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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. Students may be required to complete additional pre-requisite courses based on placement.

MAJOR: Data Science

FIRST YEAR *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.* *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.	**Fall Semester**		**Spring Semester**	
	DSC 101 Introduction to Data Science	1	CSC 260 Object-Oriented Programming I	3
	Gen Ed: Communication; Oral	3	CSC 260L Object-Oriented Programming Lab (*recommended*)	0-1
	Gen Ed: Individual and Society; INF 128 Principles of Informatics	3	Gen Ed: Communication; Written I	3
	Gen Ed: Scientific and Quantitative Inquiry; Mathematics and Statistics; MAT 128 Calculus A	3	Gen Ed: Cultural Pluralism	3
	Gen Ed: Scientific and Quantitative Inquiry; Natural Sciences without lab; INF 120 Elementary Programming*	3	MAT 227 Calculus B	3
	INF 286 Introduction to Web Development	3	STA 250 Probability and Statistics I	3
	TOTAL	**16**	**TOTAL**	**15-16**
SECOND YEAR *Speak with your advisor and professors about possible co-op and research opportunities. Think carefully as you choose a minor. Try out for the programming team.*	**Fall Semester**		**Spring Semester**	
	CSC 360 Object Oriented Programming II	3	Application Area**	3-4
	DSC 200 Data Wrangling	3	CSC 364 Data Structures and Algorithms	3
	Gen Ed: Communication; Written II	3	DSC 311 Data Analytics and Visualization	3
	Gen Ed: Scientific and Quantitative Inquiry; Natural Sciences with lab (BIO 150 and BIO 150L if Biological Sciences Application Area)	4	Gen Ed: Culture and Creativity I	3
	MAT 228 Calculus C	3	Free Elective	3
	TOTAL	**16**	**TOTAL**	**15-16**
THIRD YEAR *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.*	**Fall Semester**		**Spring Semester**	
	Application Area**	3-4	Application Area** (if needed) or Free Elective 300-level or above	3
	CSC 350 Database Programming	3	DSC 411 Data Mining	3
	CSC 425, Artificial Intelligence	3	Gen Ed: Culture and Creativity II	3
	Gen Ed: Global Viewpoints	3	Guided Elective (STA 316) *	3
	MAT 234 Linear Algebra	3	STA 341 Statistics II	3
	TOTAL	**15-16**	**TOTAL**	**15**
FOURTH YEAR *Attend programs run by Career Services to get your resume in shape and polish your interviewing skills.*	**Fall Semester**		**Spring Semester**	
	Application Area (if BIS Application Area)** or Free Elective 300-level or above	2-3	BIO 202 or DSC 292, Research	0-3
	Application Area** (if needed) or Free Elective 300-level or above	3	DSC 496 Data Science Capstone	3
	DSC 421 Big Data	3	Free Elective	3
	Free Elective 300-level or above	3	Free Elective	3
	Gen Ed: Individual and Society; ECO 201 Principles of Microeconomics	3	Guided Elective: (STA3XX) *	3
	TOTAL	**14-15**	**TOTAL**	**12-15**

GRAND TOTAL OF CREDITS	**120**

Notes:

This degree plan is for students who are admitted with ALEKS or ACT score placing the student in MAT 128. Students with a lower score will need to take additional mathematics.

A secondary area of study (minor, second major, or focus area) is required for graduation.

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

A total of 120 credits is required for graduation.

** Guided electives can be chosen from a list of DSC, ASE, CSC, MAT, and STA classes found in the course catalog. This program provides students with a minor in CS and a minor in Statistics if the courses in parenthesis is taken. In addition, students selecting the GIS or BIS Application Area will also earn an area of focus in that discipline. This program automatically satisfy the secondary area of study requirement.*

*** This program requires completion of one of the following three application areas: Business Information Systems, Geographical Information Systems, or Biological Sciences.*

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