

Course Analysis for NUMA01 Computational Programming with Python, Spring 2024

Course Information

Lecturer: Malin Christersson

Number of students: In total 92 registered students, 14 of these were re-registered.

Examination

Project: 65 students passed.

Final grade: In all, 65 students got their final grade.

Course Evaluation

All registered students got a course evaluation, 23 of them answered the evaluation.

A large majority of the students were students in the Physics Program and they took the course since it is mandatory for them.

Almost half of the students had never written a computer program before taking this course.

Most of the students felt that after the course they have learnt programming or got motivated to dive deeper into the subject.

Although most of the students thought that the lectures had helped with understanding and given insights, some of them thought that the lectures were rather theoretical and hard to follow. A comment from a student that is worth noting is:

"During one lecture the teacher wrote an entire code on her computer as she explained what she did along the way. I believe this was of teaching gave me much more than the regular lecture."

Most students liked the structure of having the training exercises directly after the lecture. They also got enough help from the teaching assistants in due time.

As for the teaching materials, most used the slides and Jupyter Notebooks from the lectures. As for the course textbook, however, most students didn't use it.



The so called Homeworks, that are a part of the examination, were considered to improve the student's knowledge, by **all students**.

Teachers comment

It is worth noting that some students found the lectures hard to follow. Perhaps we should rethink how the lectures are structured. Just as writing on the whiteboard in a mathematics lecture can help the students understand mathematics by slowing down the reasoning, it may be that writing code during the lecture helps student's understanding by slowing it all down. This is something that we will try and then evaluate in the future.

Computational Programming with Python, Spring 2024 Antal respondenter: 103

Antal respondenter: 103 Antal svar: 23 Svarsfrekvens: 22,33 %





	Medelvärde	Standardavvikelse
Your role in the course?	2,1	2,5

If other, please specify Enstaka kurs

Taking the course outside a program

our participation in the lectures.	Antal svar	
0 - 10	4 (17,4%)	-
11 - 21	1 (4,3%)	
22 - 32	0 (0,0%)	0 - 10
33 - 43	0 (0,0%)	11 01
44 - 54	3 (13,0%)	11-21
55 - 65	1 (4,3%)	22 - 32
66 - 76	2 (8,7%)	22 02
77 - 87	3 (13,0%)	33 - 43
88 - 98	4 (17,4%)	
99 - 109	5 (21,7%)	44 - 54
Summa	23 (100,0%)	
		55 - 65
		66 - 76
		77 87
		11-01
		88 - 98
		99 - 109

	Medelvärde	Standardavvikelse
Your participation in the lectures.	64,8	34,8

Comment

Was somewhat familiar with coding	- •	
Away for work two lectures		
Was on distance		
Your participation in the training		
exercises.	Antal svar	
0 - 10	9 (39,1%)	
11 - 21	3 (13,0%)	0 - 10
22 - 32	2 (8,7%)	
33 - 43	0 (0,0%)	11 - 21
44 - 54	0 (0,0%)	22 22
55 - 65	2 (8,7%)	22 - 32
66 - 76	1 (4,3%)	33 - 43
77 - 87	2 (8,7%)	
88 - 98	1 (4,3%)	44 - 54
99 - 109	3 (13,0%)	
Summa	23 (100,0%)	55 - 65
		66 - 76
		77 - 87
		88 - 98
		99 - 109
		0% 10% 20% 30% 40% 50%

	Medelvärde	Standardavvikelse
Your participation in the training exercises.	39,1	38,0

ises as was possible.		
I needed to catch up in other	subjects	
Antal svar	No.	
10 (43,5%)		-
2 (8,7%)	Ves in Java	
2 (8,7%)		
0 (0,0%)		
0 (0,0%)	Yes, in C.	
2 (8,7%)	Yes, in C++	
4 (17,4%)		
3 (13,0%) 23 (100,0%)	Yes, in Matlab.	
	Yes, in a visual p…	
	Yes, in Python.	
	Yes, in a language	
	Antal svar 1 needed to catch up in other : Antal svar 10 (43,5%) 2 (8,7%) 2 (8,7%) 0 (0,0%) 2 (8,7%) 4 (17,4%) 3 (13,0%) 23 (100,0%)	Antal svar No. 10 (43,5%) No. 2 (8,7%) Yes, in Java. 0 (0,0%) Yes, in C. 2 (8,7%) Yes, in C. Yes, in a tisual p Yes, in Matlab. Yes, in a visual p Yes, in a visual p Yes, in a language Yes, in a language

	Medelvärde	Standardavvikelse
Have you ever have written a computer program before the course start? (Please		
give the most relevant answer)	3,7	2,9

Why did you sign up for the course? (several answers possible)	Antal svar
The course is mandatory in my	10 (70 20/)
program.	10 (70,3%)
The course was strongly recommended in my program.	0 (0,0%)
The course seems to be relevant for	
my education.	3 (13,0%)
The course fits to my interests.	5 (21,7%)
The course seems to improve my	
chances on the work market.	3 (13,0%)
I took the course just for fun.	3 (13,0%)
Summa	32 (139,1%)



	Medelvärde	Standardavvikelse
Why did you sign up for the course?		
(several answers possible)	2,5	1,9

Now that the lectures are done, my impression is	Antal svar
I learned programming and I feel that can manage to write programs in mathematics and physics.	12 (52,2%)
I just made my first steps and got motivated to dive deeper into the subject.	11 (47,8%)
I got somehow lost during the course, but I think I will catch up.	2 (8,7%)
I felt I missed the point with this course and will retake it.	0 (0,0%)
Summa	27 (117,4%)



	Medelvärde	Standardavvikelse
Now that the lectures are done, my		
impression is	1,9	1,1



The material used during lectures was		
ordered in a way	1,3	0,5

Comment

Did not watch lecture videos

certain aspects of the material went by very quickly so it was hard to fully grasp examples at times

Trainings Exercises	Antal svar
I liked to have the trainings	
exercises directly after the	
lectures and that they made me work with "the topic of the day".	10 (71,4%)
I would have liked to have a	
distance of at least one day	
between new material and the	
training.	4 (28,6%)
Summa	14 (100,0%)



	Medelv	ärde	Standardavvikelse
Trainings Exercises	1,3		0,5
Support	Antal svar		
I had to wait less than 5 minutes for support during the training exercises I had to wait between 5 and 15 minutes I had to wait more than 15 minutes until a teaching assistant belood me	15 (75,0%) 4 (20,0%)	I had to wait less than 5 minutes for support during the training exercises	
Summa	20 (100,0%)	I had to wait between 5 and 15 minutes	
		I had to wait more than 15 minutes until a teaching assistant helped me.	
			0% 20% 40% 60% 8

	Medelvärde	Standardavvikelse
Support	1,3	0,6







	Medelvärde	Standardavvikelse
Taining exercises. I worked in a group.	1,5	0,5

Homework	Antal svar
The homework made me improve my knowledge.	23 (100,0%)
The homework was just for getting a grade.	0 (0,0%)
Summa	23 (100,0%)

The homework made me improve my knowledge.					
The homework was just for getting a grade.					
0	% 25	i% 50°	% 75%	6 100	0% 1

	Medelvärde		Standardavvikelse		
Homework		1,0		0,0	
Comment					
Although improved only in a few specific	areas related to coding (in	n my opinion).			
The homework presentations.	Antal svar				
The way the homeworks were presented gave me a chance to get extra feedback.	16 (69,6%)	-			
The way the homeworks were presented gave me a chance to show and test my knowledge.	12 (52,2%)	The way the ho			
The way the homework was presented did not match to my effort I put into this work.	1 (4,3%)	The way the ho			
I felt treated unfair.	0 (0,0%)				
I do not like orals with teaching assistants.	1 (4,3%)	The way the ho…			
Summa	30 (130,4%)				
		I felt treated unfair.			
		l do not like orals with teaching assistants.			
			0% 20%	40% 60%	

	Medelvärde	Standardavvikelse
The homework presentations.	1,6	0,9

I found it helpfull to work in groups	
for the homework	Antal svar
Yes	18 (90,0%)
No	2 (10,0%)
Summa	20 (100,0%)





	Medelvärde	Standardavvikelse
Course material. The slides and Jupyter		
Notebook files were	1,8	0,5

The course book.	Antal svar
I never used the course book.	14 (60,9%)
I consulted the book rarely.	4 (17,4%)
I consulted the book occasionally.	3 (13,0%)
I reread the actual sections of the lecture in the course book.	1 (4,3%)
I used it for further reading and	
deepening.	1 (4,3%)
Summa	23 (100,0%)



	Medelvärde	•	Standardavvikelse
The course book.	1,7		1,1
Course style. Language	Antal svar		
The course language was to "mathematical".	3 (13,0%)		
I got used to a more mathematical language.	4 (17,4%)	The cou language was	rse s to
I saw no problem in the way the material was communicated.	11 (47,8%)	"mathematic	al".
I liked the way the material was communicated.	5 (21,7%)	l got used t	
Summa	23 (100,0%)	mathemati langua	cal ge.
		I saw no probl in the way material w communicat	em the vas ed.
		I liked the way material w communicat	the vas ed.
			0% 10% 20% 30% 40% 50%
	Medelvär	de	Standardavvikelse

	Medelvarde	Standardavvikeise
Course style. Language	2,8	1,0

Here you can give final and summarizing comments, if you like

Might have been nice with an "icebreaker" – a five minute exchange where students could share thoughts (previous programming experience for example) – early in the course.

One small comment, I did at times feel like there was a bit of a disconnect or distance between how the material was presented during lectures versus their application during exercises, as I had to ask many questions about specific things to the teaching assistants and often remind myself of key things which came before. Although I am completely new to programming (it was tough overall but interesting at times) this could be easily explained in that way but that's a small observation I made on my part.

I think I'm the target demographic for this course. Nothing felt like greek and nothing felt way too easy.