

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

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

Prefix	Title	Credits
<b>Foundation</b>		
CSCI 4520	Python Programming I	3
or CSCI 4525	Python Programming II	
A ST 511	Statistical Methods for Data Analytics	3
Select one of the following courses 3		
CSCI 4530	R Programming I	
A ST 515	Statistical Analysis with R	
<b>Methodologies</b>		
CSCI 5415	Introduction to Data Mining	3
CSCI 5420	Applied Machine Learning I	3
or E E 565	Machine Learning I	
Select one of the following courses 3		
CSCI 5140	Database Management Systems I	
BCIS 575	Database Management Systems	
ICT 458	Web Development and Database Applications	
<b>Advanced Topics and Applications</b>		
Choose nine credits from the following: 9		
A ST 555	Applied Multivariate Analysis	
A ST 616	Computational Statistics	
ASTR 630	Statistical and Numerical Methods in Astrophysics	
BCIS 566	Business Analytics II	
BIOL 566	Advanced Bioinformatics and NCBI Database	
CSCI 5410	Computer Graphics I	
or ICT 460	Advanced Software Development Concepts	
CSCI 5310	Bioinformatics Programming	
CSCI 5305	Bioinformatics	
CSCI 5810	Advanced Software Engineering	
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 5220	Fourier Series and Boundary Value Problems	
or STAT 5230	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		3
CSCI 5994	Master's Project	
MATH 5999	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

CSCI 5415	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
CSCI 4520	Python Programming I	3
CSCI 5415	Introduction to Data Mining	3
<b>Credits</b>		<b>9</b>

### Spring

CSCI 5420	Applied Machine Learning I	3
CSCI 4530	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	
<b>Credits</b>		<b>9</b>

### Second Year

Fall		Credits
Two remaining Digital Agriculture Courses		6
CSCI 5140	Database Management Systems I	3
or ICT 458	or Web Development and Database Applications	
<b>Credits</b>		<b>9</b>

### Spring

Choose onf from the following 3		
CSCI 5994	Master's Project	
MATH 5999	Master's Thesis	
A ST 598	Special Research Problems	
E E 598	Master's Technical Report	
I E 599	Master's Thesis	
Internship		
<b>Credits</b>		<b>3</b>
<b>Total Credits</b>		<b>30</b>