

SAMPLE 4-YEAR PLAN: DATA SCIENCE B.S.

Northern Kentucky University

This is an example of one way a student can complete this program in four years if the student requires no remedial courses.

MAJOR: Data Science

FIRST YEAR	Fall Semester		Spring Semester	
	<p><i>Get to know your fellow students by attending departmental social events and student research talks. Make sure you allow time in your programming courses for experimentation and fun; that is the best way to learn.</i></p> <p>*INF 120 is recommended but not required to fulfill this Gen Ed. Students who test out of this course can take a different science course.</p>	Gen Ed: Scientific and Quantitative Inquiry; Mathematics and Statistics; MAT 128 Calculus A	3	MAT 227 Calculus B
Gen Ed: Scientific and Quantitative Inquiry; Natural Sciences without lab; INF 120 Elementary Programming*		3	CSC 260 Object-Oriented Programming I	3
Gen Ed: Individual and Society; INF 128 Principles of Informatics		3	CSC 260L Object-Oriented Programming Lab (<i>recommended</i>)	0-1
INF 282 Introduction to Databases		3	STA 250 Probability and Statistics I	3
Gen Ed: Communication; Oral		3	Gen Ed: Communication; Written I	3
DSC 101 Introduction to Data Science		1	Gen Ed: Culture and Creativity I	3
TOTAL		16	TOTAL	15-16
SECOND YEAR		Fall Semester		Spring Semester
<p><i>Speak with your advisor and 120-121 professors about possible co-op and research opportunities. Think carefully as you choose a minor. Try out for the programming team.</i></p>	MAT 228 Calculus C	3	DSC 311 Data Analytics	3
	CSC 360 Object Oriented Programming II	3	CSC 364 Data Structures and Algorithms	3
	Gen Ed: Individual and Society; ECO 201 Principles of Microeconomics	3	BIS 300 Management Information Systems	3
	BIS 275 Introduction to Business Analysis	3	STA 341 Statistics II	3
	Gen Ed: Communication; Written II	3	Gen Ed: Scientific and Quantitative Inquiry; Natural Sciences with lab	4
	TOTAL	15	TOTAL	16
THIRD YEAR	Fall Semester		Spring Semester	
<p><i>Make a point to read professional publications like the Communications of the ACM, to stay abreast of new developments in the field. Consider becoming a mentor to newer students.</i></p>	DSC 321 Data Visualization	3	DSC 411 Data Mining	3
	Elective	3	Guided elective 300 level or above	3
	CSC 450 Database Management Systems	3	BIS 330 IT Project Management	3
	BIS 384 Business Analytics	3	MAT 234 Linear Algebra	3
	Gen Ed: Global Viewpoints	3	Gen Ed: Culture and Creativity II	3
TOTAL	15	TOTAL	15	
FOURTH YEAR	Fall Semester		Spring Semester	
<p><i>Attend programs run by Career Services to get your resume in shape and polish your interviewing skills.</i></p>	DSC 421 Big Data	3	DSC 496 Data Science Capstone	3
	BIS 430 Workflow Design and Management	3	Guided elective 300 level or above	3
	Guided elective 300 level or above	3	Elective*	3-4
	CSC elective 300 level or above	3	Gen Ed: Self and Society; Cultural Pluralism	3
	Elective	3		
TOTAL	15	TOTAL	13	
			GRAND TOTAL OF CREDITS	120

Notes:

As part of the data science program, a student will have an "automatic" minor in computer science. This plan is for students who enter NKU with a mathematics ALEKS score placing them in Calculus A. *Students with a lower score will need to take additional mathematics.*

Guided electives can be chosen from a list of BIS, CSC, MAT, and STA classes found in the course catalog.

A total of 45 credits in 300-level or above courses is required for graduation.

A total of 120 credits is required for graduation.

* In order to reach 120 hours, if you do not take CSC 260L, you will need 4 hours of elective.