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# Data Science Track

— November 2, 2022 —

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# What

## **is this all about?**

We would like to raise math majors' awareness of the Data Science Track that was established by the math department a few years ago.

## **is Data Science?**

Data Science is a somewhat loosely defined term which typically refers to an interdisciplinary field employing techniques from math, computer science and engineering to extract knowledge from data and apply that knowledge to facilitate (automated) actions/decision making.

# Why

## **should we care?**

Due to technological advances, these days almost every industry is inundated with data which has the potential to lead to significant (application specific) improvements. However, there is a shortage of specialists capable of handling all those data. Hence, knowing data science substantially improves your marketability.

# How

## **do I go about learning data science?**

Math department has established a Data Science Track which specifies coursework needed to complete the track. The coursework also teaches you foundational subjects underlying some of the data science methodology.

# BS in Mathematics, Data Science Track

## *Lower division*

**PHYS 170/170L, PHYS 272/272L, MATH 244 or 253A**

## *Upper division math*

24 credit hours in mathematics courses numbered between 300 to 479 and 5 courses hours in additional mathematics courses numbered above 300 to 479 or appropriate non-introductory courses in related fields including:

**MATH 301, 307 or 311, 321, 331, 407, 442 or 475, 471, and 472**

## *ICS courses*

**ICS 211, 235, and 435**

*Recommended:* ICS 484, ICS 311

*Additional requirements:* 6 credit hours in writing-intensive mathematics courses, 12 credit hours in courses numbered above 400. Students must also complete MATH 480

# Sample path through track

Year 1		Year 2		Year 3		Year 4	
Fall		Fall		Fall		Fall	
MATH 241 or 251A (FQ)	4	MATH 243 or 253A	3	MATH 331	3	MATH Elective 300+	3
ICS 111	4	MATH 321	3	CHEM 161	3	MATH 471	3
FW	3	PHYS 170 (DP)	4	CHEM 161L	1	ICS 235	3
FG (A/B/C)	3	PHYS 170L (DY)	1	MATH Elective 300+	3	Elective 300+	3
DA/DH/DL	3	HSL 101	3	DS	3	DS	3
				HSL 201	3		
Spring		Spring		Spring		Spring	
MATH 242 or 252A	4	MATH 244 or 253A	3	MATH 442 or 475	3	ICS 435	3
MATH 301	3	MATH 311 or 307	3	MATH 407	4	MATH 472	3
ICS 211	4	PHYS 272	3	CHEM 162	3	MATH 480	2
FG (A/B/C)	3	PHYS 272L	1	CHEM 162L	1	DB	3
		DA/DH/DL	3	HSL 202	3	Elective 300+	3
		HSL 102	3				

**Thank you!**