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Lunds universitet

Sammanställning för "KEMM76 Avancerad analytisk kemi" HT 2019

Kursansvarig: Margareta Sandahl

Övriga lärare: Peter Spégel, Charlotta Turner, Sofia Essén, Lars Nilsson

Antal studenter: 17 registrerade studenter

Betyg: 2 (0) st UK, 5 (2) st G, 9 (0) st VG. (omtentamen)

Utvärdering

I. Sammanfattning av kursvärderingen

Totalt antal svar: 13

Kort sammanfattning av resultatet: Sammantaget var studenterna mycket nöjda med kursen. Studenterna uppskattade speciellt föreläsningarna och laborationerna, vilka uppfattades om viktiga moment i lärandeprocessen. Studenterna gillade övningarna men tycker i allmänhet att de är för få. Kursboken uppskattades dock inte så mycket. Tydliga instruktioner önskas för datorlaborationerna, studenterna ansåg sig väldigt beroende av lärarhjälp för att komma igång. Studenterna verkar gilla rapportbedömningskriterierna och de anser att examinationen reflekterar lärandemålen för kursen. Kommunikation mellan lärarlaget och studenterna verkar fungera väldigt bra och studenterna anger högt deltagande under lärarstyrda lärandeaktiviteter. Slutligen anser majoriteten av studenterna att kursen är mycket relevant för deras utbildning. På frågan om hur studenterna vill beskriva kursen anger få studenter att den upplevs som tråkig, underhållande och förvirrande, medan majoriteten upplever den som mycket intressant och användbar. Förövrigt upplevs kursen av många studenter som stimulerande, strukturerad, viktig och svår.

II. Lärarlagets kommentarer

Lärarlaget tyckte att kursen fungerade bra i allmänhet med mycket god genomströmning (88% vid ordinarie tentatillfälle) och gott betygsutfall. Examinationen består av skriftlig tentamen med möjlighet att addera bonuspoäng (tagna under laborationsmomenten) till godkänt resultat för betygsuppträdning. Bonuspoängen förtjänas enligt särskilda bedömningskriterier vid rapportskrivandet, tre studenter uppnådde med bonuspoängen betyget VG istället för G.



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Vi funderar att byta kursbok till nästa gång. Dilemmat är att det inte finns EN kursbok med den bredd av tekniker kursen omfattar på en adekvat nivå. Vi måste därför använda olika vetenskapliga teknikspecifika texter från olika källor för att kunna tillhandahålla studenterna med bra litteratur.

III. Utvärdering av förändringar sedan förra kursen

Sedan förra gången kursen gick har vi uppdaterat laborationshandledningarna i framförallt gaskromatografi och förtydligat bedömningskriterierna vid rättande av laborationsrapporter. I allmänhet uppfattade studenterna att labhandledningarna var bra och de verkar gilla rapportbedömningskriterierna.

IV. Förslag till förändringar till nästa kurs

Till nästa gång kursen ges planerar vi att ersätta kursboken (som är för gammal) med nyligen publicerad litteratur i form av e-böcker som alla är finns på vårt bibliotek. Datorlaborationerna är nya och under utveckling, de kommer att . uppdateras till nästa gång.

2020-04-28, sammanställning är gjord av Margareta Sandahl

Sammanställningen mailas till utbildningsadministratör Annelie Raimer:
annelie.raimer@kc.lu.se

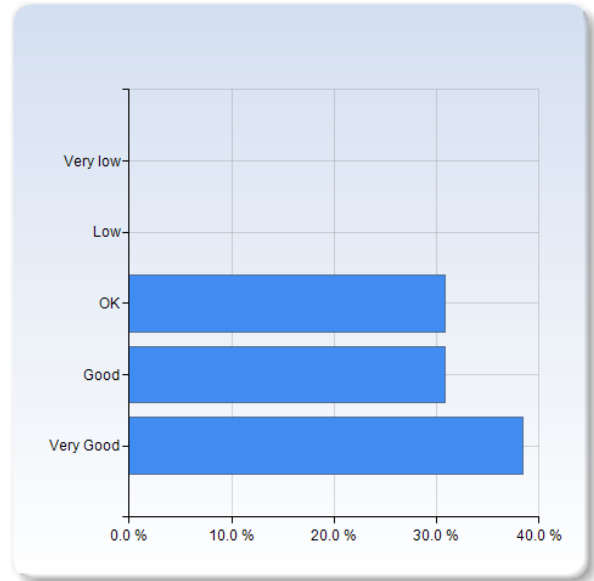
Course evaluation KEMM76 HT19

Respondents: 19
Answer Count: 13
Answer Frequency: 68.42%

Grade the quality and quantity of the following four alternatives

Quality - Lectures

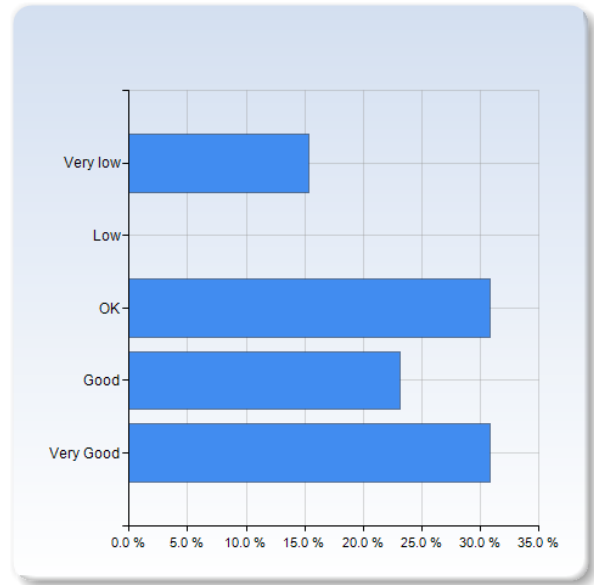
Lectures	Number of Responses
Very low	0 (0.0%)
Low	0 (0.0%)
OK	4 (30.8%)
Good	4 (30.8%)
Very Good	5 (38.5%)
Total	13 (100.0%)



Lectures	Mean	Standard Deviation
Lectures	4.1	0.9

Quality - Exercises

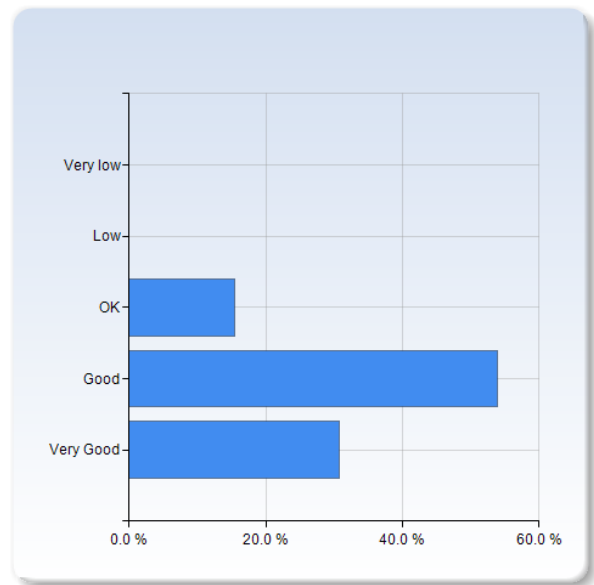
Exercises	Number of Responses
Very low	2 (15.4%)
Low	0 (0.0%)
OK	4 (30.8%)
Good	3 (23.1%)
Very Good	4 (30.8%)
Total	13 (100.0%)



Exercises	Mean	Standard Deviation
	3.5	1.4

Quality - Lab projects

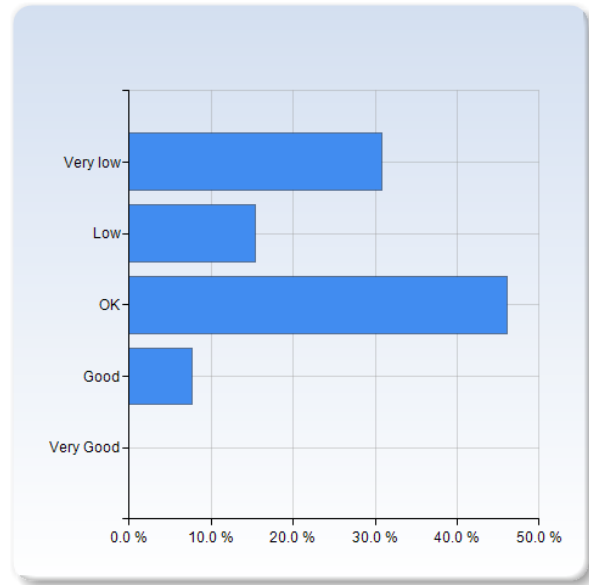
Lab projects	Number of Responses
Very low	0 (0.0%)
Low	0 (0.0%)
OK	2 (15.4%)
Good	7 (53.8%)
Very Good	4 (30.8%)
Total	13 (100.0%)



Lab projects	Mean	Standard Deviation
	4.2	0.7

Quality - Literature

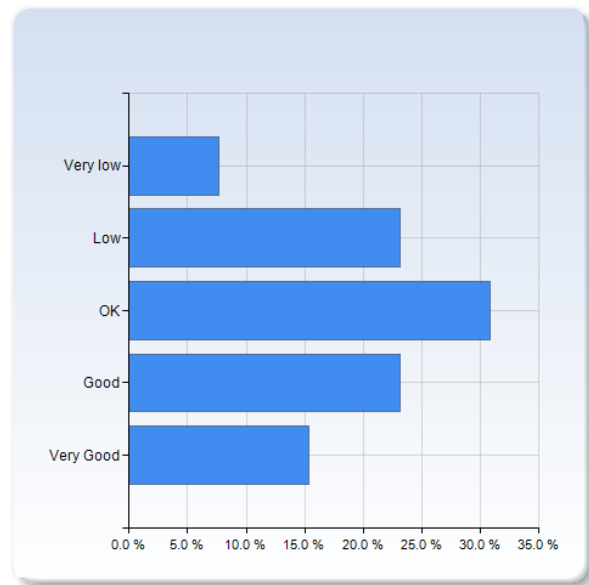
Literature	Number of Responses
Very low	4 (30.8%)
Low	2 (15.4%)
OK	6 (46.2%)
Good	1 (7.7%)
Very Good	0 (0.0%)
Total	13 (100.0%)



	Mean	Standard Deviation
Literature	2.3	1.0

Quality - Computer labs

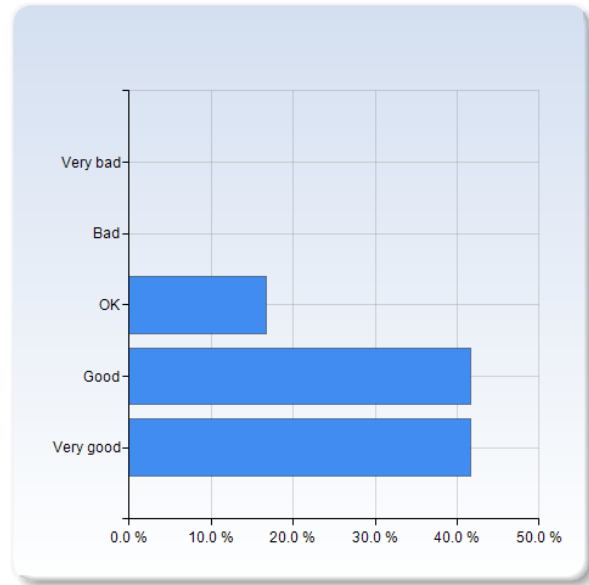
Computer labs	Number of Responses
Very low	1 (7.7%)
Low	3 (23.1%)
OK	4 (30.8%)
Good	3 (23.1%)
Very Good	2 (15.4%)
Total	13 (100.0%)



	Mean	Standard Deviation
Computer labs	3.2	1.2

Quantity - Lectures

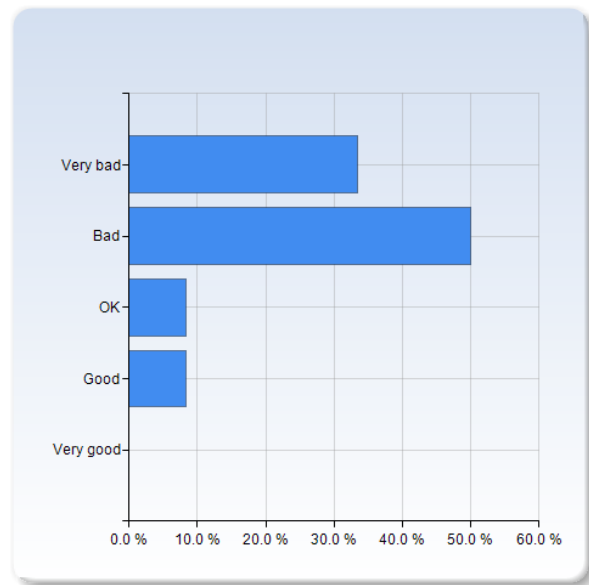
Lectures	Number of Responses
Very bad	0 (0.0%)
Bad	0 (0.0%)
OK	2 (16.7%)
Good	5 (41.7%)
Very good	5 (41.7%)
Total	12 (100.0%)



Lectures	Mean	Standard Deviation
	4.3	0.8

Quantity - Exercises

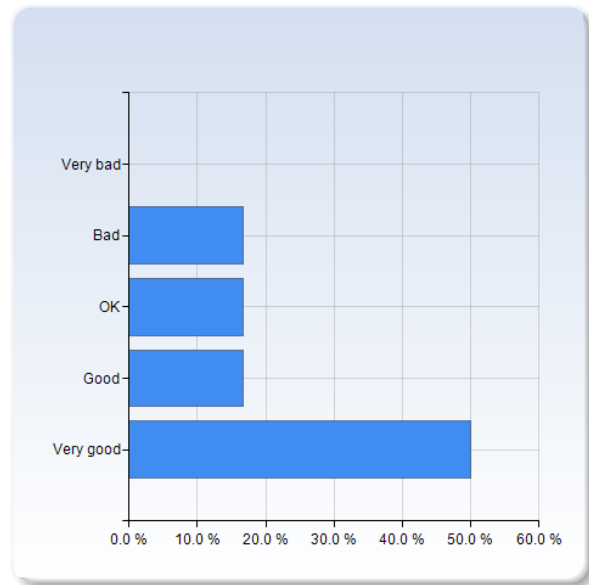
Exercises	Number of Responses
Very bad	4 (33.3%)
Bad	6 (50.0%)
OK	1 (8.3%)
Good	1 (8.3%)
Very good	0 (0.0%)
Total	12 (100.0%)



Exercises	Mean	Standard Deviation
	1.9	0.9

Quantity - Lab projects

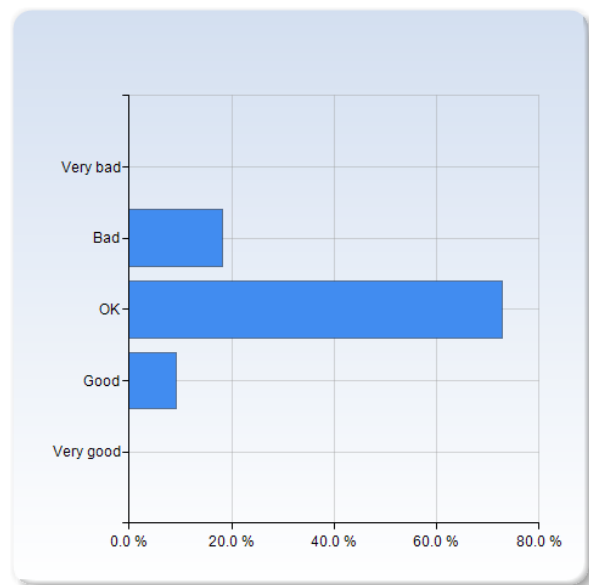
Lab projects	Number of Responses
Very bad	0 (0.0%)
Bad	2 (16.7%)
OK	2 (16.7%)
Good	2 (16.7%)
Very good	6 (50.0%)
Total	12 (100.0%)



	Mean	Standard Deviation
Lab projects	4.0	1.2

Quantity - Literature

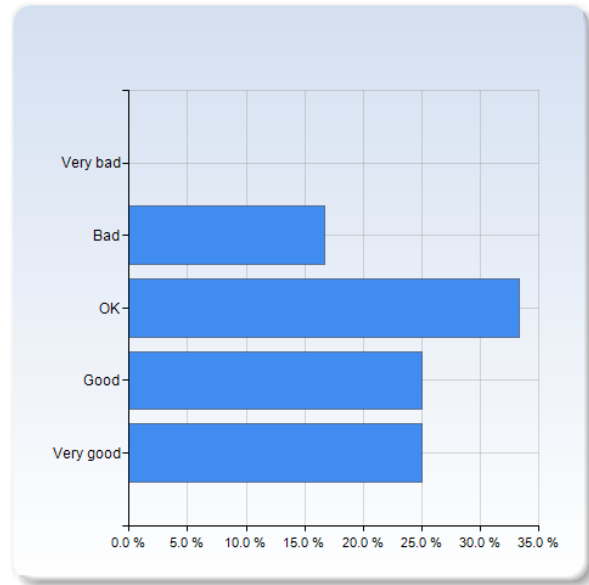
Literature	Number of Responses
Very bad	0 (0.0%)
Bad	2 (18.2%)
OK	8 (72.7%)
Good	1 (9.1%)
Very good	0 (0.0%)
Total	11 (100.0%)



	Mean	Standard Deviation
Literature	2.9	0.5

Quantity - Computer labs

Computer labs	Number of Responses
Very bad	0 (0.0%)
Bad	2 (16.7%)
OK	4 (33.3%)
Good	3 (25.0%)
Very good	3 (25.0%)
Total	12 (100.0%)



Computer labs	Mean	Standard Deviation
	3.6	1.1

Comments

Boken var inte alls hjälpsam. Riktigt dålig faktiskt. Kursen har flera delar men boken täcker bara en. Olika artiklar blir inte lika bra som en bra kursbok.

Hade velat ha många fler övningar i alla delar av kursen!

Datorlabbarna var mest stressiga och man kommer inte ihåg någonting efteråt. Kanske bättre att satsa på ett program.

This was a great course! The labs were very relevant. The chromatography lectures were fantastic.

It was difficult to focus on the lectures and its literature since the labs took up the study time.

Not enough exercises especially for the FFF, the uploaded documents for the FFF and 2019 exam was late.

The laborations were alright, just took up a lot of time.

Way to many labs to keep up with lectures

Labs were generally very good in applying relevant theory with practice. TAs were both helpful and easy going all in all very good lab course.

I'm so glad i didn't buy the book cause otherwise i would've been really mad about wasting my money as I heard others did. Skimmed through some chapters in the book at the library and never opened it again, relied entirely on online resources and lectures.

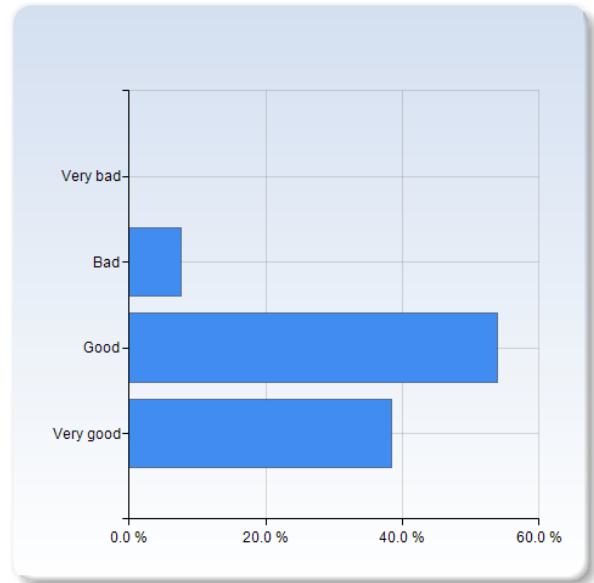
The schedule is quite intense as it is, but I would like more exercises. It is easier to test your knowledge and verify that you follow the course that way. The labs were very useful since they connected strongly to the course material. I noticed how much they had taught me when I started studying for the exam.

It would be good with more exercises/discussions. There were too many different sources of literature and it felt a bit unfocused/unstructured. I didn't use the recommended course book at all during this course. However, the lectures were thorough and a great source of information.

How did the information/communication work during the course?

Teacher availability

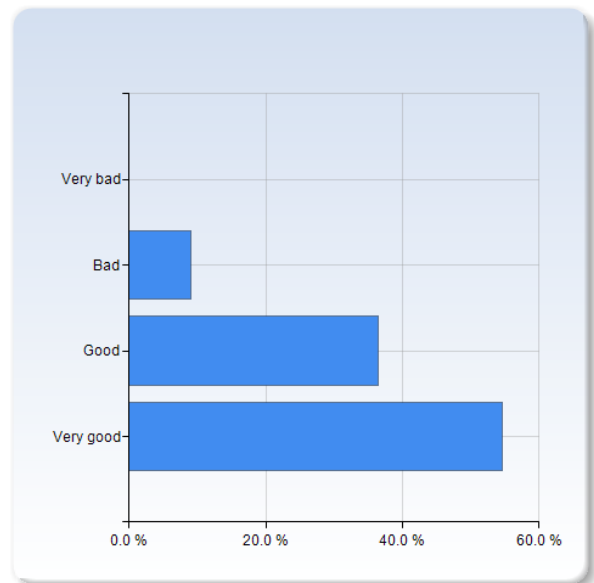
Teacher availability	Number of Responses
Very bad	0 (0.0%)
Bad	1 (7.7%)
Good	7 (53.8%)
Very good	5 (38.5%)
Total	13 (100.0%)



	Mean	Standard Deviation
Teacher availability	3.3	0.6

Assistants availability

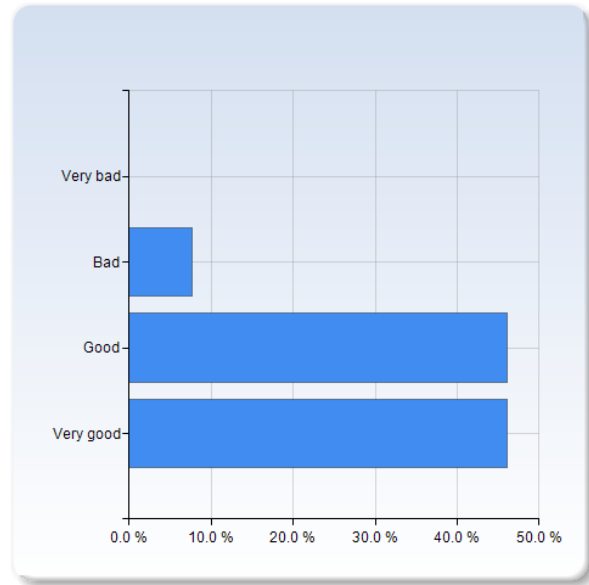
Assistants availability	Number of Responses
Very bad	0 (0.0%)
Bad	1 (9.1%)
Good	4 (36.4%)
Very good	6 (54.5%)
Total	11 (100.0%)



	Mean	Standard Deviation
Assistants availability	3.5	0.7

Lab instructors availability

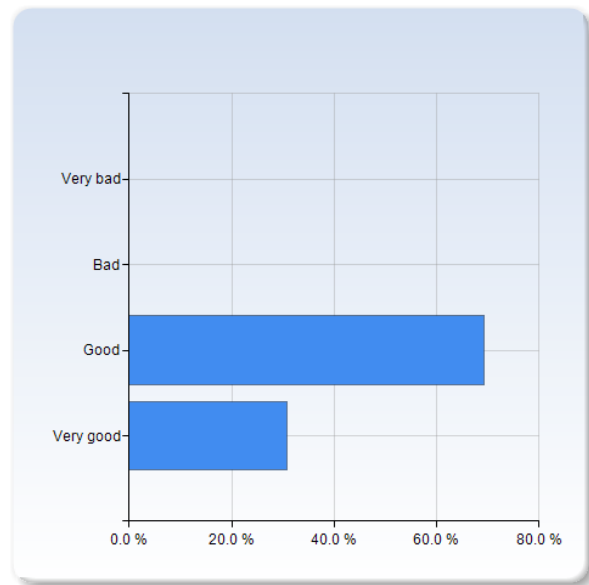
Lab instructors availability	Number of Responses
Very bad	0 (0.0%)
Bad	1 (7.7%)
Good	6 (46.2%)
Very good	6 (46.2%)
Total	13 (100.0%)



	Mean	Standard Deviation
Lab instructors availability	3.4	0.7

Communication between the teachers

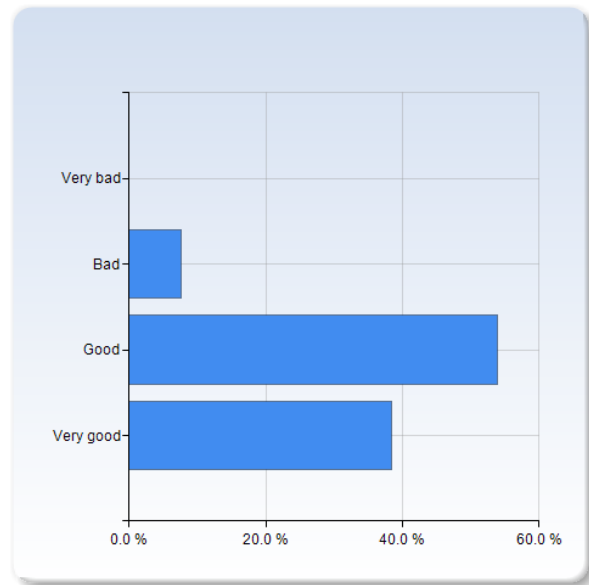
Communication between the teachers	Number of Responses
Very bad	0 (0.0%)
Bad	0 (0.0%)
Good	9 (69.2%)
Very good	4 (30.8%)
Total	13 (100.0%)



	Mean	Standard Deviation
Communication between the teachers	3.3	0.5

Information on live at lund

Information on live at lund	Number of Responses
Very bad	0 (0.0%)
Bad	1 (7.7%)
Good	7 (53.8%)
Very good	5 (38.5%)
Total	13 (100.0%)



	Mean	Standard Deviation
Information on live at lund	3.3	0.6

Comments

It was difficult to find the teachers and assistants room and even if we found it, they were not there.

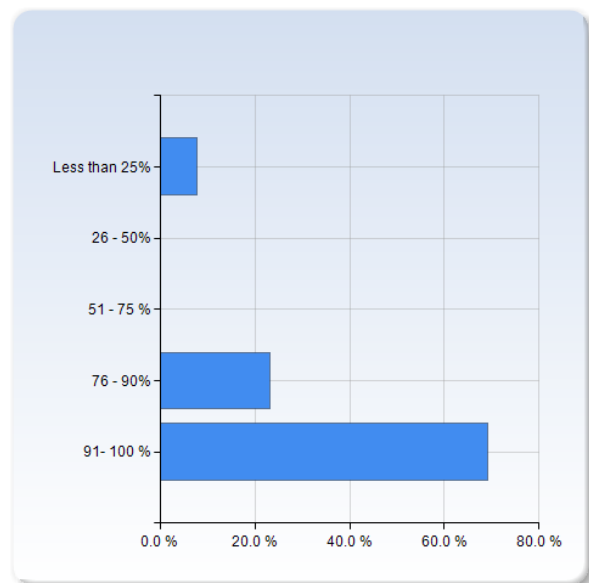
A lot of documents on I@I was uploaded really late.

For several groups it took a long time to get response to the second handin of labreports.

How much have you participated in the following three alternatives?

Lectures

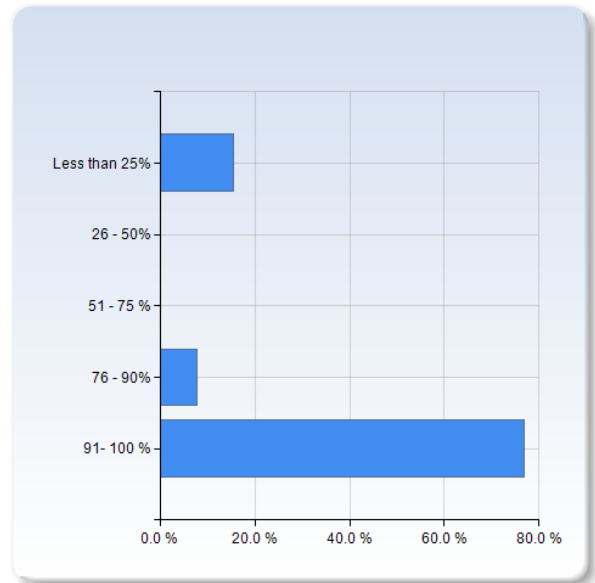
Lectures	Number of Responses
Less than 25%	1 (7.7%)
26 - 50%	0 (0.0%)
51 - 75 %	0 (0.0%)
76 - 90%	3 (23.1%)
91- 100 %	9 (69.2%)
Total	13 (100.0%)



	Mean	Standard Deviation
Lectures	4.5	1.1

Exercises

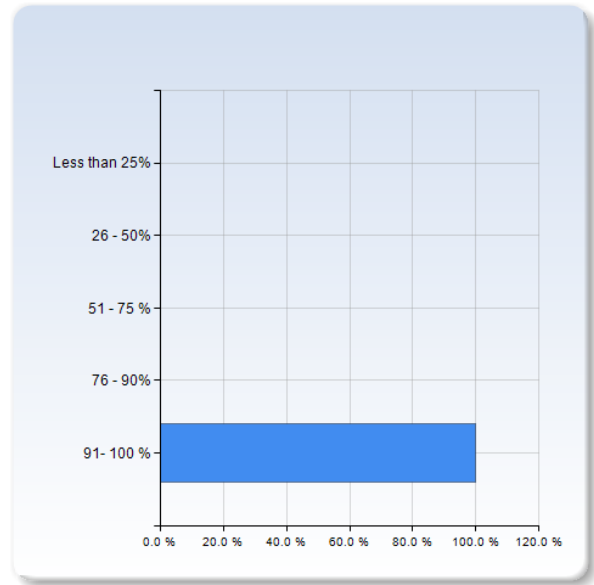
Exercises	Number of Responses
Less than 25%	2 (15.4%)
26 - 50%	0 (0.0%)
51 - 75 %	0 (0.0%)
76 - 90%	1 (7.7%)
91- 100 %	10 (76.9%)
Total	13 (100.0%)



	Mean	Standard Deviation
Exercises	4.3	1.5

Lab project

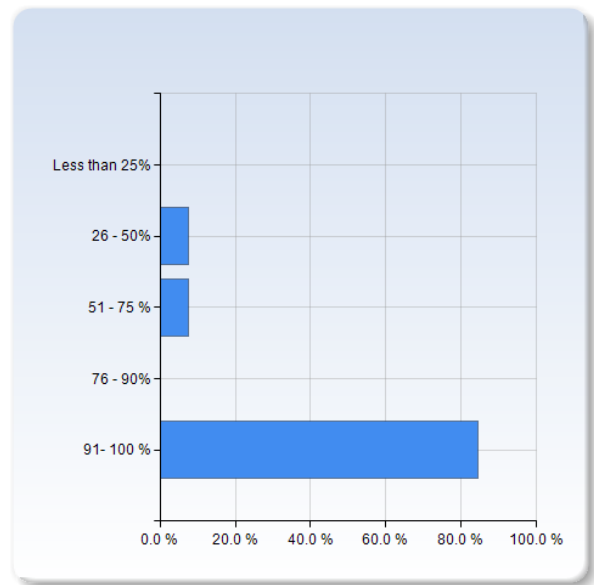
Lab project	Number of Responses
Less than 25%	0 (0.0%)
26 - 50%	0 (0.0%)
51 - 75 %	0 (0.0%)
76 - 90%	0 (0.0%)
91- 100 %	13 (100.0%)
Total	13 (100.0%)



	Mean	Standard Deviation
Lab project	5.0	0.0

Computer labs

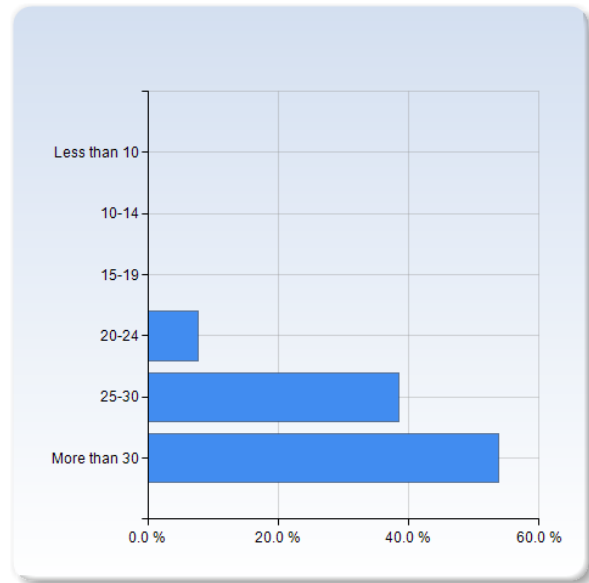
Computer labs	Number of Responses
Less than 25%	0 (0.0%)
26 - 50%	1 (7.7%)
51 - 75 %	1 (7.7%)
76 - 90%	0 (0.0%)
91- 100 %	11 (84.6%)
Total	13 (100.0%)



	Mean	Standard Deviation
Computer labs	4.6	1.0

How many work hours have you spent (including scheduled time) on studies in the course per week?

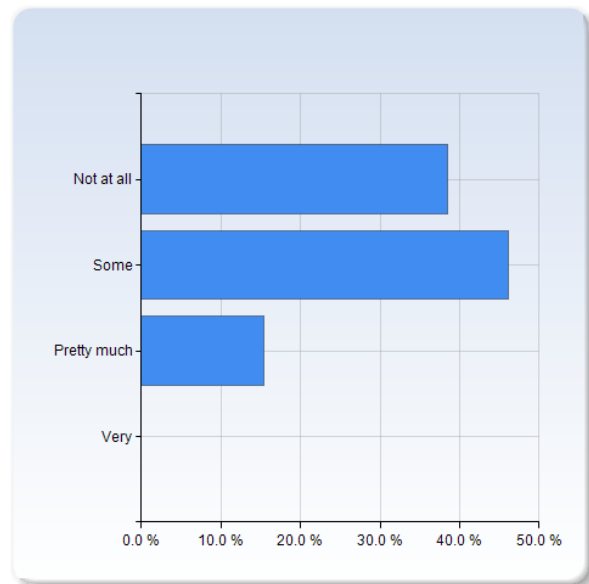
How many work hours have you spent (including scheduled time) on studies in the course per week?	Number of Responses
Less than 10	0 (0.0%)
10-14	0 (0.0%)
15-19	0 (0.0%)
20-24	1 (7.7%)
25-30	5 (38.5%)
More than 30	7 (53.8%)
Total	13 (100.0%)



How many work hours have you spent (including scheduled time) on studies in the course per week?	Mean	Standard Deviation
	5.5	0.7

Was the course literature clear and distinct?

Was the course literature clear and distinct?	Number of Responses
Not at all	5 (38.5%)
Some	6 (46.2%)
Pretty much	2 (15.4%)
Very	0 (0.0%)
Total	13 (100.0%)



Was the course literature clear and distinct?	Mean	Standard Deviation
	1.8	0.7

Comments

Used it a lot in the beginning of the course, but the reading faded when the labs begun.

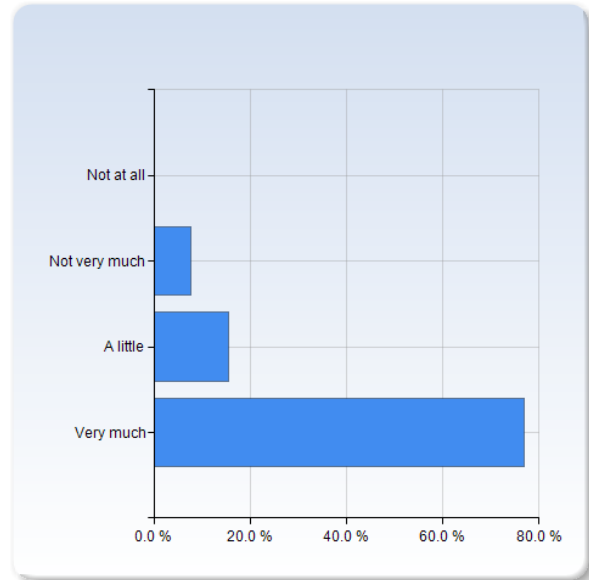
Terrible course literature, much much better looking at free online resources.

The book (Poole) was very dry and not very pedagogic. The lecture notes were superior although they usually weren't full sentences.

There were too many different sources of literature (articles etc) and it felt a bit unfocused/unstructured. I didn't use the recommended course book at all during this course.

Were the lectures helpful in the learning process?

Were the lectures helpful in the learning process?	Number of Responses
Not at all	0 (0.0%)
Not very much	1 (7.7%)
A little	2 (15.4%)
Very much	10 (76.9%)
Total	13 (100.0%)



	Mean	Standard Deviation
Were the lectures helpful in the learning process?	3.7	0.6

Comments

A lot of information but sometimes the previous exams did have questions that were unavailable from the lectures.

8 am lectures = No info goes in

In general most of the lectures were okay, one thing that really bothered me was Sofia ridiculed a person asking a question in front of the whole class laughing and saying "we just went through this surely you must understand, I'm not gonna answer that and waste time" and moved on. I couldn't answer this question and I asked if either of my desk-neighbors could answer this question at the time and none could.

So maybe don't blame poor teaching on students.

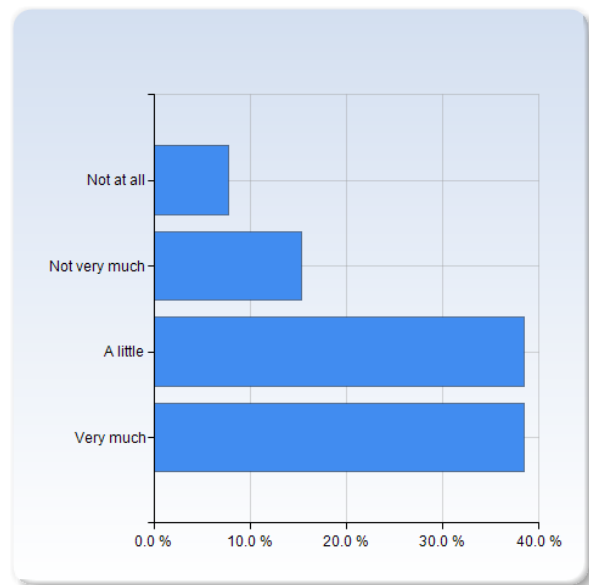
Really helpful

Besides the labs, they were the best way to learn.

I liked that each lecturer was expert in their field. Getting information from the best person available is great! Lectures and slides were very thorough and informative.

Were the exercises helpful in the learning process?

Were the exercises helpful in the learning process?	Number of Responses
Not at all	1 (7.7%)
Not very much	2 (15.4%)
A little	5 (38.5%)
Very much	5 (38.5%)
Total	13 (100.0%)



	Mean	Standard Deviation
Were the exercises helpful in the learning process?	3.1	1.0

Comments

But way to few

They helped in getting a grip of how to apply the theory for practical problems, my main concern here was the lack of exercises in the course, one hour every week would've been more helpful.

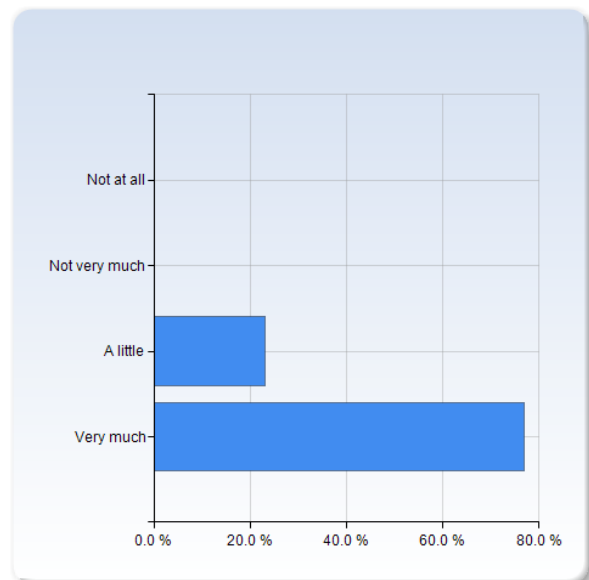
Fire alarms.... they were not finished

They were great, but there were only two! I would appreciate more exercises that test you in the same way the exam does, with discussions about different settings and parameters.

I would have liked more time for exercises and discussions to at least finish all tasks. Exercises is a good way to put your knowledge to the test.

Were the lab projects helpful in the learning process?

Were the lab projects helpful in the learning process?	Number of Responses
Not at all	0 (0.0%)
Not very much	0 (0.0%)
A little	3 (23.1%)
Very much	10 (76.9%)
Total	13 (100.0%)



	Mean	Standard Deviation
Were the lab projects helpful in the learning process?	3.8	0.4

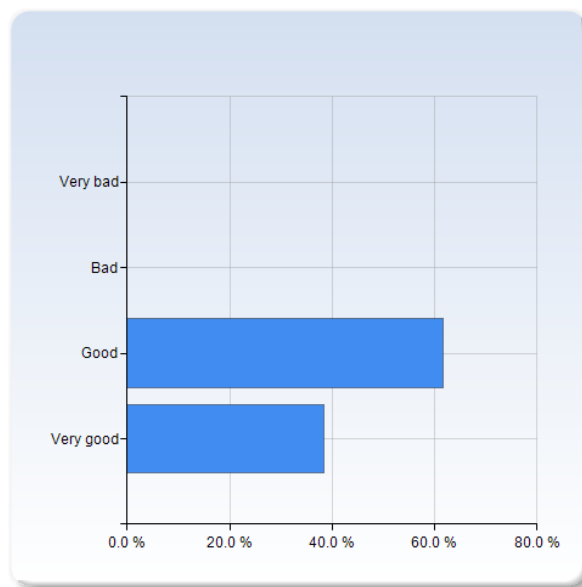
Comments

Probably the most valuable tool, although you didn't notice this while doing them.

There were many labs and we got to try different techniques and labs with different aim. Very happy with the lab course!

What do you think of the structure and instructions regarding the lab projects?

What do you think of the structure and instructions regarding the lab projects?	Number of Responses
Very bad	0 (0.0%)
Bad	0 (0.0%)
Good	8 (61.5%)
Very good	5 (38.5%)
Total	13 (100.0%)



	Mean	Standard Deviation
What do you think of the structure and instructions regarding the lab projects?	3.4	0.5

Comments

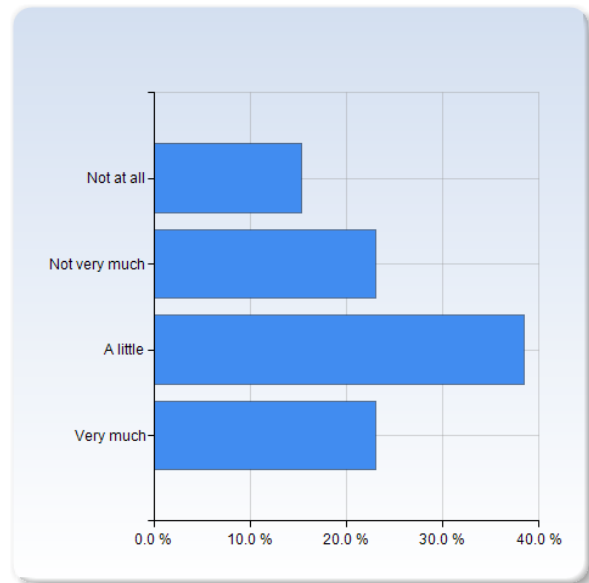
They were good but very very long, sometimes they felt unnecessary too long on waiting and collecting a too big amount of data. I think reducing the amount of data to collect for each experiment will make them shorter but still be very effective on learning and understanding how the different techniques work.

Could be made slot faster for the same results intense but good

Some lab instructions were not that useful as manuals during the labs, mostly for GC. There were step by step instructions, but at the lab we were supposed to do it differently.

Was the computer labs helpful in the learning process?

Was the computer labs helpful in the learning process?	Number of Responses
Not at all	2 (15.4%)
Not very much	3 (23.1%)
A little	5 (38.5%)
Very much	3 (23.1%)
Total	13 (100.0%)



	Mean	Standard Deviation
Was the computer labs helpful in the learning process?	2.7	1.0

Comments

Yes, it was very good to try to apply lecture contents on some real datasets

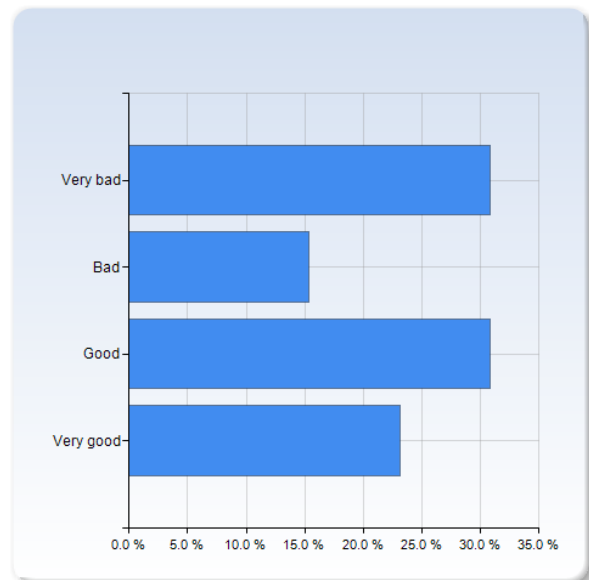
Computer labs felt very poorly prepared. There was no instructions so more or less everyone was dependent on the teacher helping them with nearly every step at the start of each exercise. Would be greatly improved with some short guide.

Some were tied to the course in a nice way, but mostly they didn't have much to do with the rest of the course material.

Good to actually perform "operations" on data to see what happens.

What do you think of the structure and instructions regarding the computer labs?

What do you think of the structure and instructions regarding the computer labs?	Number of Responses
Very bad	4 (30.8%)
Bad	2 (15.4%)
Good	4 (30.8%)
Very good	3 (23.1%)
Total	13 (100.0%)



	Mean	Standard Deviation
What do you think of the structure and instructions regarding the computer labs?	2.5	1.2

Comments

Not so clear instructions on what the task were. Played around in the programs

Inga skriftliga instruktioner alls. Alla bara satt och vänta på hjälp

Having Peter there to answer questions was very helpful.

We had no idea how to use the applications and since we had no instructions we simply had to wait until Peter could help the whole class.

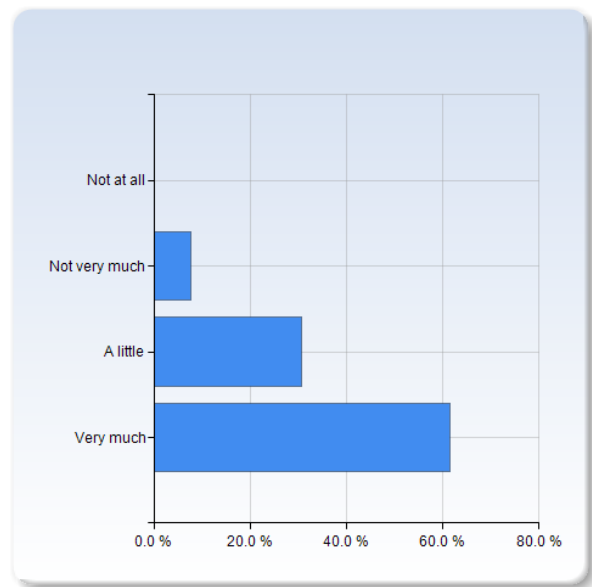
It was sometimes difficult to get familiar with so many new and different softwares in such a short time. Sometimes, I spent more than half of the schedule time in the computer room just to understand how to write the right instruction into the software and then there was not enough time to think in depth about the scheduled task. Maybe it can be very useful to get some shortcut before the actual exercise.

See above

Perhaps a little more time with teacher could be needed, or smaller groups

Were the report assessment criteria useful?

Were the report assessment criteria useful?	Number of Responses
Not at all	0 (0.0%)
Not very much	1 (7.7%)
A little	4 (30.8%)
Very much	8 (61.5%)
Total	13 (100.0%)



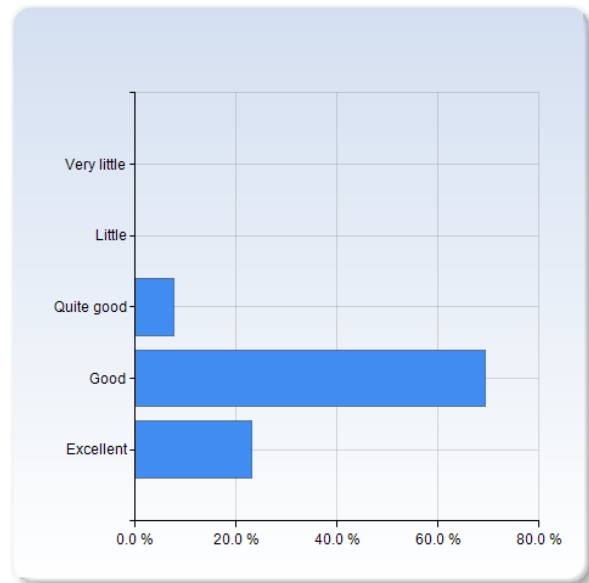
	Mean	Standard Deviation
Were the report assessment criteria useful?	3.5	0.7

Comments

Very useful, it was very clear what to write and comment for every report.

Did the examination reflect the syllabus of this course?

Did the examination reflect the syllabus of this course?	Number of Responses
Very little	0 (0.0%)
Little	0 (0.0%)
Quite good	1 (7.7%)
Good	9 (69.2%)
Excellent	3 (23.1%)
Total	13 (100.0%)



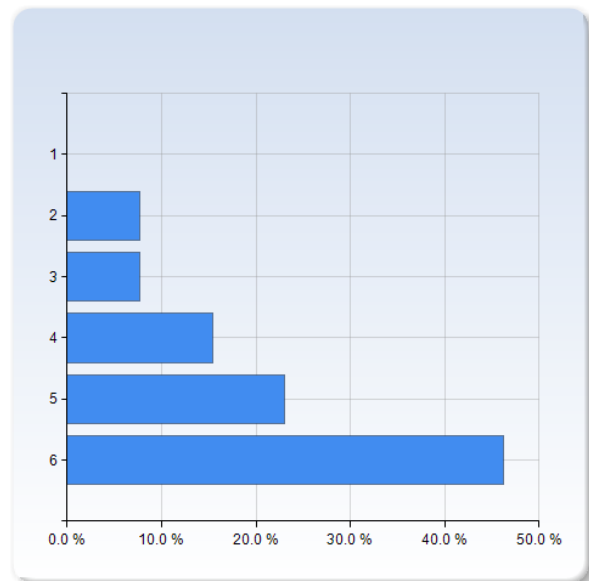
	Mean	Standard Deviation
Did the examination reflect the syllabus of this course?	4.2	0.6

Comments

It was very long and took a long time to write. Probably the longest exam I ever took. I felt that it reflected the course material nicely though.

Was the course relevant to your program? (6= yes, completely, 1 = no, not at all)

Was the course relevant to your program? (6= yes, completely, 1 = no, not at all)	Number of Responses
1	0 (0.0%)
2	1 (7.7%)
3	1 (7.7%)
4	2 (15.4%)
5	3 (23.1%)
6	6 (46.2%)
Total	13 (100.0%)



	Mean	Standard Deviation
Was the course relevant to your program? (6= yes, completely, 1 = no, not at all)	4.9	1.3

Comments

Synthetic chemist but I can definitely see use for knowing a bit of analytical chemistry

What has been good?

What has been good?

Almost everything.

Much lab work, got a little bit stressful with report and preparing for the next lab and at the same time correct old report. At the same time, the labs gave a much deeper understanding and helped a lot in the learning process.

The labs.

Labbarna. Maggan hjälpsam inför tentan

Chromatography lectures!

The effort of every lecturer to make everything clear, to be sure that students understand every topic in depth as much as possible and to answer to every question.

Lectures were very clear, well structured and interesting. I felt very involved during the lectures and very supported on critical thinking by every lecturer. I felt every question, doubt, curiosity and discussion was very welcome and appreciated. A lot of material has been provided as well as a lot of reasoning on how to work with and understand all the different techniques. I really felt I learned a lot and not just on how to pass the exam.

Availability from all teachers/assistants. The lectures

Lectures, labs, amount of labs,

Most things, I liked this course.

What has been bad?

What has been bad?

The short time for writing lab reports (too much stress), too little exercise,

Datorlabbarna och kurslitteraturen.

Lars var svår att få tag i inför tentan. Mailade frågor flera dagar innan utan svar.

Sometimes I felt a kind of information overloading and it was very difficult to keep up with lectures, computer exercises and lab projects on the second part of the course. Lab reports were very very long to write and even studying regularly every day including weekends, I sometimes felt time was not enough to do everything at my best.

Last part of the course I felt I could not really focus and concentrate about the contents of the lectures. I had to focus all my time on reports, lab work and computer exercises and then there was not enough time left to really study and go through lectures material and notes.

The exercises, not enough time at all... due to the little time not much was learned by these

Too few exercises. The book (Poole)

It would have been good with one course book to cover everything, but I understand that it is difficult to find due to the diversity of subjects.

How can we improve?

How can we improve?

Clearer instructions on the computer labs. What is the aim, what can I do in the programs and so on. Now we got to find the tools on our own (which at the same time can be good), there is a risk that we miss some tools in the program.

Much more exercises, more time for students to study, by removing the computer lab part, more group works.

Var mer tillgängliga inför tentan speciellt när ni inte laddat upp något facit på extentorna.

If possible, I would suggest to have most of the theoretical lectures at the beginning of the course.

I think that having the general introduction about chromatography, all the important principles of gas and liquid chromatography (including the overview of the different techniques and optimization) and then the overview of capillary electrophoresis and mass spectrometry one after the other and before starting the lab projects would have made things much easier, even if this meant having lectures every day.

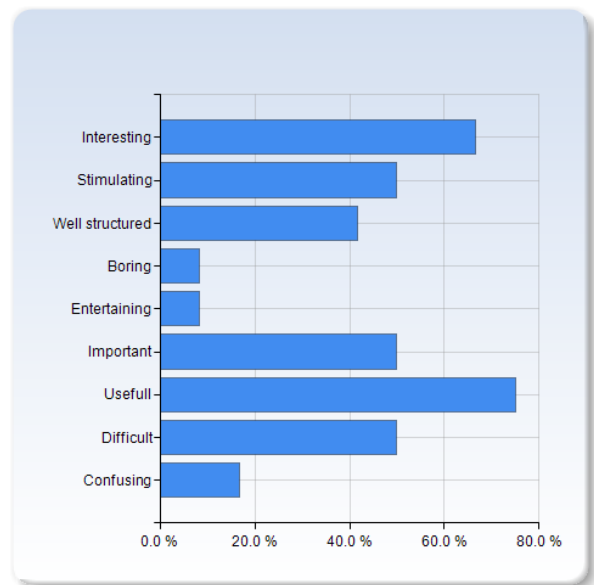
Have one more session where you go through an exam and how to think on the different exercises with the teacher as a whole group. Besides the session already held

Some lecture notes were confusing when studying and could use more complete sentences. More exercises

Update the lab instructions so that they match exactly what we are doing so they can be used as a manual.

How would you describe the course? Select as many choices as you would like.

How would you describe the course? Select as many choices as you would like.	Number of Responses
Interesting	8 (66.7%)
Stimulating	6 (50.0%)
Well structured	5 (41.7%)
Boring	1 (8.3%)
Entertaining	1 (8.3%)
Important	6 (50.0%)
Usefull	9 (75.0%)
Difficult	6 (50.0%)
Confusing	2 (16.7%)
Total	44 (366.7%)



	Mean	Standard Deviation
How would you describe the course? Select as many choices as you would like.	4.8	2.8