



**EPIC-DS Pre**

**Survey Flow**



#### EmbeddedData

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ah\_idValue will be set from Panel or URL.  
institutionValue will be set from Panel or URL.  
departmentValue will be set from Panel or URL.  
course\_nameValue will be set from Panel or URL.  
course\_descrValue will be set from Panel or URL.  
course\_prefix\_numValue will be set from Panel or URL.  
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sec\_id\_9Value will be set from Panel or URL.  
sec\_id\_10Value will be set from Panel or URL.

Standard: required\_masder\_consent (1 Question)

Standard: required\_course\_info (12 Questions)

Standard: required\_verify\_section (1 Question)

Standard: required\_course\_section\_items (5 Questions)

Standard: optional\_add\_questions (0 Questions)

Page Break

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Start of Block: required\_masder\_consent

masder\_consent **Environment, Pedagogy, Institution, Course Inventory for Data Science Pre-Course Inventory** **Title of research study:** Developing Validated Instruments to Measure Student/Faculty Attitudes in Undergraduate Statistics and Data Science Education **IRB #:** IRB-FY2025-79 **Investigator:** Michael A. Posner, Professor of Statistics and Data Science, michael.posner@villanova.edu, 610-519-3016 **Key Information:** This study involves research and is voluntary. You can stop at any time without penalty. **Purpose of the Research:** We are gathering data on attitudes toward data science. We are interested in (1) what these attitudes are, and (2) how attitudes relate to student and instructor characteristics and classroom environment. The following inventory asks about the learning environment, pedagogical practices, and other course characteristics. **Procedures:** The entire survey should take about 10 minutes to complete. We request that you complete every item, but you are not required to do so. Your survey responses may be linked with other data collected as a part of this study. You have been asked to give us your name and email address. The purpose is to verify your participation in this study, and to link your survey responses with any other responses you complete as part of this project. The EPIC inventory is administered in a pre-course and post-course format which we will link together. A dataset that excludes all personal identifying information will be made publicly available for educational researchers. The study investigator may grant access to approved researchers to use identifiable data for validated studies after a Data Use Agreement has been signed. **Risks / Discomforts:** This study is educational research and does not have any known associated risks. **Benefits to Prospective Subjects and/or to Others:** By filling out this survey, you may gain deeper insights into your pedagogical practices. Your responses may also aid data science education researchers in improving instruction in data science courses. For Villanova-specific resources and other mental health resources, visit the Villanova IRB website. To view these online, navigate to [irb.villanova.edu](http://irb.villanova.edu) and click "Participating in a Research Study." As a participant in research, you have rights. Visit the Villanova IRB website to read the Participant Bill of Rights. To read online, navigate to [irb.villanova.edu](http://irb.villanova.edu) and click "Participating in a Research Study."



**Consent will be given through clicking “I accept” on Qualtrics surveys, by selecting one of the following options:** I have read and understand the terms and conditions of this research study and agree to participate. I understand my participation is voluntary and that I may withdraw at any time without penalty. By clicking "yes" I am indicating my permission to participate in this study.

- Yes: I agree to participate. (1)
- No: I do not agree to participate. (2)

End of Block: required\_masder\_consent

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Start of Block: required\_course\_info

info You are filling out the pre EPIC-DS for `#{e://Field/CourseName}` (`#{e://Field/CoursePrefixNum}`).

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audience This course is designed *primarily* for what type of students? (Choose the option that *best* fits your course.)

- General audience (1)
- Data Science (2)
- Computer Science (3)
- Statistics or Biostatistics (4)
- Mathematics or Engineering (5)
- Life Sciences (6)
- Business (7)
- Health Sciences (including Nursing) (8)
- Social Sciences (including Psychology) (9)





math\_prereq What is the **required mathematics** prerequisite for this course? (Please check all that apply.)

- None (0)
- Calculus (1)
- Other Math (Besides Calculus, such as High School Algebra or College Algebra) (2)
- Placement Exam (3)



stat\_prereq What is the **required statistics** prerequisite for this course?

- None (0)
- Introductory Statistics Course (1)
- Statistics Course Beyond the Introductory Level (2)





cs\_prereq What is the **required computer science** prerequisite for this course?

- None (0)
  - Introductory Computer Science Course (1)
  - Computer Science Course Beyond the Introductory Level (2)
- 

textbook List the name(s) of the required **textbook(s)** that is used for this course.

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course\_credits How many **credits/units** is this course? (If this course has non-standard units, please adjust to standard units. Note, 3 or 4 credits are common values.)

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course\_weeks For how many **weeks** does this course meet? (Please include finals week if you have one.)

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student\_support Is there **additional** support available to students for this course beyond instructor or teaching assistants' office hours? Please select all that apply.

- No, there is no additional support. (0)
- Yes, free tutoring is offered for this course. (1)
- Yes, the course has undergraduate supplemental instructors or learning assistants. (2)
- Yes, a corequisite support course is offered, but not required. (3)
- Yes, a corequisite support course is required. (4)
- Yes, this course is offered as a stretch course (a one-semester course split over 2 semesters). (5)





software What type of **technology** are students *required* to use in this course for working with data? Please exclude technology used solely to store data (e.g., Excel, Google Sheets, etc.). Select all that apply.

- Python (0)
- R (1)
- WEKA (2)
- Power BI (3)
- JMP (4)
- Tableau / Qlik / Other (5)
- SAS / SPSS (6)
- Excel Miner (7)
- Other (12) \_\_\_\_\_





lab\_req Do you have **lab / recitation / discussion** sections for this course?

- No (0)
- Yes, led by the course instructor (1)
- Yes, led by a graduate teaching assistant(s) who is not the course instructor (2)
- Yes, led by undergraduate teaching assistant(s) (3)

*Skip To: End of Block If lab\_req = No*

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lab\_length How many minutes per week do students spend in lab / recitation / discussion?

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End of Block: required\_course\_info

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Start of Block: required\_verify\_section





sections\_taught You are completing the EPIC-DS pre-survey for the following sections of  $\{e://Field/course\_prefix\_num\}$ :  $\{e://Field/course\_name\}$  ( $\{e://Field/course\_descr\}$ ) . The next page will ask you about the first section listed below.

Section  $\{e://Field/sec\_id\_1\}$ :  $\{e://Field/sec\_desc\_1\}$  (1)

Display this choice:

If sec\_id\_2 Is Not Empty

Section  $\{e://Field/sec\_id\_2\}$ :  $\{e://Field/sec\_desc\_2\}$  (2)

Display this choice:

If sec\_id\_3 Is Not Empty

Section  $\{e://Field/sec\_id\_3\}$ :  $\{e://Field/sec\_desc\_3\}$  (3)

Display this choice:

If sec\_id\_4 Is Not Empty

Section  $\{e://Field/sec\_id\_4\}$ :  $\{e://Field/sec\_desc\_4\}$  (4)

Display this choice:

If sec\_id\_5 Is Not Empty

Section  $\{e://Field/sec\_id\_5\}$ :  $\{e://Field/sec\_desc\_5\}$  (6)

Display this choice:

If sec\_id\_6 Is Not Empty

Section  $\{e://Field/sec\_id\_6\}$ :  $\{e://Field/sec\_desc\_6\}$  (7)

Display this choice:



If sec\_id\_7 Is Not Empty

- Section  $\{e://Field/sec\_id\_7\}$ :  $\{e://Field/sec\_desc\_7\}$  (8)

Display this choice:

If sec\_id\_8 Is Not Empty

- Section  $\{e://Field/sec\_id\_8\}$ :  $\{e://Field/sec\_desc\_8\}$  (9)

Display this choice:

If sec\_id\_9 Is Not Empty

- Section  $\{e://Field/sec\_id\_9\}$ :  $\{e://Field/sec\_desc\_9\}$  (10)

Display this choice:

If sec\_id\_10 Is Not Empty

- Section  $\{e://Field/sec\_id\_10\}$ :  $\{e://Field/sec\_desc\_10\}$  (11)

End of Block: required\_verify\_section

Start of Block: required\_course\_section\_items

section\_reminder Please answer the following questions based on the  $\{Im://Field/1\}$  section of your course.





classsize\_pre How many students do you expect to enroll in this section? (This value will be used to calculate response rate.)

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hon\_sec Is this section an honors section?

- Yes (1)
- No (2)

modaltiy In which **modality** is your class being offered?

- Face-to-face (1)
- Virtual, Asynchronous (2)
- Virtual, Synchronous (3)
- Hyflex (synchronous, but virtual OR face-to-face participation) (4)
- Hybrid (some face-to-face synchronous component, and some asynchronous component) (5)

*Skip To: End of Block If modaltiy = Virtual, Asynchronous*



section\_times When does this section meet? Do *not* include lab / recitation / discussion meeting times. Please use only as many rows as needed to completely list the schedule for this section.

	Day of Week	Start Time		End Time	
		Hour (1)	Minute (2)	Hour (1)	Minute (2)



First Meeting (1)	▼ Monday (1 ... Sunday (7)				
Second Meeting (2)	▼ Monday (1 ... Sunday (7)				
Third Meeting (3)	▼ Monday (1 ... Sunday (7)				
Fourth Meeting (4)	▼ Monday (1 ... Sunday (7)				
Fifth Meeting (5)	▼ Monday (1 ... Sunday (7)				
Sixth Meeting (6)	▼ Monday (1 ... Sunday (7)				



End of Block: required\_course\_section\_items

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Start of Block: optional\_add\_questions

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