BU Mathematics BA-Data Science Track Checklist

Effective Summer 2019

Required and Elective Courses (56 credits)			
Required Core Data Science Courses (15 credits)	**Credits**	**Grade**	**Semester/Year**
DATASCI 110 Introduction to Data Science	3		
DATASCI 210 Data Visualization	3		
DATASCI 310 Databases for Big Data	3		
DATASCI 410 Machine Learning	3		
DATASCI 420 Advanced Data Science	3		
Required Core Math Courses (23 credits)	**Credits**	**Grade**	**Semester/Year**
MATH 125 Calculus 1	4		
MATH 126 Calculus 2	4		
MATH 185 Discrete Mathematics	3		
MATH 240 Statistical Methods	3		
MATH 141 Introduction to Statistics or MATH 241 Probability and Statistics	3		
MATH 314 Linear Algebra	3		
MATH 340 Statistical Software	3		
Required Core CS courses (9 credits)	**Credits**	**Grade**	**Semester/Year**
COMPSCI 115 Python Programming (3)	3		
COMPSCI 215 Advanced Python Programming (3)	3		
COMPSCI 357 Data Base Design	3		
Elective Courses (Select 9 credits from the list below)			
COMPSCI 121 Object Oriented Programming in Java	4		
COMPSCI 122 Graphic Interface in Java	4		
COMPSCI 221 Advanced Java	3		
COMPSCI 348 Data Mining	3		
COMPSCI 457 Advanced Data Base Design	3		
DIGFOR 219 Introduction to Linux for Digital Forensics	3		
MATH 225 Calculus 3	3		
MATH 320 Programming in Mathematics	3		
MATH 342 Design and Analysis of Experiments	3		
MATH 343 Applied Regression Analysis	3		
MATH 410 Math Modeling	3		

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	COURSE GEPs SEM/YR GRADE	COURSE GEPs SEM/YR GRADE	COURSE GEPs SEM/YR GRADE	COURSE GEPs SEM/YR GRADE
Learning Outcome 1 **Communication** **7 GEPs needed (3 disciplines)**	ENGLISH 101 3			
Learning Outcome 2 **Information Literacy** **2 GEPs needed**				
Learning Outcome 3 **Analytical/Quantitative** **5 GEPs needed (2 disciplines)**	Math 125 2	Math 126 3		
Learning Outcome 4 **Culture/History** **5 GEPs needed (2 disciplines)**				
Learning Outcome 5 **Natural Sciences** **5 GEPs needed (2 disciplines)**	Math 125 1			
Learning Outcome 6 **Social Sciences** **5 GEPs needed (2 disciplines)**				
Learning Outcome 7 **Arts and Humanities** **5 GEPs needed (2 disciplines)**				
Learning Outcome 8 **Second Language** **2 GEPs needed**				
Learning Outcome 9 **Health** **2 GEPs needed**				
Learning Outcome 10 **Citizenship** **2 GEPs needed**				

MATH BA-DATA SCIENCE TRACK COMPLETION PLAN

Cr.	First Semester	Cr.	Second Semester
4	MATH 125 Calculus I	4	MATH 126 Calculus II
3	COMPSCI 115 Python Programming	3	COMPSCI 215 Advanced Python Programming
3	ENGLISH 101 Foundations of Writing	3	DATASCI 110 Introduction to Data Science
3	MATH 141 Introduction to Statistics	3	General Education Course
1	INTSTUDY 100 University Seminar	3	General Education Course
14	Total Semester Credits	16	Total Semester Credits
Cr.	Third Semester	Cr.	Fourth Semester
3	MATH 185 Discrete Mathematics	3	MATH 240 Statistical Methods
4	DATASCI 210 Data Visualization	3	COMPSCI 357 Data Base Design
3	INTSTUDY 231 Tech Writing (suggested)	3	General Education Course
3	General Education Course	3	General Education Course
2	General Education Course	3	General Education Course
15	Total Semester Credits	15	Total Semester Credits
Cr.	Fifth Semester	Cr.	Sixth Semester
3	DATASCI 310 Databases for Big Data	3	DATASCI 410 Machine Learning
3	MATH 340 Statistical Software (or Major Elective)	3	COMPSCI 348 Data Mining
3	MATH 314 Linear Algebra	3	Major Elective
3	General Education Course	3	General Education Course
3	General Education Course	3	General Education Course
15	Total Semester Credits	15	Total Semester Credits
Cr.	Seventh Semester	Cr.	Eighth Semester
3	DATASCI 420 Advanced Data Science	3	Free Elective
3	Major Elective (or MATH 340)	3	Free Elective
3	Major Elective	3	Free Elective
3	General Education Course	3	Free Elective
3	General Education Course	3	Free Elective
15	Total Semester Credits	15	Total Semester Credits

TOTAL CREDITS: 120

IMPORTANT NOTES:

General Education courses shown as an example only. The number will depend on the choice of courses.

Major Electives shown as an example only; consult advisor for current schedule of department electives.

Number of Free Electives will depend on general education and major elective choices.