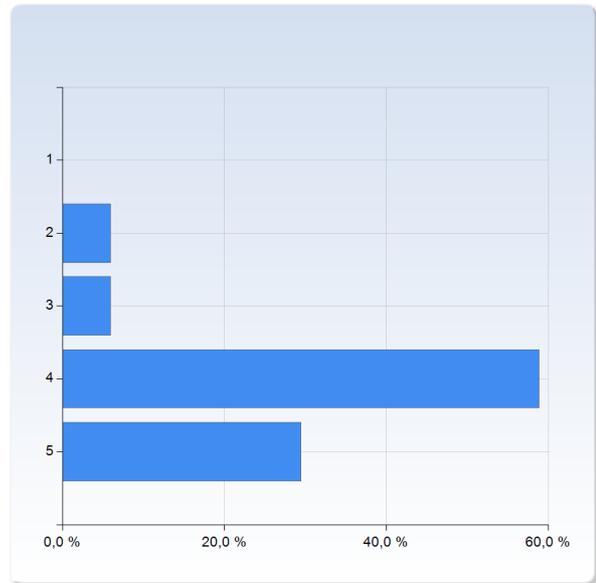


NGEN02 Ecosystem Modelling 2016

Respondents: 30
Answer Count: 18
Answer Frequency: 60,00 %

How would you rate the QUALITY of the course as a whole? (1=very poor; 5=very good)

How would you rate the QUALITY of the course as a whole? (1=very poor; 5=very good)	Number of Responses
1	0 (0,0%)
2	1 (5,9%)
3	1 (5,9%)
4	10 (58,8%)
5	5 (29,4%)
Total	17 (100,0%)



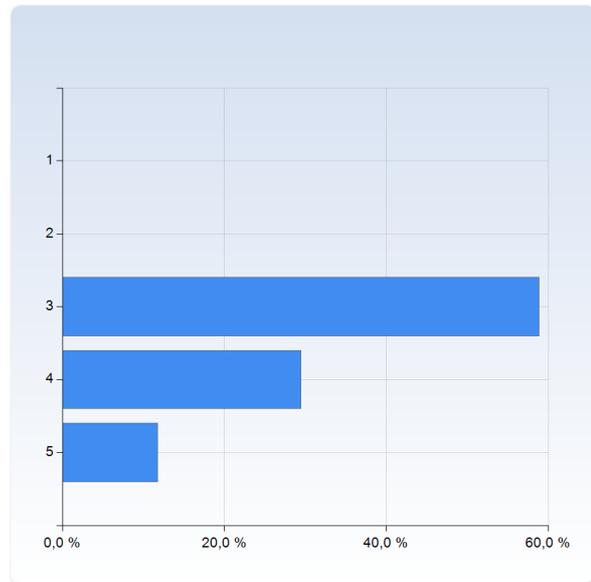
	Mean	Standard Deviation
How would you rate the QUALITY of the course as a whole? (1=very poor; 5=very good)	4,1	0,8

Comments

Very high quality of teaching given by the main lecturer. Well prepared lecture slides and activities. Seems to have given alot of thought into it.
It was great to finally learn how to perform a sensitivity and accuracy assessment.
I have no background about the ecology so I learned a lot from this course.

Rate the GRADE OF DIFFICULTY of the course as a whole (1=too easy, 3=just right for a course at this level, 5= too difficult)

Rate the GRADE OF DIFFICULTY of the course as a whole (1=too easy, 3=just right for a course at this level, 5= too difficult)	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	10 (58,8%)
4	5 (29,4%)
5	2 (11,8%)
Total	17 (100,0%)



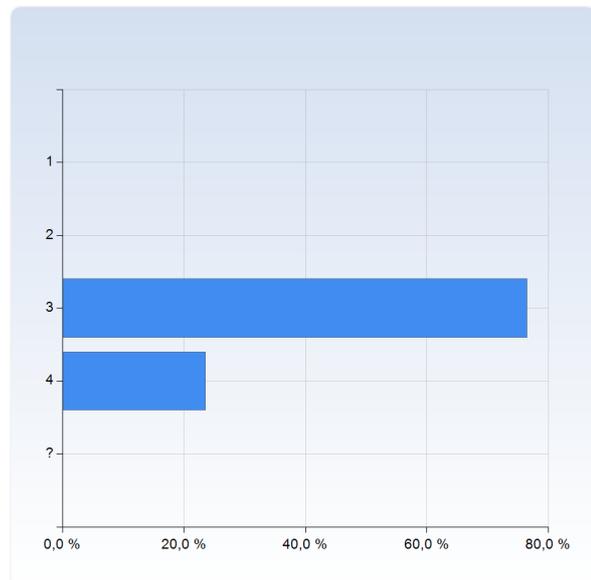
Rate the GRADE OF DIFFICULTY of the course as a whole (1=too easy, 3=just right for a course at this level, 5= too difficult)	Mean	Standard Deviation
	3,5	0,7

Comments

Very difficult course for student with no programming experience.
 We know that if we work hard at the first stage, it will be easier later.

Rate the WORKLOAD for the course as a whole (1=too little work; 3=just right; 5=too much work)

Rate the WORKLOAD for the course as a whole (1=too little work; 3=just right; 5=too much work)	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	13 (76,5%)
4	4 (23,5%)
?	0 (0,0%)
Total	17 (100,0%)



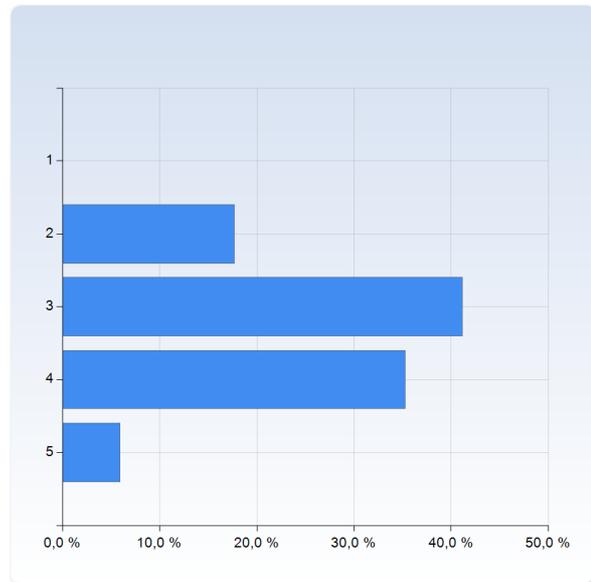
Rate the WORKLOAD for the course as a whole (1=too little work; 3=just right; 5=too much work)	Mean	Standard Deviation
	3,2	0,4

Comments

Constant work needed to be done throughout the course. I did like how activities generally had a due date on Friday so the weekend was usually free.

Rate the quality and adequacy of TEACHER ACCESS and GUIDANCE (1=very poor, 5= very good)

Rate the quality and adequacy of TEACHER ACCESS and GUIDANCE (1=very poor, 5= very good)	Number of Responses
1	0 (0,0%)
2	3 (17,6%)
3	7 (41,2%)
4	6 (35,3%)
5	1 (5,9%)
Total	17 (100,0%)



	Mean	Standard Deviation
Rate the quality and adequacy of TEACHER ACCESS and GUIDANCE (1=very poor, 5= very good)	3,3	0,8

Comments

More teacher (BS, PM) time during the computer time for the project could be a little more during the final project, especially the first two weeks.

generally good but a bit too limited for the final project where more support by the lecturers would have been helpful at times

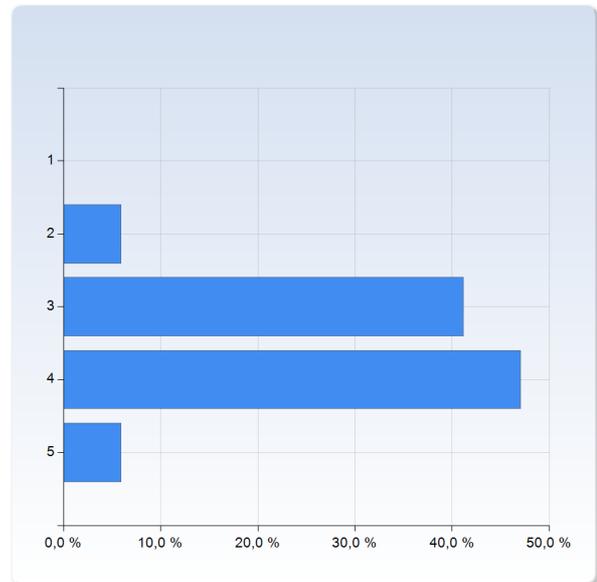
Sadly more time needs to be spent with students. I do not like the "learning by doing technique" and the activities were often quite difficult.

More time with direct contact would have helped many students through problems if teachers were directly available.

Ben is a really nice professor with lots of knowledge and experience, he always gave us good suggestions. And Paul is also nice.

How did you find the course text book (Smith & Smith "Environmental Modelling") (1=very poor, 5= very good)

How did you find the course text book (Smith & Smith "Environmental Modelling") (1=very poor, 5= very good)	Number of Responses
1	0 (0,0%)
2	1 (5,9%)
3	7 (41,2%)
4	8 (47,1%)
5	1 (5,9%)
Total	17 (100,0%)



	Mean	Standard Deviation
How did you find the course text book (Smith & Smith "Environmental Modelling") (1=very poor, 5= very good)	3,5	0,7

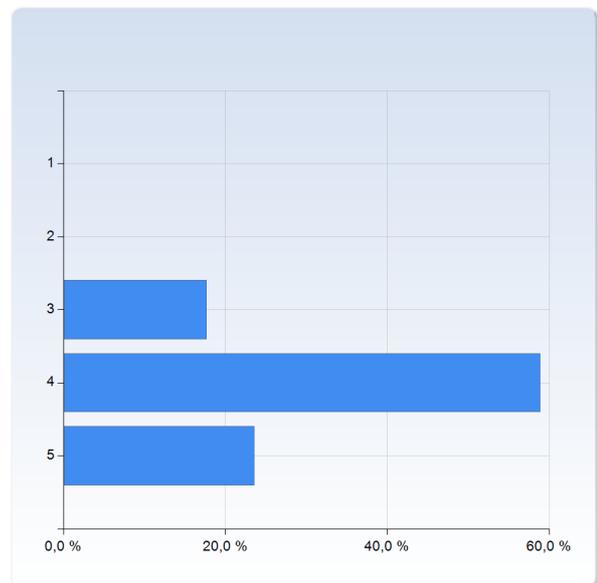
Comments

What I missed was that there were no "real" examples in the book - everything was made up for Mars, it would be nicer to have more realistic examples. In that way I didn't really like the book.

Not a required purchase. Could have been borrowed from the library.

How did you find the other course materials such as the compendium, lecture notes, distributed papers etc. (1=very poor, 5= very good)

How did you find the other course materials such as the compendium, lecture notes, distributed papers etc. (1=very poor, 5= very good)	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	3 (17,6%)
4	10 (58,8%)
5	4 (23,5%)
Total	17 (100,0%)



	Mean	Standard Deviation
How did you find the other course materials such as the compendium, lecture notes, distributed papers etc. (1=very poor, 5= very good)	4,1	0,7

Comments

the compendium was really good

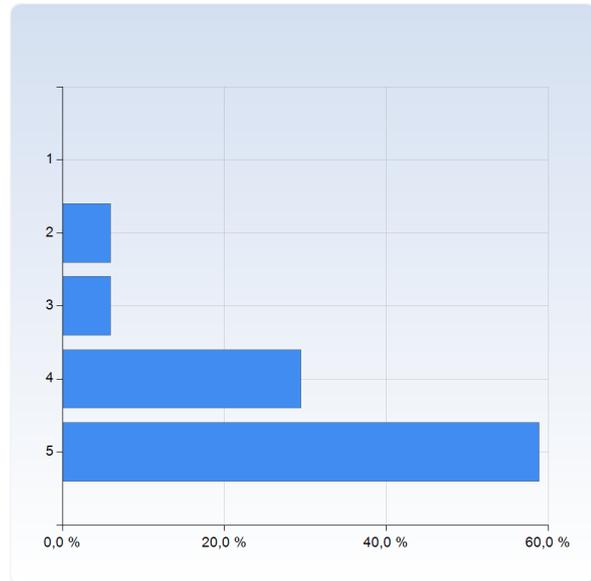
Most were good, but the Havana exercise guide lacked some detail.

Compendium could be more related to lectures

A compendium was such a nice surprise. Often was a much better guide than the text.

How much did you LEARN on the course (1=very little; 5= very much)

How much did you LEARN on the course (1=very little; 5= very much)	Number of Responses
1	0 (0,0%)
2	1 (5,9%)
3	1 (5,9%)
4	5 (29,4%)
5	10 (58,8%)
Total	17 (100,0%)



	Mean	Standard Deviation
How much did you LEARN on the course (1=very little; 5= very much)	4,4	0,9

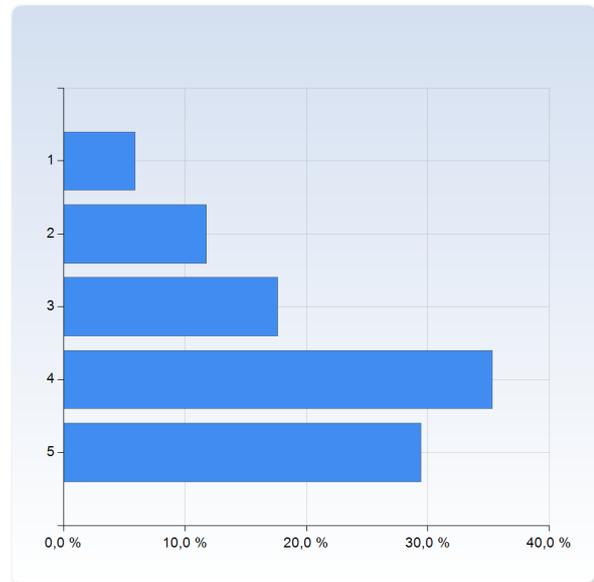
Comments

I feel that I did not learn as much matlab as I would have liked. Having no previous experience, jumping straight into the exercise and trying to teach myself was difficult, and I do not feel that I got as much out of it as I would if there was more instruction or much clearer guidance in this aspect

Coming from a natural science background the course content was not particularly new, I feel myself and students spent more time trying to battle through Matlab than actually focusing on the topic itself.

How RELEVANT did you find the course to the studies you are pursuing? (1=hardly relevant; 5= highly relevant)

How RELEVANT did you find the course to the studies you are pursuing? (1=hardly relevant; 5= highly relevant)	Number of Responses
1	1 (5,9%)
2	2 (11,8%)
3	3 (17,6%)
4	6 (35,3%)
5	5 (29,4%)
Total	17 (100,0%)



	Mean	Standard Deviation
How RELEVANT did you find the course to the studies you are pursuing? (1=hardly relevant; 5= highly relevant)	3,7	1,2

Comments

I dont think I will be using this in my future sadly. I had hoped to be exposed to using already built models and spending more time on interpreting results from them rather than building them ourselves from the ground up.

It was a little frustrating that the majority of the course was related to LPJ-GUESS and similar vegetation models. I would have liked a little more freedom to explore other types of ecosystem modelling.

Sepecifically the sensitivity and accuracy assessment.

Unfortunately so far not that much I think

What additional topics or learning activities would you like to see included in this course in the future? Why?

Perhaps modelling in combination with GIS.

More information on how to connect this to GIS

More "real life situations" like the problem analysis!

-> more connections to topics from human geography (e.g. spatial planing, agriculture, forestry etc.)

an outlook on how modelling can be used in connection to GIS, maybe additional (complementary) material/exercises for programming in matlab

A bit of statistics

An exercise on Marko's to improve understanding

Nothing that I can think of

Some introductions with GIS/Spatial integration

More Matlab instructions. Especially hard for students without previous experience.

More on problem analysis and risk management.

A proper step by step introduction to Matlab for students not familiar with it.

A slightly more robust introduction to MatLab would have been appreciated. Most students hadn't used MatLab much before, and we were expected to use it very quickly at a fairly high complexity level.

I would add a small section about debugging your code in the Matlab tutorial as it is a part that helps to understand coding/Matlab and would also be helpful in the future.

What topics or learning activities could be left out of the course in the future? Why?

Presentations of project every single week. Individual time with mentors would be better in order to improve the project.

The 1st LPJ-Guess excercise since it is covered in previous courses.

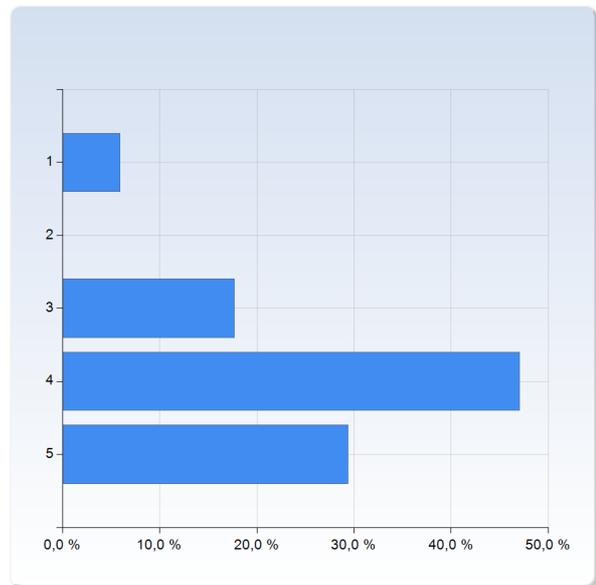
-

The first set of presentations that we did, about climate change and carbon sequestration, was very long and repetitive since most groups had similar questions and locations.

Some topics in the Problem Analysis exercise were more vague then others (like the one on security assessment of tailing dams) which leads to different interpretations of the assignment. Maybe for these topics, more explanation of examples could be given.

Introductory lectures on ecosystem modelling (Ben Smith)

Introductory lectures on ecosystem modelling (Ben Smith)	Number of Responses
1	1 (5,9%)
2	0 (0,0%)
3	3 (17,6%)
4	8 (47,1%)
5	5 (29,4%)
Total	17 (100,0%)



	Mean	Standard Deviation
Introductory lectures on ecosystem modelling (Ben Smith)	3,9	1,0

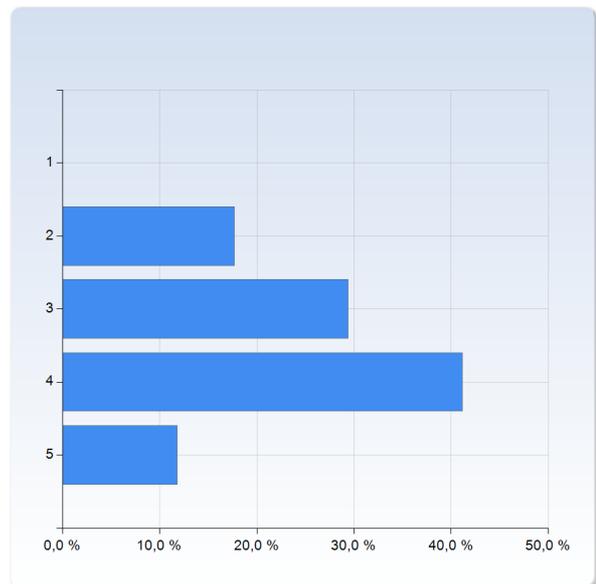
Comments

good pace!

Excellent.

Learning MATLAB (Ben Smith, Stefan Olin)

Learning MATLAB (Ben Smith, Stefan Olin)	Number of Responses
1	0 (0,0%)
2	3 (17,6%)
3	5 (29,4%)
4	7 (41,2%)
5	2 (11,8%)
Total	17 (100,0%)



	Mean	Standard Deviation
Learning MATLAB (Ben Smith, Stefan Olin)	3,5	0,9

Comments

See above comments

Give some more advanced exercises for people with more MATLAB background

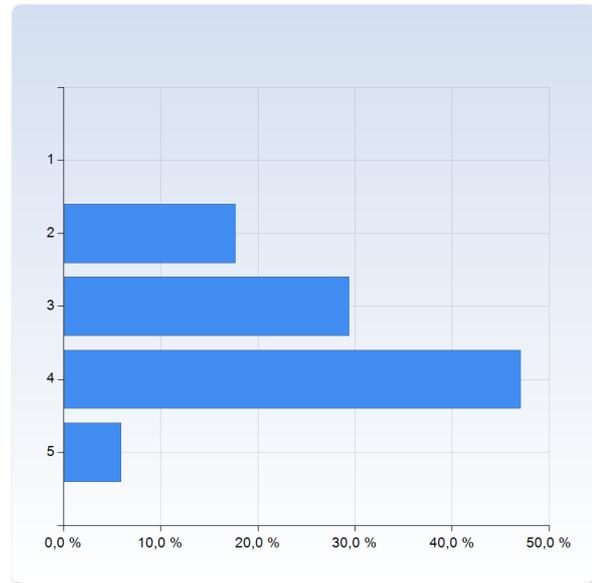
Good tutorial but not enough advanced for the next exercise or the necessary knowledge for the project.

More guidance required. a step by step run through opposed to exercises just given to the student and left to attempt. Stefan seemed to be very un approachable

I learned a lot, but would have appreciated a bit more guidance in the first week or so.

Savannah modelling exercise (Ben Smith, Stefan Olin)

Savannah modelling exercise (Ben Smith, Stefan Olin)	Number of Responses
1	0 (0,0%)
2	3 (17,6%)
3	5 (29,4%)
4	8 (47,1%)
5	1 (5,9%)
Total	17 (100,0%)



	Mean	Standard Deviation
Savannah modelling exercise (Ben Smith, Stefan Olin)	3,4	0,9

Comments

We had no guidance towards the end of the week when no one knew how to do the last part of the exercise.

deadline seemed very tight

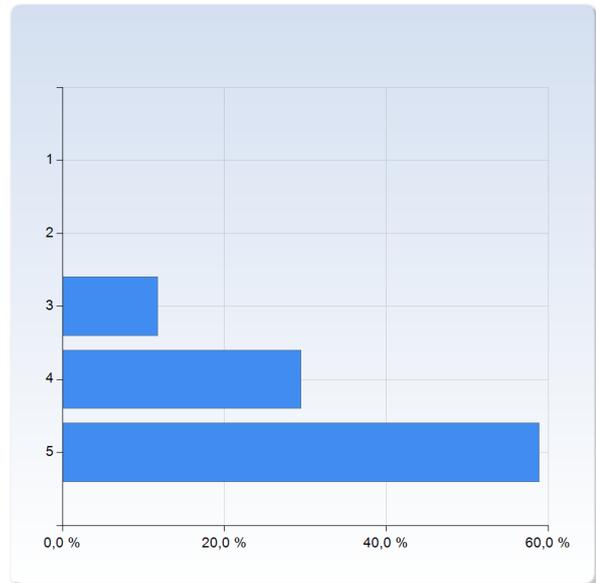
Instructions could be improved and be more detailed. There was a general frustration in the computer lab during that week that made the exercise even harder to work on, due to poor instructions especially on the coding part. We were expected to perform things that was too hard, and the previous tutorial was definitely not enough (eg creating all these functions, without even knowing how to construct it on matlab). More teacher guidance also needed.

As there was a big gap in difficulty between the first Matlab exercise and this one, with this one being much more difficult, I would have appreciated more detailed exercise instructions.

Once again most of the exercise was spent figuring out how to use Matlab and not really understanding the ecosystem we were modelling.

Tutorials on Smith & Smith (Ben Smith)

Tutorials on Smith & Smith (Ben Smith)	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (11,8%)
4	5 (29,4%)
5	10 (58,8%)
Total	17 (100,0%)



Tutorials on Smith & Smith (Ben Smith)	Mean	Standard Deviation
	4,5	0,7

Comments

very good but could have come before some of the excercises instead of after

Very good way of learning, was very helpful for the exam and for the general understanding on modelling.

Very helpful!

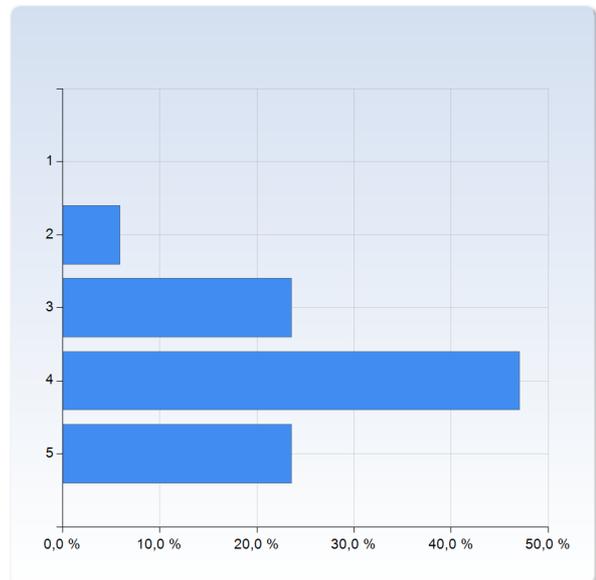
Excellent. found them very rewarding and good examination prep.

I found these to be very helpful!

Very good and helps to fully understand the book.

Large-scale ecosystem modelling (Ben Smith)

Large-scale ecosystem modelling (Ben Smith)	Number of Responses
1	0 (0,0%)
2	1 (5,9%)
3	4 (23,5%)
4	8 (47,1%)
5	4 (23,5%)
Total	17 (100,0%)



Large-scale ecosystem modelling (Ben Smith)	Mean	Standard Deviation
	3,9	0,9

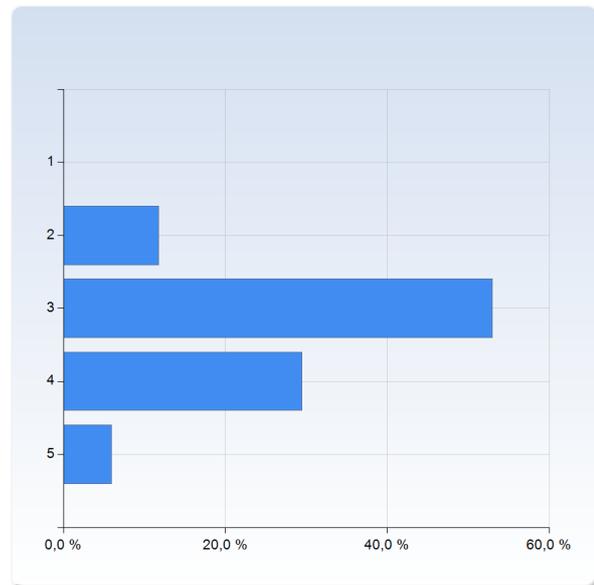
Comments

Good but some terms could have been better explained (more examples on top-bottom, bottom-up)

Difficult to grasp what should be learned from this lecture.

Biome modelling exercise (Michael Mischurov)

Biome modelling exercise (Michael Mischurov)	Number of Responses
1	0 (0,0%)
2	2 (11,8%)
3	9 (52,9%)
4	5 (29,4%)
5	1 (5,9%)
Total	17 (100,0%)



	Mean	Standard Deviation
Biome modelling exercise (Michael Mischurov)	3,3	0,8

Comments

had a quite ignorant way of dealing with the students presenting their work

Very very similar to exercises in LPJ-GUESS that we've had in other courses...

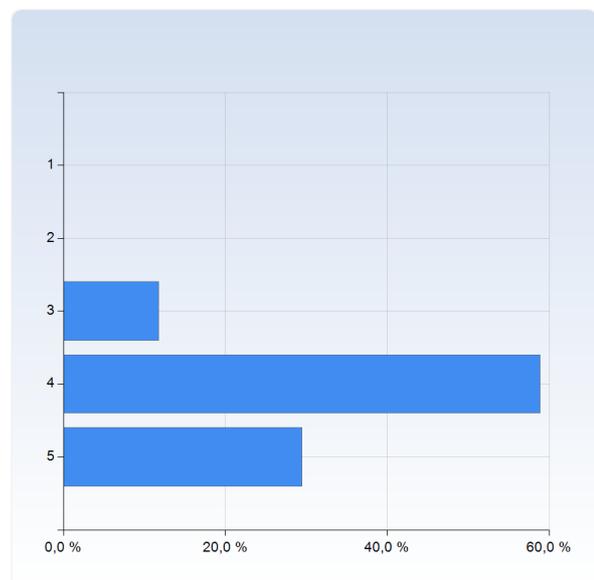
Michael could improve on giving critique during presentations. Don't treat the students like they are, or try to make them feel stupid. Some respect please!

Good especially for those not familiar with LPJ Guess

Sadly Michael did not work well with the students and often gave out a very arrogant impression. The harsh criticism in the presentations I found good and constructive but many students felt some what "picked on".

Model development and evaluation lectures (Paul Miller)

Model development and evaluation lectures (Paul Miller)	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (11,8%)
4	10 (58,8%)
5	5 (29,4%)
Total	17 (100,0%)



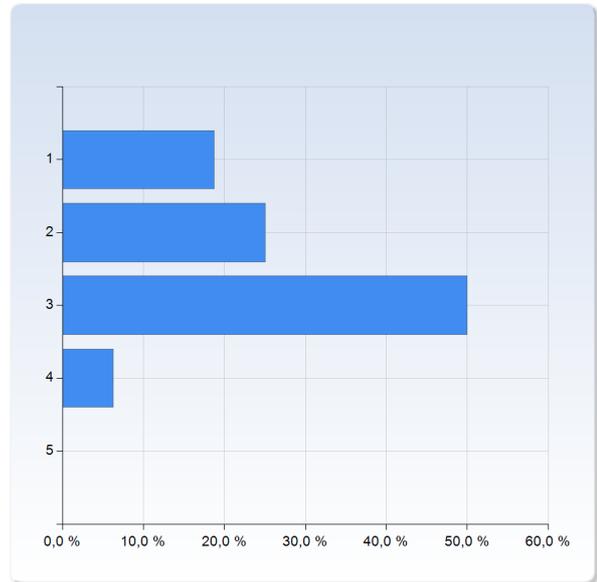
	Mean	Standard Deviation
Model development and evaluation lectures (Paul Miller)	4,2	0,6

Comments

A little more clarity on lecture slides would be appreciated.

Constraining models with data lecture (Marko Scholze)

Constraining models with data lecture (Marko Scholze)	Number of Responses
1	3 (18,8%)
2	4 (25,0%)
3	8 (50,0%)
4	1 (6,3%)
5	0 (0,0%)
Total	16 (100,0%)



	Mean	Standard Deviation
Constraining models with data lecture (Marko Scholze)	2,4	0,9

Comments

Didnt see the connection to general course content

Lecture was very difficult to follow

the connection to the rest of the course was somewhat unclear

Interesting but quite advanced, and a bit hard to take in.

I would find an exercise helpful to learn more

This lecture was unfortunately very confusing.

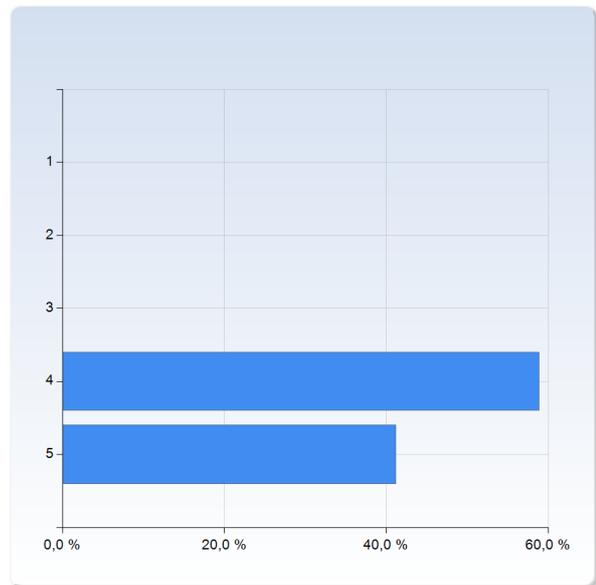
I couldnt understand the need or the point of the lectures. Which is obviously the problem.

Most of the class was incredibly confused by about half of this lecture, myself included.

Did not attend

Sensitivity analysis exercise (Paul Miller)

Sensitivity analysis exercise (Paul Miller)	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	0 (0,0%)
4	10 (58,8%)
5	7 (41,2%)
Total	17 (100,0%)



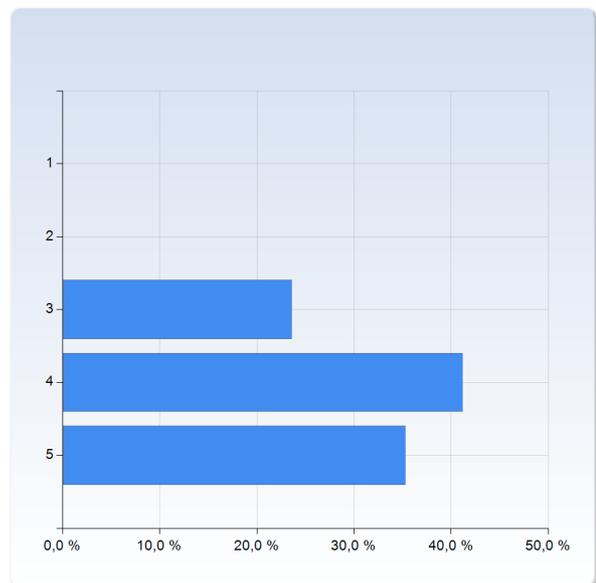
	Mean	Standard Deviation
Sensitivity analysis exercise (Paul Miller)	4,4	0,5

Comments

Nice exercise with clear instructions. If just the difference between uncertainty and sensitivity could be more clear..

Problem analysis exercise (Ben Smith)

Problem analysis exercise (Ben Smith)	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	4 (23,5%)
4	7 (41,2%)
5	6 (35,3%)
Total	17 (100,0%)



	Mean	Standard Deviation
Problem analysis exercise (Ben Smith)	4,1	0,8

Comments

Really nice exercise!

Great with a "hands-on" project, which could be what we could be faced with in a possible job

Nice and useful exercise

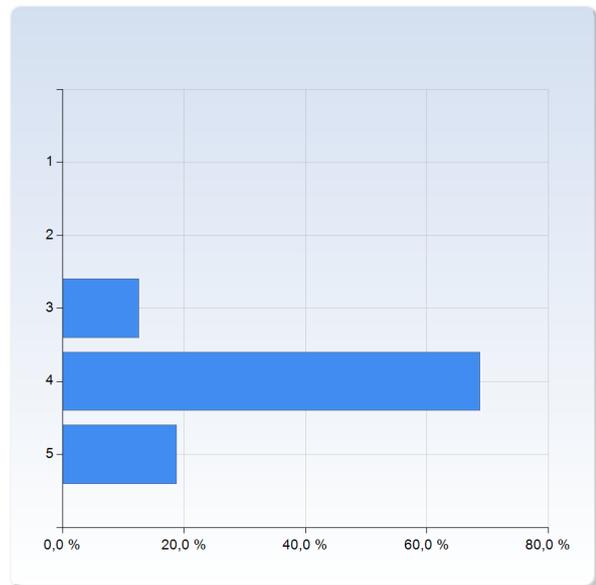
I really appreciated that this was an individual exercise, since those are sometimes rare at this department.

A very broad topic. Needs more refining as what is expected from this assignment.

I liked the freedom to choose a question outside of what we generally worked with.

Ecosystem modelling project

Ecosystem modelling project	Number of Responses
1	0 (0,0%)
2	0 (0,0%)
3	2 (12,5%)
4	11 (68,8%)
5	3 (18,8%)
Total	16 (100,0%)



	Mean	Standard Deviation
Ecosystem modelling project	4,1	0,6

Comments

More time for the project

More time with the teachers for discussion.

More question time with Ben & Paul and less presentation time would be my suggestion.

Nice project, made you understand both modelling and ecosystem functions.

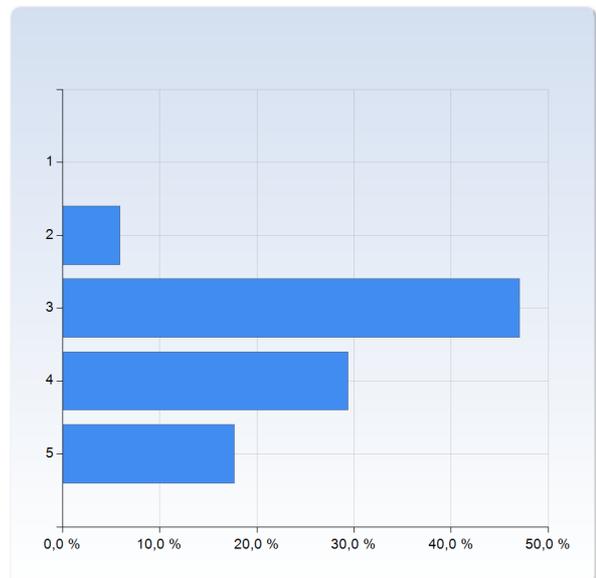
A bit confusing though with the divided groups, because it seemed that the teachers were not completely in agreement with what we had to do, causing problems for some groups that for example in the last presentation were told that their method and structure was wrong.

Very well structured, I liked that it connected the whole course content.

Matlab finally started to "fall into place"

Theory exam

Theory exam	Number of Responses
1	0 (0,0%)
2	1 (5,9%)
3	8 (47,1%)
4	5 (29,4%)
5	3 (17,6%)
Total	17 (100,0%)



	Mean	Standard Deviation
Theory exam	3,6	0,9

Comments

There was not enough time for the exam. Questions were too wide to answer for that time, We didn't have time to check our answers. Listening what should our answers be, you would need at least one hour just for question 5.
An extra hour for exam would be good.

A bit more time or less questions

good level on questions.

Very good that several past exams are available for studying for the exam.

I spent about half the exam trying to decide what the professors actually wanted as an answer, since the questions were broad, vague, and not specific enough in asking for what they wanted to hear.

What advice would you give another student who is considering taking the course next year?

Be prepared for working hard for next two months.

On of the best courses in the master's program. You really learn something!

Go to tutorials and make notes - good for the exam!

Do the chapter tutorials and be prepared to put in some work if you're not used to working in Matlab

-

Make sure you start studying from the beginning of the course period, and don't be afraid if you don't understand everything in the beginning, it will sink in eventually.

Matlab Matlab Matlab

The course is definitely worthwhile, but be prepared for hours of frustration while struggling with MatLab. Lectures are generally pretty dry, but still useful.

To at least have a understanding of basic ecosystem processes so that more time can be spend on understanding the principles of good modelling.

What advice would you give us teachers when planning next year's course?

when doing the final project instead of having two intermediate presentations it would be good to have only one presentation and one "one on one" meeting with a lecturer to discuss problems

Make sure there's enough space in the computer lab, and to book rooms for us even when there's no supervisor. Computers in other rooms may not have the relevant, or outdated, programs.

Else, good job!

More question time with Ben & Paul and less presentation time would be my suggestion for the final project.

-

Schedule a little less time for the Matlab intro exercise and a little more for the savannah exercise, like we changed it to this year.

more involved guidance during exercises

I would have liked to have the exam before the project, just because it was an awkward 3-week break from any sort of lecture before returning to the material. It would also distribute the workload a bit more comfortably not to have the project and exam back-to-back.

I like this course, hope you too

Any other remarks?

Ben-testing

Thank you!

-

Hard course but a good one.