical Mechanics
<i>Psychology:</i>	
PSY 240	Scientific Literacy in Psychology ¹
PSY 315	Sensation and Perception
or PSY 315L	Sensation and Perception Lab
PSY 340W	Research Literacy in Psychology
PSY 590	Tests and Measurements
Total Hours	25-27

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Requires a pre-requisite course