

B.S. Data Science (Core)

8-Semester *Suggested* Plan of Study
 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

Year 1 – Fall		Year 1 -- Spring	
MATH 2554C	Calculus I	MATH 2564C	Calculus II
ENGL 1013	Composition I	ECON 2143/H	Gen Ed, Basic Economics: Theory and Practice
DASC 1003/H	Intro to Data Science (incl. CoE, WCOB, ARSC Perspectives)	ENGL 1033	Gen Ed, Technical Composition II
DASC 1104	Programming Languages for Data Science (Python, R)	DASC 1204	Intro to Object Oriented Programming for DASC (Java)
		DASC 1223/H	Role of Data Science in Today's World
14 hours	Total	17 hours	Total
7 hours	Data Science Core - Required (New + Existing Courses)	11 hours	Data Science Core - Required (N + E Courses)
0 hours	Data Science – Concentration Required + Elective	0 hours	Data Science – Concentration Required + Elective
7 hours	Gen Ed	6 hours	Gen Ed
0 hours	General Elective	0 hours	General Elective

Note 1: "DASC 1011 Success In Data Science Studies" is required if not "Cal I ready."
 Note 2: "MATH 2043 Survey of Calculus" requires "MATH 2445 Calculus I with Review" in place of "MATH 2554C Calculus I."
 Note 3: "DASC 1003/H Introduction to Data Science" satisfies ISYS 1120/1123.
 Note 4: "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.

Year 2 – Fall		Year 2 -- Spring	
DASC 2594	Multivariable Math for Data Scientists	SEVI 2053	Business Foundations (DASC-only section)
INEG 2323	Probability & Stochastic Processes for Industrial Engineers	INEG 2314/H	Statistics for Industrial Engineers I
DASC 2213	Data Visualization & Communication	GNEE NNN4	Gen Ed, Science
DASC 2113	Principles & Techniques of Data Science	DASC 2203	Data Management & Data Base
GNEE NNN3	Gen Ed, History or Government	ECON 3033	Microeconomic Theory
16 hours	Total	17 hours	Total
14 hours	Data Science Core – Required (New + Existing Courses)	9 hours	Data Science Core – Required (N + E Courses)
0 hours	Data Science – Concentration Required + Elective	3 hours	Data Science – Concentration Required + Elective
3 hours	Gen Ed	4 hours	Gen Ed
0 hours	General Elective	0 hours	General Elective

Note 5: (STAT 3013 Intro. to Probability + STAT 3003 Statistical Methods) can be substituted for (INEG 2323 + INEG 2314).
 Note 6: STAT 3013 or STAT 3003 or INEG 2323 or INEG 2314 satisfy WCOB/BUSI 1033 Data Analysis & Interpretation.
 Note 7: DASC 2103 Data Structures & Algorithms moved from "Core" to CMAA-required for all students starting Fall 2023.
 Note 8: ECON 3033 or 3133 can be taken in in Spring Year 2 or Fall Year 3. The order is unimportant if they are both taken before the other courses in Econ concentration.

Year 3 – Fall		Year 3 -- Spring	
DASC 2133	Data Ethics & Privacy (replaces PHIL 3103)	DASC 3203	Optimization Methods in Data Science
DASC 3103/H	Cloud Computing & Big Data	DASC 3213	Statistical Learning
GNEE NNN3	Gen Ed, Social Science	ECON 4743	Introduction to Econometrics
GNEE NNN4	Gen Ed, Science	GNEE NNN3	Gen Ed, Social Science
ECON 3133	Macroeconomic Theory	GNEE NNN3	Gen Ed, Fine Arts
16 hours	Total	15 hours	Total
3 hours	Data Science Core - Required (New + Existing Courses)	6 hours	Data Science Core - Required (N + E Courses)
3 hours	Data Science – Concentration Required + Elective	3 hours	Data Science – Concentration Required + Elective
10 hours	Gen Ed	6 hours	Gen Ed
0 hours	General Elective	0 hours	General Elective

Year 4 – Fall		Year 4 -- Spring	
DASC 4892/H	Data Science Practicum I	DASC 4993/H	Data Science Practicum II
DASC 4113/H	Machine Learning	ECON XXX3	ECON Elective
DASC 4123	Social Problems (Issues) in DASC & Analytics	ECON XXX3	ECON Elective
ECON 4753	Forecasting		
ECON 4763	Economic Analytics		
14 hours	Total	9 hours	Total
8 hours	Data Science Core - Required (New + Existing Courses)	3 hours	Data Science Core - Required (N + E Courses)
6 hours	Data Science – Concentration Required + Elective	6 hours	Data Science – Concentration Required + Elective
0 hours	Gen Ed	0 hours	Gen Ed
0 hours	General Elective	0 hours	General Elective

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.

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