

DATA ANALYTICS (DIGITAL AGRICULTURE) - MASTER OF DATA ANALYTICS (ONLINE)

The admission requirements for the degree program requires incoming students to have a bachelor degree and a minimum mathematical preparation at the level of Linear Algebra (MATH 2415 Introduction to Linear Algebra or equivalent course, such as E E 200 Linear Algebra, Probability and Statistics Applications).

The curriculum for the degree program is composed of 30 graduate credits.

Prefix	Title	Credits
Foundation		
C S 453	Python Programming I	3
or C S 454	Python Programming II	
A ST 511	Statistical Methods for Data Analytics	3
Select one of the following courses		3
C S 458	R Programming I	
A ST 515	Statistical Analysis with R	
Methodologies		
C S 508	Introduction to Data Mining	3
C S 519	Applied Machine Learning I	3
or E E 565	Machine Learning I	
Select one of the following courses		3
C S 502	Database Management Systems I	
BCIS 575	Database Management Systems	
ICT 458	Web Development and Database Applications	
Advanced Topics and Applications		
Choose nine credits from the following:		9
A ST 555	Applied Multivariate Analysis	
A ST 616	Computational Statistics	
ASTR 630	Advanced Methods in Astrophysics	
BCIS 566	Business Analytics II	
BCIS 585	Enterprise Resource Planning & Business Processes	
BIOL 566	Advanced Bioinformatics and NCBI Database	
C S 506	Computer Graphics I	
or ICT 460	Advanced Software Development Concepts	
C S 509	Bioinformatics Programming	
C S 516	Bioinformatics	
C S 582	Database Management Systems II	
E E 596	Digital Image Processing	
I E 545	Characterizing Time-Dependent Engineering Data	
or BCIS 561	Business Analytics I	
I E 515	Stochastic Processes Modeling	
or I E 522	Queuing Systems	
I E 567	Design and Implementation of Discrete-Event Simulation	
ENGL 543	Multimedia Theory and Production	
or COMM 550	Seminar in Communication Technologies	
MATH 518	Fourier Series and Boundary Value Problems	
or STAT 535	Elementary Stochastic Processes	
SOCI 5150	Seminar in Social Networks	

SOCI 5155	Seminar in Text Analysis for the Social Sciences
SOCI 5160	Seminar in Data Visualization
AGRO 620	Instrumentation in Agronomy
AXED 5130	Advanced Agricultural Mechanization
SOIL 652	Advanced Soil Physics
Capstone Experience	
Select one of the following courses	
C S 598	Master's Project
MATH 599	Master's Thesis
A ST 598	Special Research Problems
E E 598	Master's Technical Report
I E 599	Master's Thesis
Internship	
Specific Requirement for Digital Agriculture Concentration	
C S 508	Introduction to Data Mining
SOIL 652	Advanced Soil Physics
AXED 5130	Advanced Agricultural Mechanization
AGRO 620	Instrumentation in Agronomy
Total Credits	30

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

Fall		Credits
A ST 511	Statistical Methods for Data Analytics	3
C S 453	Python Programming I	3
C S 508	Introduction to Data Mining	3
Credits		9
Spring		
C S 519	Applied Machine Learning I	3
C S 458	R Programming I	3
Take one of the following		3
AXED 5130	Advanced Agricultural Mechanization	
SOIL 652	Advanced Soil Physics	
AGRO 620	Instrumentation in Agronomy	
Credits		9

Second Year

Fall		
Two remaining Digital Agriculture Courses		6
C S 502	Database Management Systems I	3
or ICT 458	or Web Development and Database Applications	
Credits		9
Spring		
Choose onf from the following		3
C S 598	Master's Project	
MATH 599	Master's Thesis	
A ST 598	Special Research Problems	
E E 598	Master's Technical Report	
I E 599	Master's Thesis	

Internship

Credits	3
Total Credits	30