Checklist for Major in Data Analytics

(Available through the Class of 2025)

We recommend to students interested in the data analytics major: take CSC 120 as early as possible, because it is part of the major required sequence CSC 120, CSC 233, CSC 333.

Required Courses (13)

Requirement	Course	Fall	Spring	Prerequisite	Semester Planned	Completed
Statistics Programming	CSC 120	x	x	MAT 111, or placement MAT 114 or higher		
Large Data Sets	CSC 233		x	CSC 120		
Machine Learning	CSC 333	x		CSC 233		
Calculus I	MAT 131H or	x		MAT 114 or placement		
	MAT 117	x	x	MAT 114 or placement		
Calculus II	MAT 132H or		x	MAT 131H/117		
	MAT 118	x	x	MAT 131H/117		
Statistics	ECO 115	x	x	BUS 100		
	PSY 224	x	x			
	SOC 300	x				
Discrete Structures	MAT 202	x		MAT 118/132H or coreq.		
Probability Theory	MAT 208		x	MAT 118 or MAT 132H		
Linear Algebra	MAT 203		x	MAT 202		
Intro. to Programming	CSC 117	x				
Data Visualization	CSC 130		x	Statistics		
Databases & Spreadsheets, or Database Mgmt. Systems	CSC 175 or	x		CSC 113 or CSC 117		
	CSC 321		x	CSC 117		
Econometrics I	ECO 215		x	Statistics, Calculus I and BUS 100 or CSC 113 or CSC 175		

Electives (2)

Requirement	Course	Fall	Spring	Prerequisite	Semester Planned	Completed
Take a minimum of 2 of:						
Accounting Info. Systems	ACC 211	x	x	ACC 125/126		
Fraud Examination	ACC 331	x		ACC 125/126 and MGT 100		
Forensic Accounting	ACC 332		x	ACC/MGT 331		
Bioinformatics	BIO 260		Even	BIO 160 or CSC 120		
Simulation	CSC 261		Even	CSC 117		
Operations Research	CSC 327	Even		CSC 305, or corequisite		
Sports Data Analysis	ECO 216		Alt	ECO 215		
Financial Modeling	FIN 330		Alt	FIN 325 and ECO 115		
Financial Econometrics	FIN 430		x	ECO 215		
World Population Issues	GEO 108	Alt				
Decision Analytics for Mgrs	MGT 230			MGT 100 and Statistics		
Research Methods in Psych	PSY 225	x	x	PSY 101 and PSY 224		
Soc. Research Methods	SOC 465		x	SOC 121		

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Suggested Schedule for Data Analytics Major

See Assumption's Catalog for additional information, e.g. Core Curriculum requirements.
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First Year: Fall 20____	**Spring 20____**
1. CSC 120 Stats Programming (any)	1. CSC 233 Large Data Sets (Spring)
2. MAT 131H Honors Calculus I (Fall) or MAT 117 Calculus (any semester), or follow your math placement	2. MAT 132H Honors Calculus II (Spring) or MAT 118 Calculus II (any semester) (Finish Calculus I and II as soon as possible)
3.	3. Statistics ECO 115 (any) or PSY 224 (any) or SOC 300 (Fall)
4.	4.
5.	5.
6. BUS 100 Excel (1-credit, if ECO 115 in Spring)	

Second Year: Fall 20____	**Spring 20____**
1. CSC 333 Machine Learning (Fall)	1. MAT 208 Probability Theory (Spring)
2. MAT 202 Discrete Structures (Fall)	2. CSC 130 Data Visualization (Spring)
3. CSC 117 Intro to Programming (Fall)	3.
4.	4.
5.	5.

Third Year: Fall 20____	**Spring 20____**
1. ECO 215 Econometrics (Fall)	1. MAT 203 Linear Algebra (Spring)
2. CSC 175 Databases and Spreadsheets (Fall) or CSC 321 Database Management Systems (Spring)	2. Data Analytics Major Elective #1/2
3.	3.
4.	4.
5.	5.

Fourth Year: Fall 20____	**Spring 20____**
1. Data Analytics Major Elective #2/2	1
2	2.
3.	3.
4.	4.
5.	5.

Also recommended:

Systems Analysis and Design, CSC 301, prerequisite CSC 117 (Fall, odd years)
Data Structures, CSC 305, prerequisite CSC 250 (Fall)
Java Programming, CSC 317, prerequisite CSC 305 (Spring, odd years)
Networking and Data Communications, CSC/CYB 230, prerequisite CYB 115 or CSC 117/120 (Fall)
Business Ethics, PHI 260, prerequisite PHI 100 and 151, OR Professional and Ethical Responsibilities in the Sports Industry, MGT 350, prerequisite MGT 342 (Spring)

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