



**Bachelor of Science in:
Data Science**

For Students Following the:
2020-2021 catalog

Name:
Student ID:
Catalog Year:

SUPPORT COURSES (3 Hours)

Course	Pre-req	Credits	Term	Grade
ECO 201	Principles of Microeconomics	Completion of one college-level MAT course	3	

INFORMATICS CORE COURSES (9 Hours)

Course	Pre-req	Credits	Term	Grade
INF 120	Elementary Programming (or placement)	MAT 102 or placement	3	
INF 128	Principles of Informatics		3	
INF 286	Introduction to Web Development	MAT 103 & pre-req or co-req of INF 110 or INF 120 or CSC 260	3	

COMPUTER SCIENCE CORE COURSES (15 Hours)

Course	Pre-req	Credits	Term	Grade
CSC 260	Object-Oriented Programming I	MAT 103 & INF 110 or INF 120 or CSC 270	3	
CSC 360	Object-Oriented Programming II	CSC 260 & MAT 119 (≥ B-)	3	
CSC 350	Database Programming	CSC 360	3	
CSC 364	Data Structures and Algorithms	CSC 360	3	
CSC 425	Artificial Intelligence	CSC 364 & STA 205, STA 205R or STA 250	3	

MATH AND STATISTICS COURSES (18 Hours)

Course	Pre-req	Credits	Term	Grade
MAT 128	Calculus A	MAT 119 (≥ B-)	3	
MAT 227	Calculus B	MAT 128	3	
MAT 228	Calculus C	MAT 227	3	

OR

MAT 129	Calculus I	MAT 119 (≥ B-)	4	
MAT 229	Calculus II	MAT 129 or MAT 227	5	

AND

MAT 234	Linear Algebra	MAT 228 or MAT 229	3	
STA 250	Probability and Statistics I	MAT 129 or Co-req MAT 227	3	
STA 341	Statistics II	STA 250	3	

DATA SCIENCE CORE COURSES (16-19 Hours)

Course	Pre-req	Credits	Term	Grade
DSC 101	Introduction to Data Science		1	
DSC 200	Data Wrangling	INF 286, & STA 205 or STA 205R or STA 250 & introductory programming (e.g. INF 120 or CSC 260)	3	
DSC 311	Data Analytics & Visualization	DSC 200 & STA 250	3	
DSC 411	Data Mining	CSC 364 & STA 250	3	
DSC 421	Big Data	DSC 411 & pre-req or co-req of CSC 350	3	
DSC 496	Data Science Capstone	DSC 311 & DSC 421 & co-req of BIO 292 or DSC 292	3	
BIO 292	Introduction to Research in Biology	Instructor Consent	0	
OR				
DSC 292	Introductory Research Experience in DSC	Department Consent	0 - 3	

Students will select ONE of the following application areas to fulfill their major requirements.

BUSINESS INFORMATION SYSTEMS APPLICATION AREA (15 Hours)

Course	Pre-req	Credits	Term	Grade

OFFICE USE ONLY

Approved Exceptions
Successful ECO 201 CLEP Exam

OFFICE USE ONLY

Approved Exceptions
Successful INF 120 CPLE

OFFICE USE ONLY

Successful INF 286 CPLE

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Approved Exceptions
Successful CSC 260 CPLE
Successful CSC 360 CPLE

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Successful MAT 129 CLEP Exam

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Approved Exceptions

BIS 275	Introduction to Business Analysis		3		
BIS 300	Management Information Systems	Junior Standing or BUS 101 or BIS 275; & STA 212 or STA 205 or STA 205R or STA 250; & INF 101 or BIS 101 or BI Department Consent	3		
BIS 330	IT Project Management	BIS 275 or BIS 300	3		
BIS 384	Business Analytics	BIS 380 or DSC 311	3		
BIS 420	Business Intelligence & Enterprise Appl.	BIS 300 & Junior Standing & Certified Business or COI major or minor or Department Consent	3		

GEOGRAPHIC INFORMATION SYSTEMS APPLICATION AREA (13 Hours)

Course	Pre-req	Credits	Term	Grade
GEO 415	Cartography	Sophomore Standing	3	
GEO 418	Geographic Information Systems	Sophomore Standing	4	
GEO 419	Remote Sensing of Environment	Sophomore Standing	3	
GEO 518	Geographic Information Analysis	GEO 418	3	

BIOLOGICAL SCIENCES APPLICATION AREA (11-12 Hours)

Course	Pre-req	Credits	Term	Grade
BIO 150 w/ BIO 150L	Introduction to Biology I and Laboratory	MAT 101 or Placement & co-req of BIO 150L	4	
BIO 151 w/ BIO 151L	Introduction to Biology II and Laboratory	BIO 150 & co-req of BIO 151L	4	
BIO 304	General Ecology	BIO 150 & BIO 151	3	
OR BIO 349 w/ BIO 349L	Genetics and Laboratory	BIO 151 & CHE 121 (≥ C-) & co-req of BIO 349L	4	

Students will select TWO of the following courses to fulfill their major requirements.

GUIDED ELECTIVES (6 Hours) - Choose 2

Some electives are offered for variable credit; you will need a minimum of two different courses from the electives section for a minimum of 6 credit hours. DSC 494 may be repeated for credit toward the guided electives if topics vary. No more than 6 hours of DSC 392/399/492/499 can count toward the DSC major.

Course	Pre-req	Credits	Term	Grade
ASE 230	Server-Side Programming	INF 286	3	
CSC 362	Computer Systems	CSC 360	3	
CSC 402	Advanced Programming Methods	CSC 362 & CSC 364	3	
CSC 450	Database Systems	CSC 350 & CSC 364	3	
CSC 460	Operating Systems	CSC 362 & CSC 364	3	
CSC 464	Design & Analysis of Algorithms	CSC 364 & MAT 385	3	
CSC 482	Computer Security	CSC 362	3	
DSC 396	Data Science Practicum	2.5 Cumulative GPA, DSC 311	1 - 3	
DSC 431	Network Analysis	STA 250, MAT 234, & CSC 364	3	
DSC 494	Advanced Topics: Data Science	Varies with Topic	1 - 3	
DSC 499	Advanced Independent Study: Data Science	Department Consent	1 - 3	
MAT 325	Differential Equations	MAT 228 or MAT 229	3	
MAT 329	Calculus III	MAT 228 or MAT 229	3	
MAT 375	Applied Mathematical Models	MAT 129 or MAT 227 & STA 205 or STA 250	3	
STA 312	Elementary Survey Sampling	STA 205 or STA 250	3	
STA 316	Regression Analysis	STA 305 or STA 250; or STA 205 (≥ B-)	3	
STA 317	Introduction to Time Series Analysis	STA 305 or STA 316 or STA 341	3	
STA 327	Categorical Data Analysis	STA 205 or STA 305 (≥ B-); or STA 250, STA 314, or STA 341	3	
STA 340	Probability II	MAT 228 or MAT 229 & STA 250	3	
STA 360	Statistical Computing	STA 305 or any 300 level STA course or Instructor Consent	3	
STA 370	Introduction to Statistical Consulting	Instructor Consent & STA 314 or STA 341	3	

Successful BIS 300 DSST

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Students must have a grade of "C-" or better to meet pre-requisites for all courses unless otherwise indicated. Students also must earn a grade of "C-" or better in all courses that apply to the major and a minimum 2.00 major GPA. Please consult with your advisor and the appropriate University Course Catalog for all other degree requirements.