

Data Science (DASC) 8-Semester *Suggested* Plan of Study: NorthArk – U of A 2+2

Year 1 – Fall (NorthArk)		Year 1 – Spring (NorthArk)	
MAT 1233	Pre-Calculus (MATH 1305)	MAT 2204	Analytic Geometry & Calculus I (MATH 2405)
ENGL 1013	Composition I	ENGL 1033	Gen Ed, Technical Composition II
		GNED NNN3	Gen Ed, History or Government
DASC 1003 DVSC 1003	Intro to Data Science (incl. CoE, WCOB, ARSC Persp.) Intro Data Science Y1S1	DASC 1223 DVSC 1013	Role of Data Science in Today's World Intermediate Data Science Y1S2
DASC 1104 DVSC 1104 Or CIS 1603 + CIS 2011	Programming Languages for Data Science (Python, R) Programming Languages for Data Science Y1S1 Intro to Programming R for Data Science	GNED NNN3	Gen Ed, Fine Arts Elective
13 hours	Total	16 hours	Total

Year 2 – Fall (NorthArk)		Year 2 – Spring (NorthArk)	
MAT 2304	<i>Analytical Geometry & Calculus II (MATH 2305)</i>	GNED NNN3	Gen Ed, Social Science Elective
DASC 2213 DVSC 2213	<i>Data Visualization & Communication Data Visualization & Communication</i>	GNED NNN4	Gen Ed, Science Elective
DASC 2113 DVSC 2113	<i>Principles & Techniques of Data Science Principles & Techniques of Data Science</i>	DASC 2103 CIS 2203	<i>Data Structures & Algorithms Data Structures & Algorithm Design</i>
GNED NNN3	Gen Ed, Social Science Elective	DASC 2203 DVSC 2203	<i>Data Management & Data Base Data Management & Data Base</i>
GNED NNN4	Gen Ed, Science Elective	GNED NNN3	Gen Ed, Fine Arts Elective
17 hours	Total	16 hours	Total

Year 3 – Fall (U of A)		Year 3 – Spring (U of A)	
DASC 2594	Multivariable Math for Data Scientists	SEVI 2053	Business Foundations (DASC-only section)
INEG 2313	Applied Probability and Statistics for Engineers I	INEG 2333	Applied Probability and Statistics for Engineers II
DASC 2133	Data Privacy & Ethics	DASC 3203	Optimization Methods in Data Science
DASC 3103	Cloud Computing & Big Data	DASC 3213	Statistical Learning
RRRR NNN3	[Required Concentration Course]	RRRR NNN3	[Required Concentration Course]
16 hours	Total	15 hours	Total

Year 4 – Fall (U of A)		Year 4 – Spring (U of A)	
DASC 4892/H	Data Science Practicum I	DASC 4993/H	Data Science Practicum II
DASC 4113/H	Machine Learning	ECON 2143/H	Gen Ed, Basic Economics: Theory and Practice
DASC 4123	Social Problems (Issues) in DASC & Analytics	CCCC NNN3	Concentration Elective
RRRR NNN3	[Required Concentration Course]	CCCC NNN3	Concentration Elective
CCCC NNN3	[Concentration Elective]	CCCC NNN3	[Concentration Elective]
14 hours	Total	16 hours	Total

Total Hours by Course Category	
121 hours	Total
65 hours	Data Science Core - Required (New + Existing Courses)
21 hours	Data Science – Concentration Required + Elective
36 hours	Gen Ed
0 hours	General Elective

120 Total Credit Hours of which 21 Credit Hours are Concentration-specific Hours.
Concentration-specific hours are notational for hours and when in this *suggested* Plan of Study.

Note 1: DASC 1204 Object-Oriented Programming (concepts) are taught in DVSC 1104 (NorthArk), CIS 1603 (NorthArk), and DSVC 2113 (NorthArk).

Note 2: “ECON 2143/H Basic Economics: Theory and Practice” can be met by ECON 2013 + ECON 2023 but only one may be used as meeting GenEd Social Science.

Note 3: MAT 1305 Pre-calculus (recommended) OR MAT 1233 Trig (if MAT 1223 College Algebra completed with a “C” or better) (NorthArk).

Note 4: DASC 2103 Data Structures & Algorithms moved from “Core” to CMPA-required for all students starting Fall 2023.

Note 5: First two years (NorthArk): DASC 2594 and Probability & Statistics sequence will be taken in Year 3
DASC and DSCV are paired with their equivalents in the proper sequence. CIS 2203 Data Structures & Algorithm Design (NorthArk) = DASC 2103 Data Structures & Algorithms for CMPA Concentration.

Note 6: (STAT 3013 Intro. to Probability + STAT 3003 Statistical Methods) can be substituted for (INEG 2323 + INEG 2314).

Note 7: STAT 3013 or STAT 3003 or INEG 2323 or INEG 2314 satisfy WCOB/BUSI 1033 Data Analysis & Interpretation.

Note 8: Students doing an Honors Thesis use DASC 400VH Honors Thesis in Data Science (at least 1 credit hour) in Year 4 and usually Year 4 – Spring.