

Topics for an Introductory Data Science Course

Michael A. Posner, *Villanova University*

April Kerby-Helm, *Winona State University*

Contact: michael.posner@villanova.edu

Introductory data science courses are appearing at colleges, universities, and high schools around the country and the world. What topics do we cover in these courses, and how and why are these decisions made? How do we consider the background knowledge of our students and how they hope to utilize their skills after this course (whether professionally, additional courses, or as an engaged citizen)? In addition, the course is being taught by computer scientists, statisticians, business analysts, mathematicians, journalists, etc. Each of these disciplines approaches the topics differently. What upskilling is required of instructors to prepare them to integrate material from academic disciplines in which they were not trained into the course? How much, if any, cross-disciplinary collaboration, and discussion occurs or should occur in designing this course? Participants in this birds-of-a-feather will share their decision processes and choices about introductory data science courses that they teach or are designing. This includes choices made about the content as well as whether and how upskilling occurs. They will review and refine a list of current data science topics created based on national surveys of data science instructors as well as a review of curriculum guidelines. Close attention will be paid to differing language between data science instructors from different academic backgrounds. We welcome new and experienced data science instructors, educators planning on or interested in teaching such a course.

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