JHU - Krieger School of Arts & Sciences / Whiting School of Engineering
ASEN.2025.Summer Project 2

Course: AS.110.110.77.SU25: Foundational Mathematics of Artificial Intelligence
Instructor: Apurva Nakade *
Response Rate: 13/19 (68.42 %)

1 - The overall quality of this course is:

Response Option	Weight	Frequency	Percent
Poor	(1)	0	0.00%
Weak	(2)	0	0.00%
Satisfactory	(3)	1	7.69%
Good	(4)	5	38.46%
Excellent	(5)	7	53.85%
N/A	(0)	0	0.00%

Percent Responses: 0 25 50 100

Means: Question 4.46 | School Level 4.41 | Department Level 4.31

Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
13/19 (68.42%)	4.46	0.66	5.00	1848	4.41	0.79	5.00	364	4.31	0.78	4.00

2 - The instructor's teaching effectiveness is:

Apurva Nakade

Response Option	Weight	Frequency	Percent
Poor	(1)	0	0.00%
Weak	(2)	0	0.00%
Satisfactory	(3)	0	0.00%
Good	(4)	5	38.46%
Excellent	(5)	8	61.54%
N/A	(0)	0	0.00%

Percent Responses: 0 25 50 100

Means: Question 4.62 | School Level 4.44 | Department Level 4.38

Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
13/19 (68.42%)	4.62	0.51	5.00	1878	4.44	0.81	5.00	377	4.38	0.83	5.00

3 - The intellectual challenge of this course is:

Response Option	Weight	Frequency	Percent
Poor	(1)	0	0.00%
Weak	(2)	0	0.00%
Satisfactory	(3)	0	0.00%
Good	(4)	8	61.54%
Excellent	(5)	5	38.46%
N/A	(0)	0	0.00%

Percent Responses: 0 25 50 100

Means: Question 4.38 | School Level 4.33 | Department Level 4.34

Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
13/19 (68.42%)	4.38	0.51	4.00	1837	4.33	0.78	4.00	361	4.34	0.79	5.00

4 - The teaching assistant for this course is:

Response Option	Weight	Frequency	Percent
Poor	(1)	0	0.00%
Weak	(2)	0	0.00%
Satisfactory	(3)	2	15.38%
Good	(4)	2	15.38%
Excellent	(5)	9	69.23%
N/A	(0)	0	0.00%

Percent Responses: 0 25 50 100

Means: Question 4.54 | School Level 4.51 | Department Level 4.36

Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
13/19 (68.42%)	4.54	0.78	5.00	1819	4.51	0.78	5.00	354	4.36	0.88	5.00

JHU - Krieger School of Arts & Sciences / Whiting School of Engineering
ASEN.2025.Summer Project 2

Course: AS.110.110.77.SU25: Foundational Mathematics of Artificial Intelligence
Instructor: Apurva Nakade *
Response Rate: 13/19 (68.42 %)

5 - Please enter the name of the TA you evaluated in question 4:

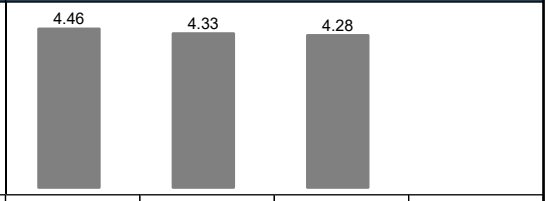
Response Rate	13/19 (68.42%)

- Ivy
- Ivy Zhang
- IVY
- Ivy Zhang
- Ivy Zhang
- Ivy Zhang
- Ivy Zhang
- Ivy Zhang
- Ivy
- Ivy Zhang
- Ivy Zhang
- Ivy
- Ivy Zhang

6 - Feedback on my work for this course is useful:

Response Option	Weight	Frequency	Percent	Percent Responses
Disagree strongly	(1)	0	0.00%	
Disagree somewhat	(2)	0	0.00%	
Neither agree nor disagree	(3)	1	7.69%	
Agree somewhat	(4)	5	38.46%	
Agree strongly	(5)	7	53.85%	
N/A	(0)	0	0.00%	

0 25 50 100

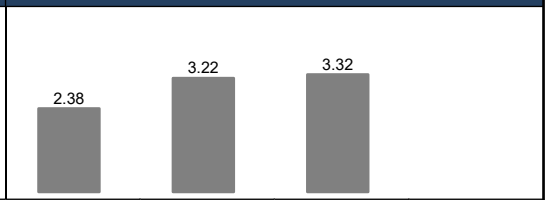


Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
13/19 (68.42%)	4.46	0.66	5.00	1822	4.33	0.86	5.00	359	4.28	0.87	4.00

7 - Compared to other Hopkins courses at this level, the workload for this course is:

Response Option	Weight	Frequency	Percent	Percent Responses
Much lighter	(1)	1	7.69%	
Somewhat lighter	(2)	3	23.08%	
Typical	(3)	4	30.77%	
Somewhat heavier	(4)	0	0.00%	
Much heavier	(5)	0	0.00%	
N/A	(0)	5	38.46%	

0 25 50 100



Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
13/19 (68.42%)	2.38	0.74	2.50	1828	3.22	0.93	3.00	360	3.32	0.86	3.00

JHU - Krieger School of Arts & Sciences / Whiting School of Engineering
ASEN.2025.Summer Project 2

Course: AS.110.110.77.SU25: Foundational Mathematics of Artificial Intelligence
Instructor: Apurva Nakade *
Response Rate: 13/19 (68.42 %)

8 - What are the best aspects of this course?	
Response Rate	12/19 (63.16%)

- I really like the way Mr. Apurva teaches us to code. How at first we code together, and then for homework, we do something similar on our owns to lock in what we learned.
- The lecturin part, I feel like we can be fully involved and spread out our mind to do in-class discussion and resolve each others problems.
- Approaching with many algorithms and theories, visualizing data and models, coding, presenting, applying it to real issues.
- This course is very intellectually challenging, and I really enjoy the group discussions of the material, as they are very engaging and lead to more learning overall.
- The best aspects is the open ended discussion we would have about topics
- Learning how to connect math to the codes and how it works and the math behind it.
- coding part and the lecture part
- Some of the data visualisations, as it allows you to truly understand some data and offers a different perspective to just numbers
- I had never done coding before, and this course, although challenging at times, did teach me a lot and provided me with an excellent base.
- Being able to code my own AI for the group projects.
- I liked how the course was split into 2, with the coding part and the math part.
- Learning new information that could be useful later in life

9 - What are the worst aspects of this course?	
Response Rate	12/19 (63.16%)

- The fact that it is short.
- We need to do reflection questions for the first week.
- Nothing
- I wish that we got to talk more about actual artificial intelligence in this course. Eventually, we get to discussing neural networks and other elements of AI processing, but in the beginning of the course it was disappointing how little we were talking about developed AI models like ChatGPT.
- The worst aspects is when the teacher would sometimes be looking down thinking how he would be planning the lesson while we were in class.
- Coding and not being able to keep up even after help.
- none
- Some ways of prediction can get quite repetitive and sometimes seem a bit redundant. For example, using two ways of prediction (random forest, decision tree) to achieve the same outcome.
- N/A
- No concerns.
- I disliked how we focused more on the code side of the AI.
- sometimes the pace of the course is a bit quick

10 - What would most improve this class?	
Response Rate	11/19 (57.89%)

- Making it longer.
- maybe more pactices
- I think it is just the lessons are too difficult for people who have never learned python before like me.
- I would have liked to discuss more about how the course material relates directly to the development and study of widely used AI models.
- Maybe more thought out lesson plans, more structure.
- When following the code to be able to go slower and ask questions.
- Some difference in the content covered in the morning and the afternoon e.g. the afternoon course can sometimes be something completely different to what was looked at in the morning.
- The amount of interaction between the students and the feedback given by the teacher on presentation.
- Learning more in depth about AIs that could recognize images, such as functions to see colors.
- This course could be improved by providing a more in-depth introduction to Python for those new to it.
- going slower sometimes would be good

JHU - Krieger School of Arts & Sciences / Whiting School of Engineering
ASEN.2025.Summer Project 2

Course: AS.110.110.77.SU25: Foundational Mathematics of Artificial Intelligence

Instructor: Apurva Nakade *

Response Rate: 13/19 (68.42 %)

11 - What should prospective students know about this course before enrolling? (You may comment on any aspect of this course such as assumed background, readings, grading systems, and so on.)

Response Rate	10/19 (52.63%)

- That it is a lot of coding. You don't need to know how to code beforehand, but you will spend a lot of time coding in the class.
- Their comprehension skills, mathematic skills, analyzing skills, problem solving skills and their proficiency in coding python just a little bit to easily get used to.
- This course requires no prior knowledge or experience with Python programming, but Python frequently. If you have no prior coding experience before taking this course, you may want to learn at least a little bit before taking it. This class is discussion-based and I would highly recommend taking notes, as a lot of new terms are introduced throughout the course. If you enjoy statistics and/or programming, this course is for you.
- Basic stats knowledge, because this definitely extended on basic stats, such as the math behind it or how stats can be used for more complex machine learning models.
- That there is less math than you think and that it is good to know a bit of code before.
- It's ok if they know nothing about programming, the professor will teach from the most basic idea
- They should have a basic understanding of Python, but even so, you pick up most necessary skills throughout the course.
- This course is practically all coding and no math.
- It is not an intense course, even the final project is low stakes.
- It is much better if you have done Python before.

12 - Why did you take a course this summer?

Response Rate	11/19 (57.89%)

- Because I like learning new things and meeting new people. Also to bolster my college application.
- I wanted to have new experiences in a summer program course like JH pre college program and this course it's suitable the most for me because I love math and AI and I want to do an occupation related to the field of AI.
- I took a course this summer in order to have some idea of what college life is like. I loved the idea of living at a college for a couple of weeks so that I could take a class with engaging material in a subject that I'm interested in, meet people from different backgrounds and with different interests than me, and learn lots of new and interesting things every day.
- Because the course name sounded interesting and I wanted to explore the campus a little bit while learning the college experience and what college level courses are like.
- To learn more about Math and how it can connect to AI tools.
- to develop my interest in AI
- I was wanting to further expand my academic horizons, and also wanted to get a taste of a different field of mathematics.
- I thought it would be interesting to expand my horizons.
- To learn more about AI to be skilled enough to create AI without the help of others.
- To experience the American college lifestyle.
- I was interested in learning some things related to AI

13 - Regarding your decision process to take a summer class, what were some of your obstacles/concerns?

Response Rate	10/19 (52.63%)

- Finding something that would fit in my schedule. I was in Chile for the month of June. I was trying to find something physics related. Il think the math in A.I course is really relate do physics though because a lot of probability is involved in both and A.I is used a lot for my physics homework.
- It takes me 2 weeks outside my hometown and that is a really new and challenging experience for me in the US alone without much knowledge.
- The distance, I live a little far from JHU and the commute time was a big challenge.
- If the codes would be more difficult and if I was able to keep up.
- Whether I can understand the models of machine learning and relevant coding when I know nothing about AI
- I was going into these area of mathematics without much prior knowledge, so I wasn't sure how much of the material I would already know.
- N/A
- There were not many options of what I could do after class other than the game room and gym.
- The course to take and the timings.
- Some concepts were hard to understand

JHU - Krieger School of Arts & Sciences / Whiting School of Engineering
ASEN.2025.Summer Project 2

Course: AS.110.110.77.SU25: Foundational Mathematics of Artificial Intelligence
Instructor: Apurva Nakade *
Response Rate: 13/19 (68.42 %)

14 - What other courses not currently offered during the summer would you like to see offered?	
Response Rate	9/19 (47.37%)

- A Nuclear Physics course would be awesome.
- I haven't found any yet.
- A intro to how stats is applied to other disciplinaries in the world(biology, healthcare, finance, maybe even chemistry and physics).
- Maybe having a class more focused on math rather than AI or coding.
- N/A
- N/A
- A next level of this course.
- More math courses.
- n/a

JHU - Krieger School of Arts & Sciences / Whiting School of Engineering
ASEN.2025.Summer Project 2

Course: AS.110.110.72.SU25: Foundational Mathematics of Artificial Intelligence
Instructor: Apurva Nakade *
Response Rate: 12/17 (70.59 %)

1 - The overall quality of this course is:

Response Option	Weight	Frequency	Percent
Poor	(1)	0	0.00%
Weak	(2)	0	0.00%
Satisfactory	(3)	0	0.00%
Good	(4)	7	58.33%
Excellent	(5)	5	41.67%
N/A	(0)	0	0.00%

Percent Responses: 0 25 50 100

Means: Question 4.42 | School Level 4.41 | Department Level 4.31

Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
12/17 (70.59%)	4.42	0.51	4.00	1848	4.41	0.79	5.00	364	4.31	0.78	4.00

2 - The instructor's teaching effectiveness is:

Apurva Nakade

Response Option	Weight	Frequency	Percent
Poor	(1)	0	0.00%
Weak	(2)	0	0.00%
Satisfactory	(3)	1	8.33%
Good	(4)	4	33.33%
Excellent	(5)	7	58.33%
N/A	(0)	0	0.00%

Percent Responses: 0 25 50 100

Means: Question 4.50 | School Level 4.44 | Department Level 4.38

Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
12/17 (70.59%)	4.50	0.67	5.00	1878	4.44	0.81	5.00	377	4.38	0.83	5.00

3 - The intellectual challenge of this course is:

Response Option	Weight	Frequency	Percent
Poor	(1)	0	0.00%
Weak	(2)	0	0.00%
Satisfactory	(3)	3	25.00%
Good	(4)	5	41.67%
Excellent	(5)	4	33.33%
N/A	(0)	0	0.00%

Percent Responses: 0 25 50 100

Means: Question 4.08 | School Level 4.33 | Department Level 4.34

Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
12/17 (70.59%)	4.08	0.79	4.00	1837	4.33	0.78	4.00	361	4.34	0.79	5.00

4 - The teaching assistant for this course is:

Response Option	Weight	Frequency	Percent
Poor	(1)	0	0.00%
Weak	(2)	0	0.00%
Satisfactory	(3)	1	8.33%
Good	(4)	6	50.00%
Excellent	(5)	4	33.33%
N/A	(0)	1	8.33%

Percent Responses: 0 25 50 100

Means: Question 4.27 | School Level 4.51 | Department Level 4.36

Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
12/17 (70.59%)	4.27	0.65	4.00	1819	4.51	0.78	5.00	354	4.36	0.88	5.00

JHU - Krieger School of Arts & Sciences / Whiting School of Engineering
ASEN.2025.Summer Project 2

Course: AS.110.110.72.SU25: Foundational Mathematics of Artificial Intelligence
Instructor: Apurva Nakade *
Response Rate: 12/17 (70.59 %)

5 - Please enter the name of the TA you evaluated in question 4:

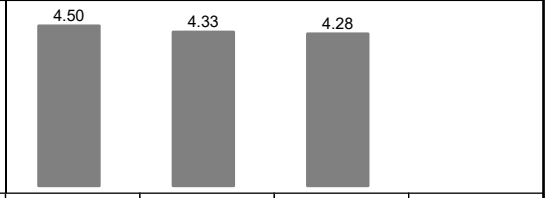
Response Rate	9/17 (52.94%)

- Ivory
- Ivy Zhang
- Ivy Zheng
- Ivy Zhang
- Ivy Zhang
- Ivy
- Ivy Zhang
- Ivy Zhang
- Ivy Zhang

6 - Feedback on my work for this course is useful:

Response Option	Weight	Frequency	Percent	Percent Responses
Disagree strongly	(1)	0	0.00%	
Disagree somewhat	(2)	0	0.00%	
Neither agree nor disagree	(3)	1	8.33%	
Agree somewhat	(4)	4	33.33%	
Agree strongly	(5)	7	58.33%	
N/A	(0)	0	0.00%	

0 25 50 100

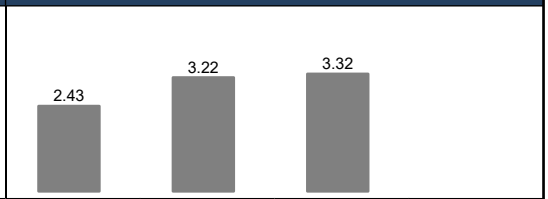


Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
12/17 (70.59%)	4.50	0.67	5.00	1822	4.33	0.86	5.00	359	4.28	0.87	4.00

7 - Compared to other Hopkins courses at this level, the workload for this course is:

Response Option	Weight	Frequency	Percent	Percent Responses
Much lighter	(1)	1	8.33%	
Somewhat lighter	(2)	3	25.00%	
Typical	(3)	2	16.67%	
Somewhat heavier	(4)	1	8.33%	
Much heavier	(5)	0	0.00%	
N/A	(0)	5	41.67%	

0 25 50 100



Response Rate	Mean	STD	Median	School Level	Mean	STD	Median	Department Level	Mean	STD	Median
12/17 (70.59%)	2.43	0.98	2.00	1828	3.22	0.93	3.00	360	3.32	0.86	3.00

8 - What are the best aspects of this course?

Response Rate	11/17 (64.71%)

- The teacher is great and has a really good teaching style and attitude
- The Coding worksheets were really well done and enjoyable
- It is interesting and you are always learning new concepts
- The interesting dive into data and how its actually important for AI training
- Creating code to conduct statistical analyses
- I enjoy the fast pace and fun material, I find it much more interesting compared to other classes and enjoy listening to the lectures given by the professor.
- Some of the best aspects of this course are the coding, and connection it to real world data.
- The interactiveness of the course.
- How class time is split into two, with one part being lecture overall and the other being everyone coding individually. Also the professor. He goes around the classroom in the second half and helped everybody a lot with their codings and projects.
- Learning new math and coding concepts and applying them in different ways to different datasets.
- Data analysis, coding, training algorithms.

JHU - Krieger School of Arts & Sciences / Whiting School of Engineering
ASEN.2025.Summer Project 2

Course: AS.110.110.72.SU25: Foundational Mathematics of Artificial Intelligence
Instructor: Apurva Nakade *
Response Rate: 12/17 (70.59 %)

9 - What are the worst aspects of this course?	
Response Rate	11/17 (64.71%)

- There is no talk about how the math and coding we learn relates to AI.
- I mean I personally thought we should've gotten into neural networks a bit quicker
- It feels like it is not what you expected when you read foundational mathematics of AI. It's more like: programing, types of regression and statistics
- The pace is rather fast, and there's barely any hand-on stuff
- Learning the various types of statistical analysis
- Sometimes if you are unable to understand something quickly, you might fall behind which can be very stressful.
- Some of the worst aspects are malfunctions, and codes not working.
- The independance
- Everything’s great.
- It was very fast pace which sometimes made it difficult to follow along and understand.
- Jupiter Notebook

10 - What would most improve this class?	
Response Rate	11/17 (64.71%)

- If there was more talk about the relation between the math we learn and AI.
- Maybe a little more speed for some sections.
- I think it is not at the same level as the other class taking the same course
- just simply adding more examples and whatnot
- Potentially more hands-on methods of teaching?
- I would enjoy more focus on learning math and less focus on python. While I do agree that showing a practical use of the math learned can be very useful. I personally enjoyed the math sections more.
- I wouldn't improve the class because I like the way it is currently.
- More guidance.
- More AI or LLM content. I was expecting the foundation of AI being taught, but what i have received is more like a statistics course, on like how to describe data and predict data using models. the presence of AI in the final project is also weak, which was what I wasn’t expecting.
- Maybe more slower paced instruction on how to do various things in Python.
- Having more interactive classes instead of just letting students copy code.

11 - What should prospective students know about this course before enrolling? (You may comment on any aspect of this course such as assumed background, readings, grading systems, and so on.)	
Response Rate	11/17 (64.71%)

- It's basically a Statistics and Coding course.
- Perspective students need no former knowledge of python I honestly believe everything is well prepared
- Read the syllabus intensively and don't look at the title, understand.it is a light work course.
- Students should know that the class dives into data, and its best understood if you had tutoring done before coming here
- This class can be pretty coding heavy with the python, however it is still beginner friendly enough to those who may not have prior experience with python or coding in general. In addition a extremely rudimentary understanding of statistics is expected.
- This course is definitely more fast pace and will often go past a lot of material very quickly. Despite that it was extremely enjoyable and satisfying and unlike any other course I've ever taken.
- Students should know a general basic level of coding in python. They should also know how to work in groups with people that are on a higher level of coding experience than them.
- It involves a lot of coding and requires some prior knowledge on the subject, and it is less mathematically centered. The grading is fair and most of your grade is deoendant on the final project.
- Would be best to know basic python programming. Students should be able to collaborate and give presentations. Students should have a general idea of statistics and probability.
- It heavily involves coding, specifically with Python. I did not know that beforehand and would have liked to so I could better prepare myself.
- This course is very coding-heavy.

JHU - Krieger School of Arts & Sciences / Whiting School of Engineering
ASEN.2025.Summer Project 2

Course: AS.110.110.72.SU25: Foundational Mathematics of Artificial Intelligence
Instructor: Apurva Nakade *
Response Rate: 12/17 (70.59 %)

12 - Why did you take a course this summer?	
Response Rate	11/17 (64.71%)

- It seemed fun and I wanted to do something academic.
- I wanted to depeen my knowledge of python and ai
- AI really interest me and I felt like in the future everyone needs to know.
- I took it to broaden my knowledge of coding
- I have always ben interested in artificial intelligence, machine learning, and thing of that nature. I thought that this course would be a great opportuinty to explore my interests in this field.
- I wanted to learn more about the math behind AI.
- The course I took this summer was "Artificial Intelligence & Mathematics".
- To get a preview of Uni life and experience it.
- Interested in AI and math.
- This course seemed really interesting.
- Because I wanted to improve my skillset for the future

13 - Regarding your decision process to take a summer class, what were some of your obstacles/concerns?	
Response Rate	11/17 (64.71%)

- The cost
- whether I knew enough python
- Price.
- My concern was that its too fast
- I was cornered I would be able to keep up with the mathematical part of the course.
- The class feels much more relaxed but, I'm not sure if that is entirely because it is a summer course.
- Some obstacles was getting to know the new code functions and remembering them for future assignments. A concern was being left behind in coding as supposed to others.
- Deadlines, choosing what corses I wanted as the ones I wanted finished.
- Safety issues, living conditions, and course quality.
- I was debating just giving myself time to do summer homework and begin college application preparation instead of doing a summer class with an additional workload.
- Meeting new people and moving to a place far away from my hometown. Luckily JHU made it pretty simple and fast.

14 - What other courses not currently offered during the summer would you like to see offered?	
Response Rate	9/17 (52.94%)

- more algorithims and data structures type courses
- More mathematics courses
- Nothing really
- N/A
- Maybe some social science or economics?
- I would also like to see a course for Robotics during the summer.
- Cultural Studies
- More math courses.
- N/A