

# Data Science Foundations (Certificate)

This online/on-campus program is well suited for working professionals who have some formal training in Computer Science and/or Statistics and wish to acquire a basic understanding of data science. Applicants are expected to have an accredited Bachelor of Science degree in either a sciences or engineering discipline, Computer Science or Statistics. A minimum GPA of 3.0, on a 4-point scale, is also expected. The GRE is not required for admission.

Financial aid is not available through our program. Interested applicants will need to review other means of assistance, if needed.

## Certificate in Data Science Foundations

Code	Title	Hours	Counts towards
<b>Required Courses</b>		<b>6-9</b>	
Complete a minimum of two courses from "Core Courses" listed below			
<b>Elective Courses</b>		<b>3-6</b>	
Complete minimum of one course from "Elective Courses" listed below			
<b>Total Hours</b>		<b>12</b>	

### Required Courses

Code	Title	Hours	Counts towards
<b>Select minimum of two courses from the following:</b> <sup>1</sup>		<b>6-9</b>	
CSC 505	Design and Analysis Of Algorithms		
CSC 541	Advanced Data Structures		
ST 517	Applied Statistical Methods I		
ST 563	Introduction to Statistical Learning		

### Elective Courses

Code	Title	Hours	Counts towards
<b>Select minimum of one course from the following</b>		<b>3-6</b>	
CSC 522	Automated Learning and Data Analysis <sup>2</sup>		
CSC 540	Database Management concepts and Systems		

CSC 591	Special Topics In Computer Science (Topics include: Data Driven Business Intelligence; Graph Data Mining; Spatial and Temporal Data Mining)
ST 540	Applied Bayesian Analysis

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- Students must take at least one ST and one CSC course
  - Credit cannot be given for both CSC 522 Automated Learning and Data Analysis and ST 563 Introduction to Statistical Learning

## Faculty

### Lecturer

Tiffany M. Barnes

Donald L. Bitzer

Rada Yuryevna Chirkova

Jon Doyle

Rudra Dutta

Edward F. Gehringer

Xiaohui Gu

Christopher Graham Healey

James C. Lester II

Timothy James Menzies

Rainer Frank Mueller

Harilaos George Perros

Michael A. Rappa

Douglas S. Reeves

Gregg Evan Rothermel

Georgios N. Rouskas

Nagiza Faridovna Samatova

Carla Diane Savage

Xipeng Shen

Munindar P. Singh

Matthias F. M. Stallmann

Mladen Alan Vouk

Laurie A. Williams  
Dennis R. Bahler  
Min Chi  
William H. Enck  
Vincent W. Freeh  
Zhishan Guo  
Kook Han  
Khaled Abdel Hamid Harfoush  
Steffen Heber  
Arnav Harish Jhala  
Sandeep Kuttal  
Edgar Lobaton  
Noboru Matsuda  
K. Anyanwu Ogan  
David L. Roberts  
Donald R. Sheehy  
Sharma Valliyil Thankachan  
Ranga Raju Vatsavai  
Benjamin Allen Watson  
Anupam Das  
Guoliang Jin  
Alexandros Kapravelos  
Jung-Eun Kim  
Jiajia Li  
Xu Liu  
Collin Francis Lynch  
Christopher Robin Martens  
John-Paul William Ore  
Christopher Joseph Parnin  
Thomason William Price  
Asst Professor  
Bradley Galloway Reaves  
Alessandra Scafuro  
Muhammad Shahzad  
Kathryn Thomasset Stolee  
Man Ki Yoon

Ruozhou Yu  
Ignacio Xavier Dominguez  
Jason Tyler King  
Tzvetelina Battestilli  
Jamie Allison Jennings  
Jessica Young Schmidt  
Bita Akram  
Suzanne M. Balik  
Tzvetelina Battestilli  
Ignacio Xavier Dominguez  
Patrick A. Dreher  
Sarah Smith Heckman  
Jamie Allison Jennings  
Shuyin Jiao  
Shuyin Jiao  
Jason Tyler King  
Jessica Young Schmidt  
David Brian Sturgill  
Ketchiozo Thierry Wandji  
Wu-show Chou  
Edward Willmore Davis Jr.  
Robert Joseph Fornaro  
Thomas Lynn Honeycutt  
David Franklin McAllister  
Woodrow Robbins  
William James Stewart  
Alan Lee Tharp  
David J. Thuente

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## Adjunct professors

Robert Loftin  
Bradford Wayne Mott

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Adam Gaweda  
Alexander Card

Sterling Mark Mcleod

Xiaorui Liu

Yuchen Liu