IDS 701: Unifying Data Science

Spring 2023 Course Evaluation

This report includes all responses received to this survey in the last 120 days.

Please indicate your level of agreement with the following statements regarding IDS 701.

Scale 1-5, where 1 = strongly disagree and 5 = strongly agree
Note: these items are sorted by mean (from highest to lowest).

Field	Mean	SD	Min	Max	N
Grading was fair, appropriate, and consistent.	4.14	0.87	2.00	5.00	22
The assignments were appropriate.	4.05	0.88	2.00	5.00	22
The assignments were appropriate for group work.	4.00	1.00	1.00	5.00	22
This course increased my knowledge in the subject.	3.95	1.02	1.00	5.00	22
This course increased my interest in the subject.	3.95	1.11	1.00	5.00	22
The course objectives were clear.	3.95	1.02	1.00	5.00	22
The readings were clear and appropriate.	3.59	0.89	2.00	5.00	22

22 Responses

Field	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
This course increased my interest in the subject.	5%	5%	23%	27%	41%
Grading was fair, appropriate, and consistent.	0%	5%	18%	36%	41%
This course increased my knowledge in the subject.	5%	0%	27%	32%	36%
The assignments were appropriate for group work.	5%	5%	9%	50%	32%
The assignments were appropriate.	0%	9%	9%	50%	32%
The course objectives were clear.	5%	5%	14%	45%	32%

The readings were clear and appropriate.	0%	9%	41%	32%	18%

Please provide any explanations for the responses about IDS 701, especially if you indicated disagree or strongly disagree.

I feel like the approach of PDS in teaching UDS is not very effective. Some heavy readings between Tuesday and Thursday also make it quite hard to be immersed in the reading. The "jump-around" of the book chapters also makes the reading sometimes hard to grasp. As most of the students come from interdisciplinary backgrounds, I might suggest explaining AB testing first and how it relates to causal inference and then spread out from there, just to put a lot of the stuff into context and focus.

I just think Nick's teaching style works more for PDS than UDS. UDS is more theoretical, and I think we need to spend lecture time doing more lectures and discussion. Basically, mirror Kyle's teaching style, because his teaching supplemented the gaps of comprehension that the readings could never clear up. PDS was all code related, so it made sense as to why that was the case that lecture time was always minimal.

I felt that UDS was a course that started off with a clear end goal, it felt more confusing throughout the semester. Additionally, as much as the readings were helpful in the beginning, they seemed to be less relevant, made little sense, were confusing, etc as the semester went along (especially the end, when the readings didn't really make a lot of sense and caused more confusion than required.

I really enjoyed this class, much more so than PDS in the fall. I mention PDS because I think that class is why some people struggled to grasp the concepts in this class. There are a lot of elements that seem similar between the two, and I think it creates a perception that this class should enjoy the same very practical and deliberate walk through hard skills. With that in mind, I greatly enjoy the style and pace of UDS. It challenges students to work on their own to close knowledge gaps and solve the unknowns. That's useful and fun.

I like all styles except for group assignment

I feel that the course was really unstructured and it was difficult to tie up the reading material with the course objectives and the problem space. I also think we did nothing in classes except discussing what we wrote on our reflections. I felt we mostly just chatted in class rather than learn more in-depth stuff about the topics. We studied A/B testing but I am not sure how to apply it practically. I think a lot of focus was on discussing abstract ideas but there was no application. I honestly did not learn much from coming to class, and it really affected my motivation about the program.

The objective was clear but the path to the objective less so.

There was often too much readings.

Please rate your level of agreement with the following statements regarding the professor of IDS 701.

Scale 1-5, where 1 = strongly disagree and 5 = strongly agree
Note: these items are sorted by mean (from highest to lowest).

Field	Mean	SD	Min	Max	N
The professor was enthusiastic about the course.	4.32	0.76	3.00	5.00	22
The professor demonstrated knowledge of the subject matter.	4.32	0.97	1.00	5.00	22
The professor showed genuine concern for me.	4.23	0.79	3.00	5.00	22
The professor encouraged feedback from the class.	4.09	0.90	2.00	5.00	22
The professor was effective in communicating course content.	3.91	1.00	2.00	5.00	22
The professor was organized and well prepared.	3.82	0.94	1.00	5.00	22

22 Responses

Field	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The professor demonstrated knowledge of the subject matter.	5%	0%	9%	32%	55%
The professor was enthusiastic about the course.	0%	0%	18%	32%	50%
The professor showed genuine concern for me.	0%	0%	23%	32%	45%
The professor encouraged feedback from the class.	0%	5%	23%	32%	41%
The professor was effective in communicating course content.	0%	9%	27%	27%	36%
The professor was organized and well prepared.	5%	0%	27%	45%	23%

Please provide any explanations for the responses about IDS 701 and the professor for that course, especially if you indicated disagree or strongly disagree.

Nick is clearly an expert at this matter.

I just think Nick's teaching style works more for PDS than UDS. UDS is more theoretical, and I think we need to spend lecture time doing more lectures and discussion. Basically, mirror Kyle's teaching style, because his teaching supplemented the gaps of comprehension that the readings could never clear up. PDS was all code related, so it made sense as to why that was the case that lecture time was always minimal.

Nick was an exceptional professor; however, compared to IDS 720: PDS, I really found this semester to be less structured, harder to understand, and even more difficult to understand how this would be applied in the real world (outside of the control environment of a class) (outside of any social/political issues). Additionally, I would say that there was definitely a change in terms of participation due to how off-putting the class structure was. The class seemed to become more difficult/harder to understand after survey results compared to the first half of the semester. Additionally, when the reading reflection were on what we found interesting and what questions we had, it seemed as though if questions were not part of the discussion/presented during class, they were irrelevant. I also think the reading reflection became more cumbersome as a result. Rather than enjoying the material, it became more dreadful.

You really should teach this course offset from ML. I know that's not possible, but some people's life choices this spring really sabotaged the environment at times. I thought Nick did a fantastic job overcoming that.

If you can tell us more coding skills, it will be better

I feel this course could have been taught by a subject specialist who could have taught us how to use these skills practically. Although the professor was probably an expert in some of these topics, I think there was very less to no teaching during the class - mostly we just discussed stuff and never addressed the main topics in details. I felt there was really less preparation for this class - some slides and having 0.5-1 hr of lecture might have helped. The flipped system was also not a great idea for this class. I like the professor in general and enjoyed his previous course, but I really did not enjoy this course.

It was a bit hard to follow the lecture.

Please indicate your overall rating of IDS 701 components.

Scale 1-5, where 1 = strongly disagree and 5 = strongly agree
Note: these items are sorted by mean (from highest to lowest).

Field	Mean	SD	Min	Max	N
Professor	4.00	1.04	2.00	5.00	22
My effort as a student	3.82	0.89	2.00	5.00	22
Assignments	3.71	1.08	1.00	5.00	21
Exams	3.55	1.12	2.00	5.00	22
Overall course	3.52	1.18	1.00	5.00	21
Group Work	3.50	1.08	2.00	5.00	22

TAs and other teaching supports	3.48	1.14	1.00	5.00	21
Texts / Readings	3.14	1.22	1.00	5.00	22

22 Responses

Field	Poor	Fair	Good	Very Good	Excellent
Professor	0%	9%	27%	18%	45%
Overall course	5%	10%	48%	5%	33%
Exams	0%	18%	41%	9%	32%
Assignments	5%	5%	33%	29%	29%
My effort as a student	0%	5%	36%	32%	27%
Group Work	0%	18%	41%	14%	27%
TAs and other teaching supports	5%	14%	33%	24%	24%
Texts / Readings	5%	32%	32%	9%	23%

Please provide any explanations for the responses above, especially if you indicated poor or fair.

The course is good, makes me learn a lot about causal inference and careful thinking before doing "data science".

As for my effort, it's hard for Nick to compete with machine learning. That handicaps all time available.

The readings are not always clear or seem verbose in explaining simple concepts. One of the TA is amazing but the other TA did not seem fully equipped for the job. She was also not very respectful to me. There has been times where I attended her office hour and she cut me off mid-sentence to move on to the next student.

To reiterate, the texts/readings became more cumbersome over time. Harder to understand, put into context, etc. For example, even though I didn't do well on the exam, I actually found the exam and the review sessions extremely helpful as it put everything into context. I did truly put forth a lot of effort but between the readings being hard to grasp and understanding how these impact outside of the classroom (outside of online/AB testing, and social/political issues), I found this course to be truly confusing.

The readings could have been shorter. Often times. a lot of these were mundane and would take insanely long time to read and comprehend to answer to 2 reflection questions which were often vague.

The readings were a little much at times, although the revised reflection form was a welcome change that provided focus. I also appreciate the balance of assignments tipping more to individual work.

The exam can include more content.

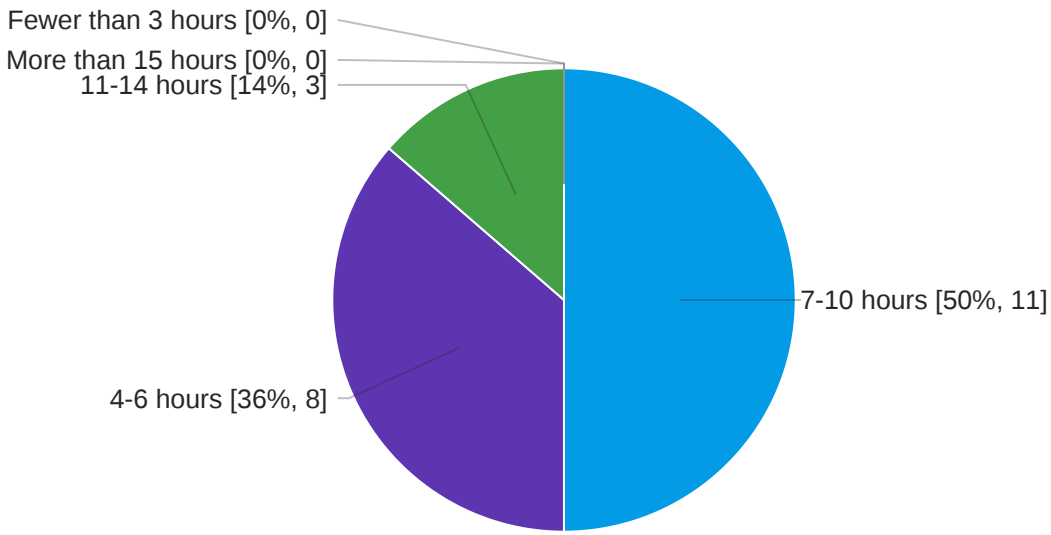
I work hard and I like this class

I felt it was just me working all the time. The reflections were too long and felt like a waste of time because most of my questions were never addressed even though we were asked to identify them. However, I appreciate that the professor changed the structure of the reflections to improve on this. Also, I am not learning much from the project because it is the same as the professor's last course (Practising Data Science)

The texts were convoluted and I think the class should have been better about preparing us for the readings.

There was not a good accessibility to the instructors.

On average, how many hours per week did you spend on IDS 701 out of class?



Would you recommend this course to other students?

Definitely Not [5%, 1] Probably Not [14%, 3] Not sure [23%, 5] Probably [27%, 6] Definitely [32%, 7]

Based on your experience in IDS 701, how much do you feel that you have improved in the following areas?

Scale 1-4, where 1 = not at all and 4 = a great deal

Note: these items are sorted by mean (from highest to lowest).

Field	Mean	SD	Min	Max	N
Applying technical, mathematical, statistical, and domain knowledge to real analysis problems	3.36	0.88	1.00	4.00	22
Working in teams of people with a variety of skills and backgrounds	3.09	0.90	1.00	4.00	22
Collaborative problem solving	3.05	0.93	1.00	4.00	22
Domain knowledge (e.g., economics, medical studies, engineering)	3.05	0.88	1.00	4.00	22
Mathematical / statistical skills and knowledge	3.05	0.84	1.00	4.00	21
Giving and receiving feedback	3.00	0.90	1.00	4.00	22
Technical skills (e.g., coding in Python)	2.77	0.90	1.00	4.00	22

22 Responses

Field	Not at all	A little	Some	A great deal
Applying technical, mathematical, statistical, and domain knowledge to real analysis problems	5%	14%	23%	59%
Collaborative problem solving	5%	27%	27%	41%
Working in teams of people with a variety of skills and backgrounds	5%	23%	32%	41%

Domain knowledge (e.g., economics, medical studies, engineering)	5%	23%	36%	36%
Mathematical / statistical skills and knowledge	5%	19%	43%	33%
Giving and receiving feedback	9%	14%	45%	32%
Technical skills (e.g., coding in Python)	9%	27%	41%	23%

What was the most important thing you learned or most important area of growth for you this semester? Why was this important to you?

interpreting causal questions and resulrs

Enforcing backward design in any project and producing the right question for a clearer objective.

Exploratory, proscriptive and predictive questions and how to match them to what stakeholders really need.

It was helpful to learn about AB testing and causal inference. I have received interview questions on AB testing.

The most important thing I learned this semester was the different components that go into truly understanding a problem and the possible solution to the problem. The most important area of growth for me this semester using technical skills to find answers to causal inference questions. Both of these areas were important to me because it helped me better understand how to break down problems were will deal with as data scientists.

Causal inference and all the confusion that comes with it. Potential outcomes framework. AB testing

One of the most valuable things I learned in this course was how to design and conduct experiments, perform A/B testing, and effectively tackle data science questions. The course's emphasis on critical thinking encouraged me to question everything, which has been incredibly beneficial. By challenging assumptions and scrutinizing data, I've gained a deeper understanding of the subject matter and how to approach complex problems.

I gained a much greater appreciation for tools, approaches, and aspects of causal inference. I don't think I genuinely understood when it was appropriate to evaluate the causality of different things, but I feel better now. I also now have a better understanding of when and where to challenge the findings of others.

I build a basic knowledge structure about A/B testing. I think I learned to think in a more interdisciplinary way.

I learn what is casual inference

Causal inference and experiments

dont procrastinate

understanding fixed effects and indicator variables and really understanding interpretations and how this can be helpful in a causal inference context

Learn new problem spaces to understand what I am interested in, and take less stress.

I enjoyed learning about the experimental designs and about what gives an experiment internal and external validity. But the language is really convoluted.

Causal inference.

What aspect of the class most critically contributed to your learning?

asking questions

The reading. I feel like I'm getting used to lengthy and text-heavy reading (in English) because of this class. (and also Kyle's class)

Lecture time when Nick went more in depth with some things. The test was excellent too. It really proved how much I understood.

I think the assignments were helpful to get a full understanding of the material.

I truly believe all review sessions helped put puzzle pieces together that were confusing throughout the semester.

The class discussions cleared a lot of my confusions. Also, the Trustworthy Online Controlled Experiments book greatly contributed.

he reading reflection structure introduced in the second part of the semester has been more effective than the previous one. During the first part of the semester, I found it challenging to articulate my thoughts on what I didn't understand in the readings. At times, the readings were relatively straightforward, and I had to resort to vague explanations to complete the task. However, the new reflection structure has helped me to better engage with the material and communicate my thoughts more clearly.

The lectures and discussions. Really outstanding.

Assignments and reflections are helpful.

I think the weekly assignment is helpful for me to review concepts

Nick provided very insightful reading and videos without overwhelming content.

readings

The midterm review was very helpful putting all the different topics in context and how they are all related to each other

Nothing - maybe I learnt a bit about how to interpret interaction terms.

The reading materials.

What could be improved in this class?

the readings and class structure could be more organized

The structure of a material. Also, the 3 meetings about making a good team can be moved into the MIDS workshop. Especially since none of the non-MIDS student team up with MIDS students.

I think using class time for a team charter thing was a bit weird. It should have been a workshop. Also use lecture time as time to do lectures.

The reading reflection is a pain because it took away my focus from the reading itself. I used to have time to take notes when reading to help me stay organized. But the reading reflection took significant time away from me as I am a slow writer. Additionally, the new version of reading reflection is way too long to be effective. I felt too stressed out with everything else towards the end of the semester and the LONG reading reflection did not help. I would much rather doing pop quizzes or weekly quizzes if the the goal is to ensure students read the materials. To be completely honest, reading reflections feel like a punishment for me after reading the readings, particularly when the reflections get too long.

More technical component to the class, readings definitely need to be more interesting, examples should be used outside of the normal political/social arena, using class time more effectively (in the sense of teams creation/charter seems like a bad fit for this class)

Please make the readings shorter. Also, please make the class lectures different than assigned readings. This is because towards the end of the semester, it was difficult to do the reading before every class and if the discussions were based on the reading, it was difficult to follow along. Nick did a great job towards the last quarter of the semester where his lectures were less associated with the previous days readings.

The course material is challenging, and many students find it difficult to grasp. While the readings and in-class assignments have been useful, it would greatly benefit us if the professor could adopt a more structured approach to teaching the material. Creating presentation slides for each topic and providing detailed explanations during lectures would be helpful. Unfortunately, the hybrid learning system employed in this class has not been as effective as it was in the practical data science course.

Student effort. Shameful.

I guess that maybe instead of asking students what questions they have, we can learn in a more collaborative way. We share a google doc (or another platform) and ask each student to answer other students' questions if they can.

I hope we can choose our own team members for group project

This class is great, but it's timing of assignments with Kyle's assignments often become overwhelming, and the ability to spend appropriate time on this class's assignments suffer. Additionally, the classes discussing teamwork and stakeholders is important, but felt disjointed and would have been better in MIDS workshop.

less reading

more stimulating assignments

I thought sometimes the assignments were ahead of the material which may have confused me at times

Everything to be honest. I think someone else with A/B testing knowledge should teach it - or this course should be changed into something else.

It would be great if some lecture notes can be provided, not the whole textbook citation.

Is there anything else you would like the professor of IDS 701 to know?

Thank you for the course, Nick!

I just think Nick's teaching style works more for PDS than UDS. UDS is more theoretical, and I think we need to spend lecture time doing more lectures and discussion. Basically, mirror Kyle's teaching style, because his teaching supplemented the gaps of comprehension that the readings could never clear up. Those are my two cents. Nick, you're the right professor for this course. I just think you need to switch your toolset for it. This is why I tend to be understanding towards academics who don't have degrees in education, because you're not trained to be educators in every aspect of education. You have not been trained in the way a Math teacher is trained. And a math teacher is not traineed in the way an ESL teacher is trained. The teaching of any subject is as much strategy as it is art. Every course is so drastically different, even if certain design principles still hold across them.

It would be helpful to get a bullet-point list of all the core concepts at the start of the semester as a study guide for students. This will not only help to study for the midterm, but also help students to take notes when they go through the readings.

I think if there are ways to give the readings ahead of time at the beginning of the semester and make everything open on gradescope so people can do it per their schedule, it would be extremely helpful. With ML, it is hard to make time for this class at times. Additionally, I would say it would be more beneficial if the readings had a purpose. Some of the readings didn't seem to have a clear intent behind it.

I understand several of the topics for this course were messy. If there is an organized structure to learning these materials later on, that would be really helpful

Unfortunately, the hybrid learning system employed in this class has not been as effective as it was in the practical data science course.

NO

Nick is great and I would like to continue taking classes with him.

na

More structure, more teaching time in class (lecture rather than flipped class room), slides instead of just discussion (sometimes it was very difficult to follow through)

The textbook was quite difficult to understand.

Is there anything else you would like the MIDS program to know about this course?

I think I have written some of the suggestions in the boxes above.

This course has the potential to be stupendously unmatched. It just needs some tweaks to reach that level of excellence. Nick is the right man for the job, the right mind, but I think he needs to switch his approach for this one.

I believe we should be able to pick our own teams for this class/this semester. I also don't think doing the charter and the team activities helped. Those activities would be better placed in a mandatory MIDS workshop than in class.

Although the professor is excellent, the course would be better taught rather than in a hybrid format where we do readings and only discuss a few things in class. While the hybrid model has some advantages, it is more challenging to engage with the material and participate in class discussions if you don't understand the readings anyway.

NO

na

I think we should cover the initial part of this course in the stats course last semester and have a more practical A/B testing and experimentation course instead of this.

The course contents are good, but it is a bit hard to follow everything.