Kursanalys FEM för ingenjörstillämpningar SE1025 HT2018

Personal

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Assistent:	Henry Ericsson
Examinator:	Jonas Neumeister

Kvantitativa data

Antal registrerade:	84
Prestationsgrad:	65 %
Examinationsgrad:	57 %

Kommentarer från kursansvarig

Detta var tredje gången jag hade kursen, tidigare omgångar var HT2015 och HT2016. Kursen har utvecklats under ett antal år och under senare år har flertalet lärare ansvarat för kursen. Jag följde i stort sätt uppläget från mitt första år som i sin tur baseras på Jonas Faleskogs upplägg som en gång planerade och startade kursen. Min åsikt är att inga större ändringar i upplägg behöver göras. Föreläsningarna följdes av ca 45-50 studenter. Ett antal av de 84 registrerade studenterna har läst kursen tidigare men fått underkänt på tentamen och fortsätter dessvärre med detta. Om man bara tittar på aktiva studenter som följer föreläsningarna och övningarna så är min uppfattning att examinationsgraden ligger på 75 % - 80 %.

Kursutvärderingen, bifogad i slutet av detta dokument, visar att studenterna är nöjda med kursen. Huvudomdömena verkar vara *intressant* och *användbar*. Det som studenterna efterfrågar, både denna gång och tidigare omgångar, är att arbeta mer med kommersiell programvara och med denna lösa verkliga problem. Detta görs i en senare kurs, modellering med FEM och utrymme för detta saknas i denna kurs. Dock så tipsar jag om denna kurs som en lämplig påbyggnad.

Ett problem är kurslitteratur. Jag använde *The finite element method - a practical course* av G. R. Liu & S.S. Quek som referenslitteratur. Fördelen med denna är att den finns tillgänglig som e-bok från KTHB. De flesta studenter verkar bara använda Jonas Faleskogs OH-kompendium och mina föreläsningsanteckningar som lades upp som pdf-er efter varje föreläsning. Jag har tittat på att använda en annan bok men alternativen är dyra, ca 900 kr/bok och finns inte som e-böcker. Att döma av kursutvärderingen så fungerar nuvarande litteratur hyfsat.

Tentan, bestod av 5 st tal som kunde ge 25 poäng totalt. I år försökte vi göra en tenta med jämnare svårighetsgrad än tidigare där inga ”rena gratispoäng” ges men även sänk svårighetsgrad på de svåraste talen. Detta resulterade i många höga betyg (A och B) utan att påverka examinationsgraden markant.

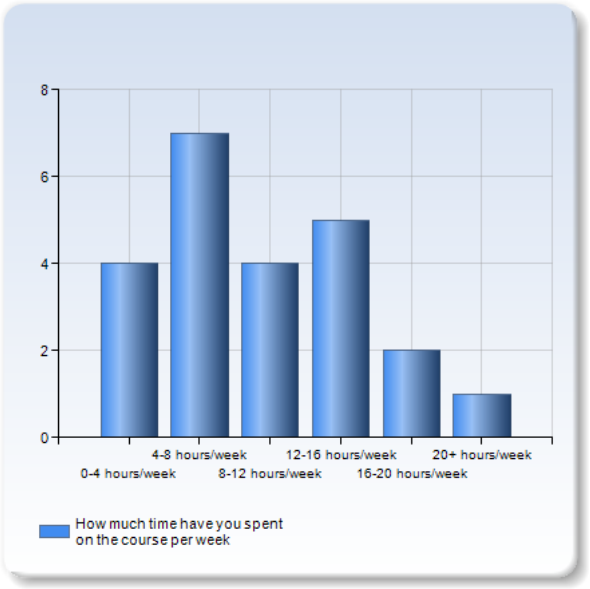
Det som behöver ändras i kursen är labbarna och framför allt första labben där en stor del av arbetsinsatsen består i att bråka med ANSYS användargränssnitt. En ändring av programvara påverkar dock följande kurser och behöver därför diskuteras tillsammans med övriga lärare på institutionen. Här ska jag öka kopplingen mellan laborationerna och föreläsningarna till nästa år, speciellt lab2 där man kan gå igenom hur problemet sätts upp på en föreläsning och sedan analysera det med programvara på laborationen.

SE1025 HT2018 FEM for Engineering Applications

Respondents: 82
Answer Count: 23
Answer Frequency: 28.05 %

How much time have you spent on the course per week

How much time have you spent on the course per week	Number of Responses
0-4 hours/week	4 (17.4%)
4-8 hours/week	7 (30.4%)
8-12 hours/week	4 (17.4%)
12-16 hours/week	5 (21.7%)
16-20 hours/week	2 (8.7%)
20+ hours/week	1 (4.3%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
How much time have you spent on the course per week	2.9	1.4	49.6 %	1.0	2.0	3.0	4.0	6.0

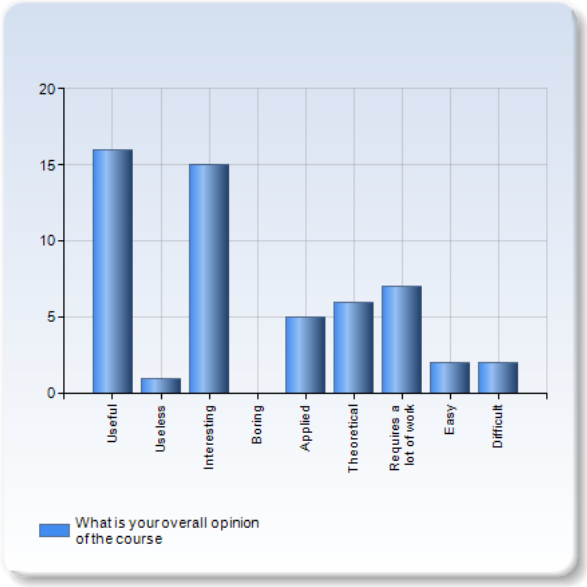
Does the amount of work match 6hp
Yes, even beyond:)
Yes, it does
Yes
No. I think the course should be 7 or 7.5 credits
Yes
Nope
It varies. Maybe more.
yes
Maybe it could have been 7,5 hp
Yes
Yes
Sure it does.
yes
yes

How much time have you spent on the course per week
3
5
5
4
1
6
4
2
4
4
2
1
3
2
2
4
1
3
2
2

20 (23)

What is your overall opinion of the course

What is your overall opinion of the course	Number of Responses
Useful	16 (69.6%)
Useless	1 (4.3%)
Interesting	15 (65.2%)
Boring	0 (0.0%)
Applied	5 (21.7%)
Theoretical	6 (26.1%)
Requires a lot of work	7 (30.4%)
Easy	2 (8.7%)
Difficult	2 (8.7%)
Total	54 (234.8%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
What is your overall opinion of the course	3.8	2.5	65.6 %	1.0	1.0	3.0	6.0	9.0

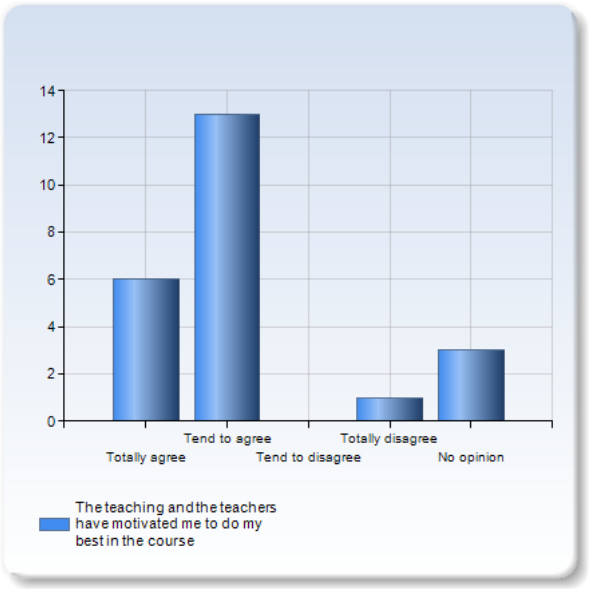
Comment
If you put effort in doing exercises, your endeavor will pay off
It was very applied. I did not expect that.
Not easy nor difficult, something in between
It set a base for my solid mechanics study here, including FEM method and related software. That's why it's so useful to me.

What is your overall opinion of the course
6
7
9
1
3
6
7
1
1
3
5
1
1
3
1
3
5
7
2
3

20 (54)

The teaching and the teachers have motivated me to do my best in the course

The teaching and the teachers have motivated me to do my best in the course	Number of Responses
Totally agree	6 (26.1%)
Tend to agree	13 (56.5%)
Tend to disagree	0 (0.0%)
Totally disagree	1 (4.3%)
No opinion	3 (13.0%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The teaching and the teachers have motivated me to do my best in the course	2.2	1.3	57.6 %	1.0	1.5	2.0	2.0	5.0

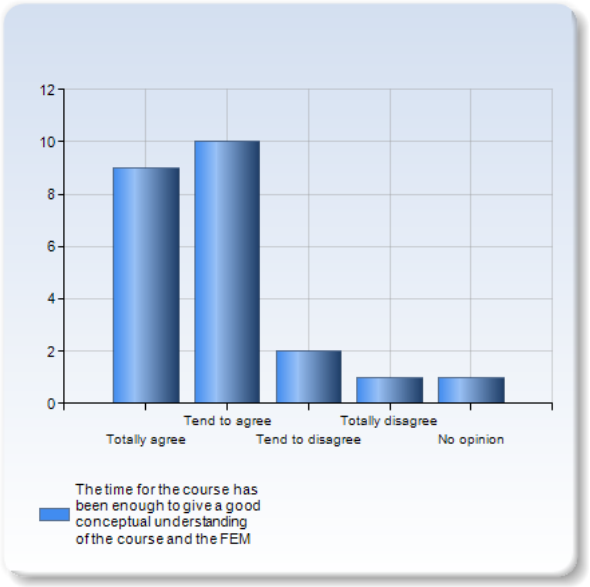
Comment
The lecturer is extremely available towards the students to give further explanations
The lectures were really good. I didn't read any books or so, the lectures were enough.

The teaching and the teachers have motivated me to do my best in the course
5
2
2
1
4
2
2
2
2
1
2
5
1
2
1
2
2
1
2
1

20 (23)

The time for the course has been enough to give a good conceptual understanding of the course and the FEM

The time for the course has been enough to give a good conceptual understanding of the course and the FEM	Number of Responses
Totally agree	9 (39.1%)
Tend to agree	10 (43.5%)
Tend to disagree	2 (8.7%)
Totally disagree	1 (4.3%)
No opinion	1 (4.3%)
Total	23 (100.0%)



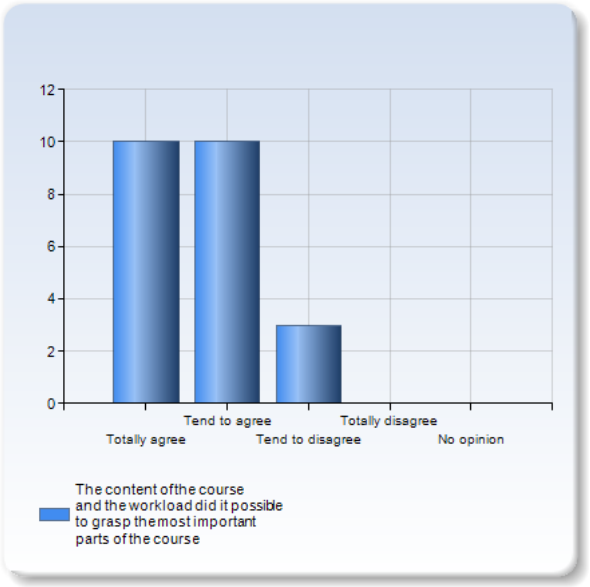
	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The time for the course has been enough to give a good conceptual understanding of the course and the FEM	1.9	1.0	54.4 %	1.0	1.0	2.0	2.0	5.0

Comment	The time for the course has been enough to give a good conceptual understanding of the course and the FEM
I had several FEM classes before so I did not really learn something new.	4
A bit fast	2
	1
	2
	1
	2
	3
	1
	1
	3
	5
	2
	1
	1
	2
	1
	1
	1
	2
	2

20 (23)

The content of the course and the workload did it possible to grasp the most important parts of the course

The content of the course and the workload did it possible to grasp the most important parts of the course	Number of Responses
Totally agree	10 (43.5%)
Tend to agree	10 (43.5%)
Tend to disagree	3 (13.0%)
Totally disagree	0 (0.0%)
No opinion	0 (0.0%)
Total	23 (100.0%)



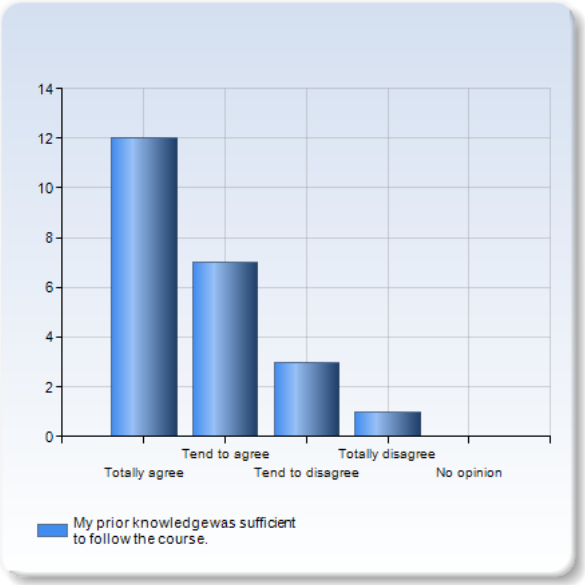
	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The content of the course and the workload did it possible to grasp the most important parts of the course	1.7	0.7	41.5 %	1.0	1.0	2.0	2.0	3.0

The content of the course and the workload did it possible to grasp the most important parts of the course
3
2
2
1
1
2
3
1
1
2
1
3
1
1
2
1
2
1
2
1

20 (23)

My prior knowledge was sufficient to follow the course.

My prior knowledge was sufficient to follow the course.	Number of Responses
Totally agree	12 (52.2%)
Tend to agree	7 (30.4%)
Tend to disagree	3 (13.0%)
Totally disagree	1 (4.3%)
No opinion	0 (0.0%)
Total	23 (100.0%)



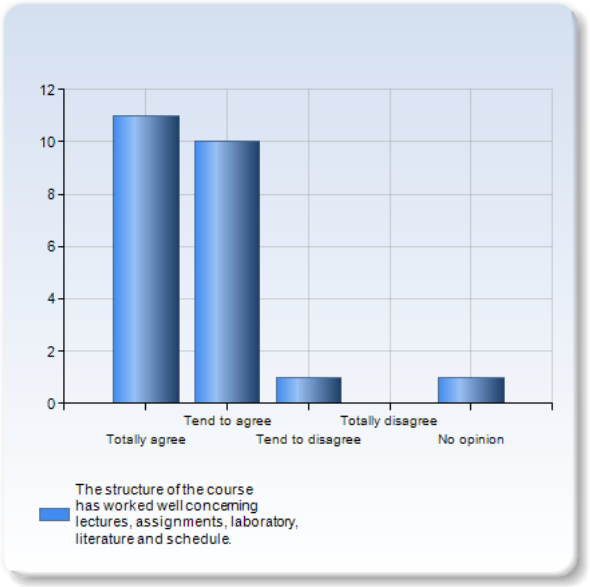
	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
My prior knowledge was sufficient to follow the course.	1.7	0.9	51.6 %	1.0	1.0	1.0	2.0	4.0

Comment	My prior knowledge was sufficient to follow the course.
Some of the math "tools" used were quite confusing as I had never heard of their usage before. But I think if there was a bit more explanation on how they were utilized, for example, weight functions with Differential Equations.	3
	1
	1
	1
	1
	3
	2
	1
	1
	4
	1
	3
	1
	2
	2
	1
	1
	2
	2
	2

20 (23)

The structure of the course has worked well concerning lectures, assignments, laboratory, literature and schedule.

The structure of the course has worked well concerning lectures, assignments, laboratory, literature and schedule.	Number of Responses
Totally agree	11 (47.8%)
Tend to agree	10 (43.5%)
Tend to disagree	1 (4.3%)
Totally disagree	0 (0.0%)
No opinion	1 (4.3%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The structure of the course has worked well concerning lectures, assignments, laboratory, literature and schedule.	1.7	0.9	54.6 %	1.0	1.0	2.0	2.0	5.0

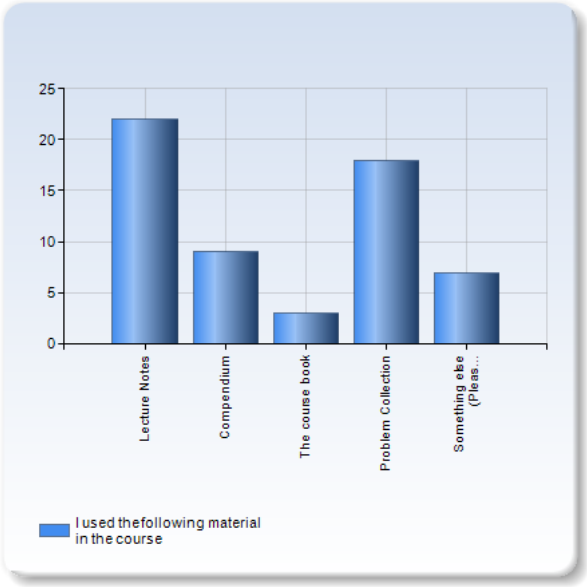
Comments? Should we have more tutorials and less lectures or is it good to have examples during the lectures
Good to have examples to help us grasp more conceptual information
More practical examples could be treated during the lecture hours
Have examples during the lectures, good to directly apply the content of the lecture
I did not go to the tutorials and instead only went to the lectures
Jag tycker fördelningen var bra nu! Det är bra att få ett exempel direkt på den teoretiska genomgången!
Prefer to have more examples in lectures.
It would be good to have more examples during the lectures. I've noticed that the lectures were mostly theoretical and less applied, so seeing a few more examples would be helpful. In particular, I say this because the problem collection has answers but not full solutions, so it's hard to tell where I went wrong when calculating a problem, and therefore not so great to use these problems as examples to look at when solving other problems.

The structure of the course has worked well concerning lectures, assignments, laboratory, literature and schedule.
5
2
2
2
1
2
2
1
1
1
1
2
1
1
1
1
2
1
1
2

20 (23)

I used the following material in the course

I used the following material in the course	Number of Responses
Lecture Notes	22 (95.7%)
Compendium	9 (39.1%)
The course book	3 (13.0%)
Problem Collection	18 (78.3%)
Something else (Please specify in the comments section, we might find better course material by that)	7 (30.4%)
Total	59 (256.5%)



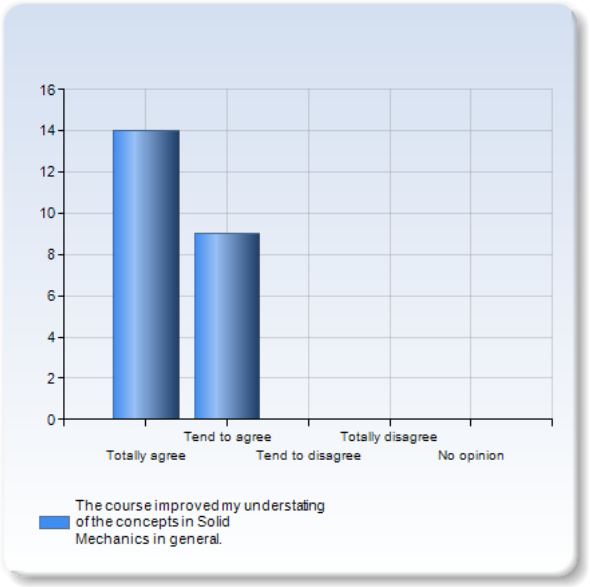
	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
I used the following material in the course	2.6	1.5	57.8 %	1.0	1.0	2.0	4.0	5.0

Comment	I used the following material in the course
Youtube Channel - Schuster Engineering - very good explanations of important FEM concepts.	1
Ex-tentorna	4
Schuster Engineering is an increadebly useful YouTube-channel that explains the most parts of the course! Highly recommended!	1
tutorials on Youtube and handouts from other professors in other institutions	4
Andre tengstrands lösningar på Kth-sidan (till övningshäftet). Kan även lägga till det svenska kompendiet på Canvas (även om kursen är på engelska)	1
Old exams were pretty useful too	2
Old exams	4
Youtube videos were good for revisiting concepts while studying for the exam (channel called "Schuster Engineering"). The problem collection lacks solution explanations and I didn't find it very useful.	5
	1
	1
	5
	1
	3
	4
	1
	4
	1
	3
	4
	5

20 (59)

The course improved my understating of the concepts in Solid Mechanics in general.

The course improved my understating of the concepts in Solid Mechanics in general.	Number of Responses
Totally agree	14 (60.9%)
Tend to agree	9 (39.1%)
Tend to disagree	0 (0.0%)
Totally disagree	0 (0.0%)
No opinion	0 (0.0%)
Total	23 (100.0%)



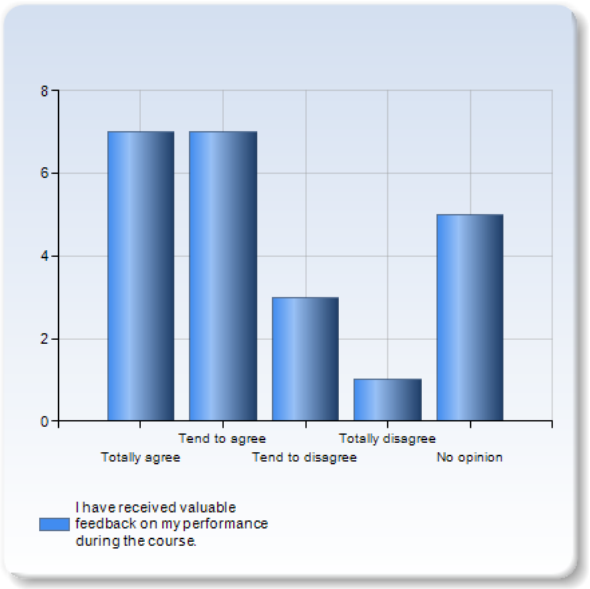
	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The course improved my understating of the concepts in Solid Mechanics in general.	1.4	0.5	35.9 %	1.0	1.0	1.0	2.0	2.0

The course improved my understating of the concepts in Solid Mechanics in general.
2
1
1
1
1
1
2
2
1
2
2
2
1
1
2
2
2
1
1
1

20 (23)

I have received valuable feedback on my performance during the course.

I have received valuable feedback on my performance during the course.	Number of Responses
Totally agree	7 (30.4%)
Tend to agree	7 (30.4%)
Tend to disagree	3 (13.0%)
Totally disagree	1 (4.3%)
No opinion	5 (21.7%)
Total	23 (100.0%)

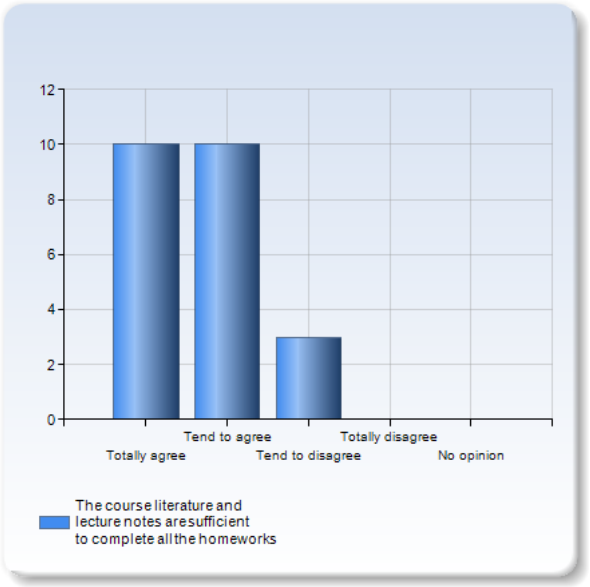


	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
I have received valuable feedback on my performance during the course.	2.6	1.5	59.7 %	1.0	1.0	2.0	3.5	5.0

Comment	I have received valuable feedback on my performance during the course.
Vore bra att få tillbaks assignments så att man vet vad som blev fel! (Kanske bara jag som missade?)	5
	5
	1
	1
	4
	5
	2
	1
	3
	1
	3
	5
	1
	2
	2
	1
	2
	2
	1
	2
20 (23)	

The course literature and lecture notes are sufficient to complete all the homeworks

The course literature and lecture notes are sufficient to complete all the homeworks	Number of Responses
Totally agree	10 (43.5%)
Tend to agree	10 (43.5%)
Tend to disagree	3 (13.0%)
Totally disagree	0 (0.0%)
No opinion	0 (0.0%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The course literature and lecture notes are sufficient to complete all the homeworks	1.7	0.7	41.5 %	1.0	1.0	2.0	2.0	3.0

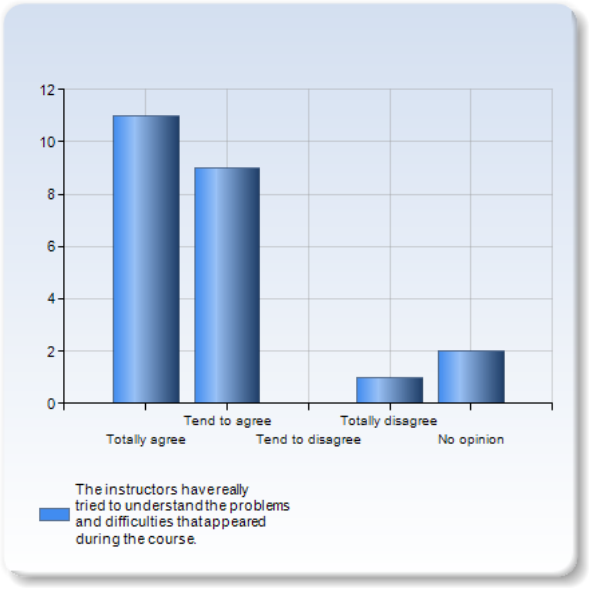
Comment
Wished for more valuable step by step methods for solving iso-parametric with four nodes cases. Like we had for spring, truss and beams elements.
Förutom 3an

The course literature and lecture notes are sufficient to complete all the homeworks
3
2
2
1
2
1
2
2
1
2
1
3
1
2
2
1
1
2
1
2

20 (23)

The instructors have really tried to understand the problems and difficulties that appeared during the course.

The instructors have really tried to understand the problems and difficulties that appeared during the course.	Number of Responses
Totally agree	11 (47.8%)
Tend to agree	9 (39.1%)
Tend to disagree	0 (0.0%)
Totally disagree	1 (4.3%)
No opinion	2 (8.7%)
Total	23 (100.0%)



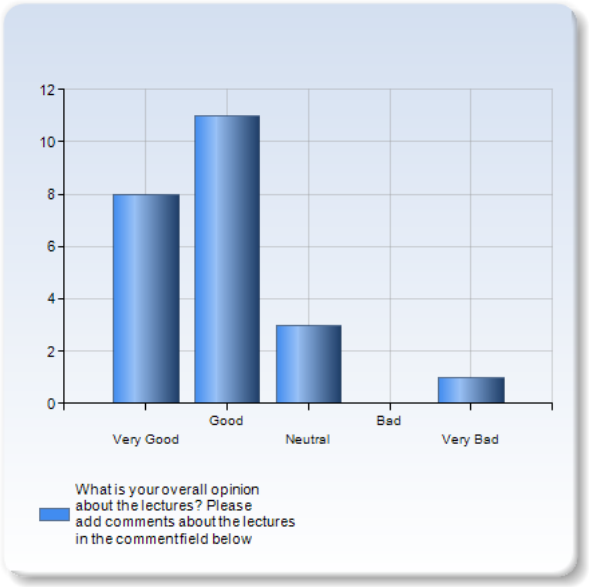
	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
The instructors have really tried to understand the problems and difficulties that appeared during the course.	1.9	1.2	65.1 %	1.0	1.0	2.0	2.0	5.0

Comment
Henry was so very helpful :) Very sincere, made himself available to help students outside of class hours, did his best to advise us on how to succeed in the course.
The instructors have really tried to understand the problems and difficulties that appeared during the course.
5
2
1
2
4
2
2
1
2
2
1
5
1
2
1
1
1
2
1
1

20 (23)

What is your overall opinion about the lectures? Please add comments about the lectures in the comment field below

What is your overall opinion about the lectures? Please add comments about the lectures in the comment field below	Number of Responses
Very Good	8 (34.8%)
Good	11 (47.8%)
Neutral	3 (13.0%)
Bad	0 (0.0%)
Very Bad	1 (4.3%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
What is your overall opinion about the lectures? Please add comments about the lectures in the comment field below	1.9	0.9	49.6 %	1.0	1.0	2.0	2.0	5.0

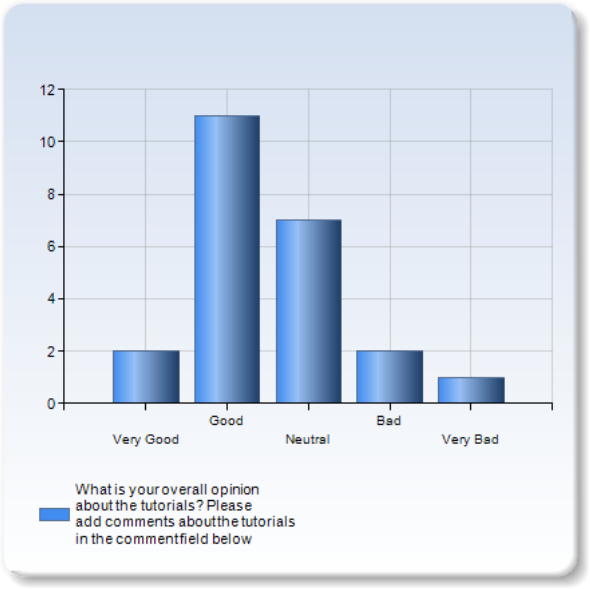
Comments? How should we improve the lectures?
I think most work is great, maybe need a review after each homework
I only attended two lectures, because I normally don't go on any lectures to learn. I follow the lecture notes instead.
Good structure of the lectures, though more examples would be appreciated
A lot of examples. I'm not used to get everything presented on a sliver dish in the lecture. Different countries, different teaching methods. But I guess it's called applied FEM so the course content really satisfies it's title.
Useful course. It let me know the principle of FEM and enabled me to solve some problems. Also use ANSYS to solve complex ones.
The first weeks was pretty heavily loaded with lectures and that can be both good and bad. For me it had the effect that I studied a lot in the beginning and got a good foundation but I neglected the other courses a little bit. For some of my friends it was too much the first weeks so they left the course. My conclusion is to maybe level it out with the lectures.
Föreläsningarna var bra!
I practiced some problems from problem collection, chapter 1. It is hard for me to split the structure for analysing the forces and moments inside. So emphasis should be made in that part.
Simple, easy to follow. I think some of the derivations could have been a little clearer, but overall lectures were really helpful.
The lectures were good but they would be much better with a few more examples, even if they are just quick examples. (There is no need for too many examples, since that is what the tutorials are for.)

What is your overall opinion about the lectures? Please add comments about the lectures in the comment field below
3
1
3
1
5
2
2
2
2
3
2
2
1
1
1
1
2
2
1
1

20 (23)

What is your overall opinion about the tutorials? Please add comments about the tutorials in the comment field below

What is your overall opinion about the tutorials? Please add comments about the tutorials in the comment field below	Number of Responses
Very Good	2 (8.7%)
Good	11 (47.8%)
Neutral	7 (30.4%)
Bad	2 (8.7%)
Very Bad	1 (4.3%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
What is your overall opinion about the tutorials? Please add comments about the tutorials in the comment field below	2.5	0.9	37.6 %	1.0	2.0	2.0	3.0	5.0

Comments? How should we improve the tutorials?
Instructor should be more careful When calculating
I didn't go to anyone, but heard from others that they were not always so helpful due to failures from assistant when calculating, which often made the students more unsure about things.
I think the person to take the tutorials should be a doctoral/PhD student and not a second year masters student
Be more prepared for the tutorials so that you instructors totally know what you've doing
Better preparation of the tutorials
Sometimes the calculation went wrong.
Henry was good but it was a little bit much "just following the notes". I stopped going after the second. I like when the tutorials start with a small lecture, a recap of what has been said during the real lectures and after that exercises.
It is too theorical, we should practice more instead of just writing the solution
Ibland för snabb på varför och lite mkt tid på att bara skriva upp matriser tex. Jag är mer intresserad av lösningsmetoder för att kunna lösa problemen själv än att varje siffra i en matris är rätt (vilket inte verkade gälla andra). När ett fel upptäcktes tog det väldigt mkt tid från lektionen att försöka backtracka vad felet ger för konsekvenser. Skulle hellre se att man struntar i det lilla felet och fortsätter med lösningsmetoderna i detta fall. Annars bra!
Often the tutor made mistakes. It is understandable since he took the course last year.
Henry has made progress to become rigorous without making errors in the tutorials.
I think the examples were really helpful, but I thought that it would be more beneficial to spend less time on "number-crunching" so that we could go through more examples. As for the examples themselves, if possible, it'd be helpful to chose more complicated problems so that students can have more opportunities to ask questions they might have when doing homework or when studying for the exam.
The TA who ran the tutorials was very pedagogical and had a clear way of showing the method for solving problems, so in this way the tutorials were very useful. However, it seems he often did not cross-check with the answers in the problem collection because his answers usually didn't match (there was some sort of minor mistake somewhere and the entire problem would end up being incorrect). It's totally understandable that this happens, but a quick check with the answer key after he solves out the problems would help to eliminate this problem.

What is your overall opinion about the tutorials? Please add comments about the tutorials in the comment field below
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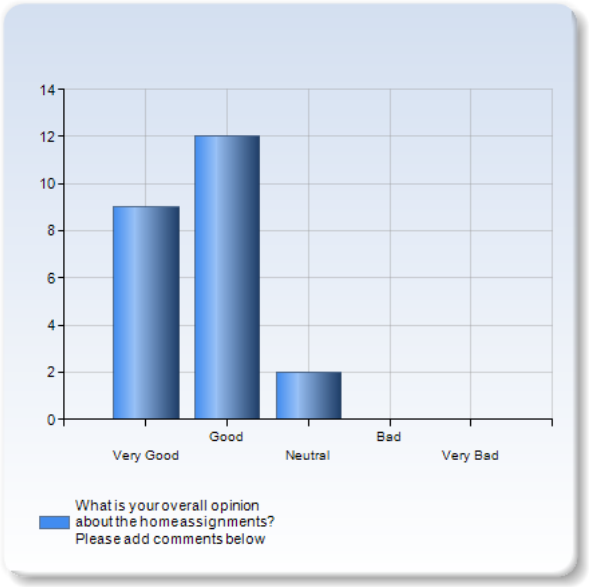
20 (23)

What is your overall opinion about the home assignments? Please add comments below

What is your overall opinion about the home assignments? Please add comments below	Number of Responses
Very Good	9 (39.1%)
Good	12 (52.2%)
Neutral	2 (8.7%)
Bad	0 (0.0%)
Very Bad	0 (0.0%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
What is your overall opinion about the home assignments? Please add comments below	1.7	0.6	37.4 %	1.0	1.0	2.0	2.0	3.0

Comments? Should there be more home assignments? Do they require too much work?
Maybe should give us some Instruction after we have done it to help us recognize mistakes
Help one to grasp the content of the course. The workload is too big for one person. So hard for one student to get a good understanding of all the content.
The assignments should be more applied, i.e. more programming should be involved e.g. MATLAB, Phyton, c etc.
Really helped to understand the most parts of the course, good challenge!
The home assignments were extremely useful to understand the different procedures and topics
Quite long calculations. I would prefer more smaller problems where one needs to show that they understand how to solve the problems since the most difficult part of the assignments were getting correct numbers and not the method.
perhaps the home assignments should contain more marks - as mathematical mistakes meant that marks were easily lost and method was not rewarded. I think this also applies to the exam marks too.
they covered a lot of areas so that's good
Om man gjorde dom ordentligt var det bra hjälp till tentaplugget
Hope for at least one problem for each important principle. Like the part about heat transfer.
I think there could have been more home assignments, but they were a good length. Sometimes I felt that there was a gap in difficulty between the tutorials and the home assignments but otherwise they were quite fair.
Home assignments were good for giving an understanding of what sort of problems could appear on the final exam.

What is your overall opinion about the home assignments? Please add comments below
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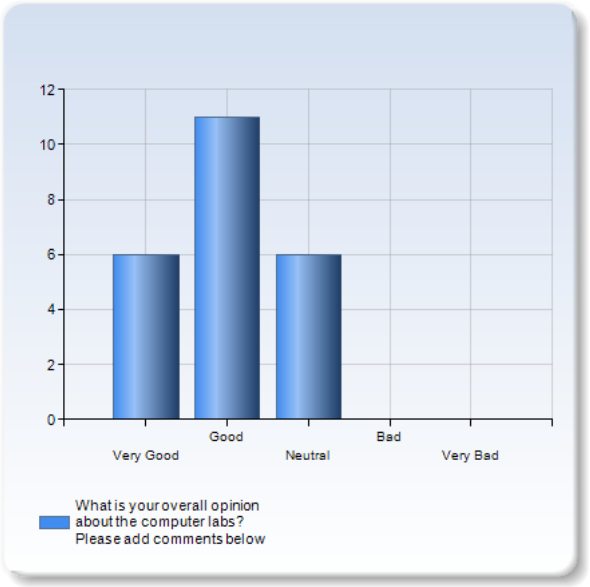
20 (23)

What is your overall opinion about the computer labs? Please add comments below

What is your overall opinion about the computer labs? Please add comments below	Number of Responses
Very Good	6 (26.1%)
Good	11 (47.8%)
Neutral	6 (26.1%)
Bad	0 (0.0%)
Very Bad	0 (0.0%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
What is your overall opinion about the computer labs? Please add comments below	2.0	0.7	36.9 %	1.0	1.5	2.0	2.5	3.0

Comments? How should we improve the computer labs? Do they work well?
Helpful assistants and fun to learn the software and FEM process.
More lab sessions should be included in the course schedule to enable us practise sufficiently with ANSYS
Theyb worked, and both the assistants are extremely prepared and helpful
The second lab was very short, 1,5 h. More problems there, also where you have to more think about the problem.
sometimes the lab notes were not up to date and changes were written on the whiteboard however this created some confusion
maybe have some kind of introduction to ANSYS first. the first lab were pretty much just reading the instructions and do what it said even if you didn't know what you were doing.
Spenderade mer tid på att definiera geometri och få allt rätt än att faktiskt lösa problemet och studera resultatet. Tror färdiga modeller (iaf på vissa delar) skulle vara bättre.
Ansys is really a mess for someone whom get acquainted with it for the first time.
Hope it requires some preparation before the labs.
They were good, I really really wish we could have had more labs. Especially when considering what skill we will be using in the industry, having more labs would improve student's comprehension of how to use the software to solve real-world problems.

What is your overall opinion about the computer labs? Please add comments below
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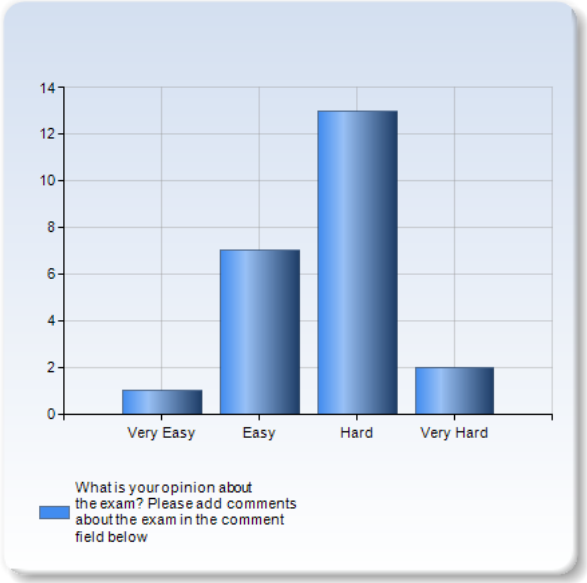
20 (23)

What is your opinion about the exam? Please add comments about the exam in the comment field below

What is your opinion about the exam? Please add comments about the exam in the comment field below	Number of Responses
Very Easy	1 (4.3%)
Easy	7 (30.4%)
Hard	13 (56.5%)
Very Hard	2 (8.7%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
What is your opinion about the exam? Please add comments about the exam in the comment field below	2.7	0.7	26.1 %	1.0	2.0	3.0	3.0	4.0

Comments, did the exam fulfil your expectations?
Yes need to review for all lectures to do well in exam
The temperature question got to much space(points) on the exam in compare to how little time we had to learn about temperature cases. Missed a Castigliano case.
Yes, I expected it to be slightly tough
Too lengthy.
Yes, it totally fulfilled my expectations, unfortunately the time was not enough to do all problems on the exam
I expected it to be hard. And it was!!! But this is how it should be
I have plenty of time to finish it, which is good. And the problems are kind of easy.
The exam itself was not super tough but the time is the biggest factor the decreases your grade. It's hard to do all five tasks with care. What I liked about the correction is the you don't take away points if you have done a silly error because it is so easy to do with all the matrices and integrals.
very easy but you are examined on the math calculations only : better to see if the student can put the formulas needed for Fem than doing just the calculations
Not easy nor hard, something in between. I felt prepared enough to pass by doing old exams though.
The difficulties seems to be similar to the old exams. Although there were some strange numbers inside my answer that made me nervous, the exam is still fine enough.
Not too hard, was pretty much what I expected. I would rate it a medium but there's no option for that.
It was roughly what I expected, although some problems were a little harder in that I really had to think about how to apply the concepts taught in the course (but I assume that was the goal).

What is your opinion about the exam? Please add comments about the exam in the comment field below
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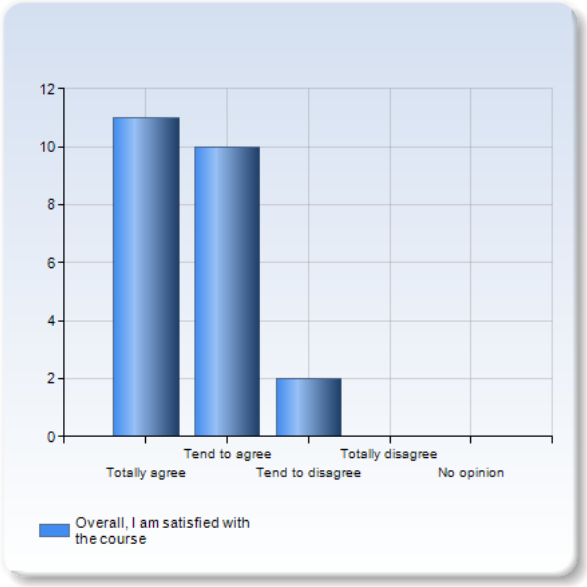
20 (23)

Overall, I am satisfied with the course

Overall, I am satisfied with the course	Number of Responses
Totally agree	11 (47.8%)
Tend to agree	10 (43.5%)
Tend to disagree	2 (8.7%)
Totally disagree	0 (0.0%)
No opinion	0 (0.0%)
Total	23 (100.0%)



	Mean	Standard Deviation	Coefficient of Variation	Min	Lower Quartile	Median	Upper Quartile	Max
Overall, I am satisfied with the course	1.6	0.7	40.8 %	1.0	1.0	2.0	2.0	3.0

Comment	Overall, I am satisfied with the course
Thanks for guiding me into FEM.	3
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20 (23)

What could be made better in the course? Be as specific as possible and I promise to discuss the comments with the organizer for the next course round if it would not be me (Erik Olsson)

What could be made better in the course? Be as specific as possible and I promise to discuss the comments with the organizer for the next course round if it would not be me (Erik Olsson)
You've done a good job, and I learned a lot from your lecture, I mean the setting of lectures, tutorials andhomework is really reasonable, at least for me. But maybe you can spend some time illustrating the homeworks rather then just sending them back to us. One last thing, Please write a little bit clearer on board because sometimes it's hard to recognize your words hahaha. Thanks Erik, for your effort in this course.
- Because I didn't attend the majority of lectures, I would like to get the lecture notes as fast as possible online, so I can summarize/go through them the same day the lecture was held. For the most time they came up the same day, but sometimes the lecture notes came up 1-3 days after and that delayed the learning process for me. - More step by step examples for trusses, beams and isoparametric 4 nodes. They don't need to be too long. - I had difficulties understanding what the form functions was or how they come to be. Which also made it hard to understand B matrices. I would have wished for some very clear explanation in the beginning of the course. In the lecture notes also.
More lab sessions with ANSYS, The course should be more applied and programme oriented e.g. MATLAB, C, C++, Phyton etc.
The exam was quite lengthy and it was difficult to finish within the stipulated time.
Point out for us students how to work on the exam so you can do all problems within 5 hours effectively. Was not so clear to me, sadly it made me miss a problem on the exam because the time was not enough.
I think the computer labs should give some bonus points, at least 1 (meaning 0.5 points for each lab)
I think you did a good job and I enjoyed comming to class.
Maybe a little more programming in home assignment?
Bigger classroom.
Better computer lab sheets
Mentioned partly above.
More labs! And during lab times, would be helpful for instructors to go through one example with the whole class so that less time is spent floundering, waiting for an instructor to be free, and then asking them a simple question regarding the interface for the program. I liked how we were given a tutorial first and then asked to solve a problem on our own. That was really helpful for developing our understanding, in my opinion.
* more examples in the lectures * cross-check the answers/solutions with the problem collection before giving the tutorials * would be nice to have a problem collection with slightly more detailed solutions (or else go through more examples in the lectures/tutorials; I know this is hard because there's only so much time available)