?

Finite Element Methods, 5.0 c

Course code: 1TD253, Report code: 12015, 33%, DAG, NML, week: 44 - 03 Semester: Autumn 2014

Result

This evaluation is answered by 23% (11/47) of the respondents.

Please write summaries of the free-text responses for each question before you publish. Work with the course report will be facilitated if you have already written the summaries. Please note that free text responses must be examined trough a privacy perspective before they are published or printed. See guidelines for course evaluations.

Show course and programme filter

Welcome

Your views on the course is an important part of the course development. We hope you can give us feedback on things that should be developed and improved as well as things that works well and should be kept as it is. Concrete suggestions for improvement are very welcome.

Thanks for your help!
/Murtazo och Lina

General Aspects

1: Which study program (or equivalent) are you registered on?			Answers: 11
Answer options:			
0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. Civil Engineering, Engineering Physics (F)	8 responses	73%	
2. Master Programme in Computational Science	1 responses	9%	
3. Single Subject Course	1 responses	9%	
4. Other programme	1 responses	9%	

2: What is your general view about the course?			Answers: 11
Answer options:			Median: 4 Mean: 3.7 / 5
0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. Very bad	0 responses	0%	
2.	1 responses	9%	
3.	2 responses	18%	
4.	7 responses	64%	
5. Very good	1 responses	9%	

3: What was the degree of difficulty

Answers: 11

Answer options: Median: 4 Mean: 4.2 / 5

Option	Responses	%	
0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. Very easy	0 responses	0%	
2.	0 responses	0%	
3.	0 responses	0%	
4.	9 responses	82%	▇▇▇▇▇▇▇▇▇▇
5. Very hard	2 responses	18%	▇▇

4: How did the total amount of work on the course relate to the credits?

Answers: 11

Answer options: Median: 5 Mean: 4.4 / 5

Option	Responses	%	
0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. Very low	0 responses	0%	
2.	0 responses	0%	
3.	2 responses	18%	▇▇
4.	3 responses	27%	▇▇▇
5. Very high	6 responses	55%	▇▇▇▇▇▇

5: Is the course relevant to your education?

Answers: 11

Answer options: Median: 4 Mean: 4.0 / 5

Option	Responses	%	
0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. Not at all	0 responses	0%	
2.	0 responses	0%	
3.	2 responses	18%	▇▇
4.	7 responses	64%	▇▇▇▇▇▇▇
5. To a very high extent	2 responses	18%	▇▇

6: Has the course been stimulating and interesting?

Answers: 11

Answer options: Median: 4 Mean: 3.9 / 5

Option	Responses	%	
0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. Not at all	0 responses	0%	
2.	0 responses	0%	
3.	3 responses	27%	▇▇▇
4.	6 responses	55%	▇▇▇▇▇▇
5. To a very high extent	2 responses	18%	▇▇

7: Did the course administration (schedule etc) work?   Answers: 11

Answer options: Median: 4 Mean: 3.4 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. No, not at all	1 responses	9%	
2.	4 responses	36%	
3.	0 responses	0%	
4.	2 responses	18%	
5. Yes, to a high degree	4 responses	36%	

8: Was your prior knowledge good enough for the course?   Answers: 11

Answer options: Median: 4 Mean: 4.0 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. No, not at all	0 responses	0%	
2.	1 responses	9%	
3.	2 responses	18%	
4.	4 responses	36%	
5. Yes, absolutely	4 responses	36%	

9: What has been particularly good in this course?   Answers: 3

Lektionerna och Lina som hade lektionerna.

Engagerad föreläsare och hjälpsamma lärare. Givande laborationer och uppgifter.

The Assignments were really time consuming but helped a lot in understanding the FEM methods and how to program them with good support by all teachers.

10: What are the most important specific improvements that could be made?   Answers: 4

In general the course was good. would be nice to hsve clarifications on many things, like what different vectors mean etc. Both in the lectures, lessons and labs.

Måste göra andra projektet mindre alternativt erbjuda betydligt mycket mer hjälp. Tentan innehåll en hel del saker som inte ens togs upp i kursen. Det tyckte jag inte var schyst.

Göra instruktionerna till hur man använder Linux datorerna tydligare i uppgift 3. Ha föreläsningarna i större lokaler så alla får plats och så man kan se tavlan. Lägga ut föreläsnings anteckningarna på internet. Tyckte det las för mycket fokus på att utantill kunna bevisa feluppskattningar till tentan.

Do not have classes in a class room in ITC building 6, the rooms are small which means it's difficult to see the blackboard. The blackboard is also small which means that the teacher has to erase too quickly. The labs are really important because they the students a chance to try out for ourselfs if we have understood the content from the lectures. But all the labs took much longer time than the allocated 2 hours per lab. Therefore, it would be good to rend out an reminder a few days before the lab session that everyone should prepare before coming to the lab.

Learning Outcomes

To pass, the student should be able to

- explain fundamental concepts in mathematical modeling with partial differential equation, and fundamental properties for elliptic, parabolic and hyperbolic equations;

- formulate and with a computer solve second order elliptic boundary value problems in one spatial dimension for Dirichlet, Neumann and Robin boundary conditions using the finite element method;

- formulate and with a computer solve second order elliptic boundary value problems in two spatial dimensions with Dirichlet, Neumann, and Robin boundary conditions, using the finite element method;

- derive a priori and a posteriori error bounds for elliptic equations in one and two spatial dimensions, and be able to use these error bounds to construct adaptive algorithms for local mesh refinement.

- solve parabolic and hyperbolic partial differential equations using the finite element method in space and finite differences in time, and to compare different time stepping algorithms and choose appropriate algorithms for the problem at hand.

- use finite element software to solve more complicated problems, such as coupled systems of equations;

- evaluate different techniques for solving problems and be able to motivate when to use existing software and when to write new code.

11: Have you been informed about the learning outcomes during the course?   Answers: 11

Answer options: Median: 4 Mean: 3.7 / 5

0. Do not know/not relevant/do not wish to answer	1 responses	9%
1. No, not at all	1 responses	9%
2.	1 responses	9%
3.	3 responses	27%
4.	0 responses	0%
5. Yes, to a high degree	5 responses	45%

12: In your opinion, the learning outcomes were met?   Answers: 11

Answer options: Median: 4 Mean: 3.9 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. Not agree at all	0 responses	0%
2.	0 responses	0%
3.	5 responses	45%
4.	2 responses	18%
5. Fully agree	4 responses	36%

13: Comments related to learning outcomes: Answers: 1

The basics and topics regarding the assignments very well explained but the more advanced methods along with most of the proofes were quite rushed and hard to follow/understand.

Teaching

14: The teacher-student communication and cooperation has worked well?   Answers: 11

Answer options: Median: 4 Mean: 4.2 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. Not agree at all	0 responses	0%
2.	1 responses	9%
3.	1 responses	9%
4.	4 responses	36%
5. Fully agree	5 responses	45%

Main Teacher: Murtazo Nazarov

15: The teaching was clear and well structured?			Answers: 10
Answer options:			Median: 4 Mean: 3.8 / 5
0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. Not agree at all	0 responses	0%	
2.	2 responses	18%	
3.	1 responses	9%	
4.	4 responses	36%	
5. Fully agree	3 responses	27%	

16: The teaching was engaging			Answers: 11
Answer options:			Median: 5 Mean: 4.4 / 5
0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. Not agree at all	0 responses	0%	
2.	0 responses	0%	
3.	2 responses	18%	
4.	3 responses	27%	
5. Fully agree	6 responses	55%	

17: The teacher did get the course content across?			Answers: 11
Answer options:			Median: 4 Mean: 3.9 / 5
0. Do not know/not relevant/do not wish to answer	0 responses	0%	
1. Not agree at all	0 responses	0%	
2.	1 responses	9%	
3.	2 responses	18%	
4.	5 responses	45%	
5. Fully agree	3 responses	27%	

Main Teacher: Lina Meinecke

18: The teaching was clear and well structured? Answers: 11

Answer options: Median: 5 Mean: 4.5 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. Not agree at all	0 responses	0%
2.	0 responses	0%
3.	1 responses	9%
4.	4 responses	36%
5. Fully agree	6 responses	55%

19: The teaching was engaging Answers: 11

Answer options: Median: 5 Mean: 4.4 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. Not agree at all	0 responses	0%
2.	0 responses	0%
3.	2 responses	18%
4.	3 responses	27%
5. Fully agree	6 responses	55%

20: The teacher did get the course content across? Answers: 11

Answer options: Median: 4 Mean: 4.3 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. Not agree at all	0 responses	0%
2.	0 responses	0%
3.	2 responses	18%
4.	4 responses	36%
5. Fully agree	5 responses	45%

21: What did the teachers do particularly well in this course? Answers: 4

Murtazo är oerhört kunnig och kan sitt ämne utan och innan. Lina är tillmötesgående och hjälper gärna till om man har frågor.

Lina har varit mycket bra. Strukturerad och otroligt hjälpsam och vänlig.

Lina Meinecken tog sig verkligen tid att hjälpa på ett bra sätt även utanför lektionstid, uppskattades!

Clear explanations and good talking speed, always willing to answer questions.

22: Is there anything in the teacher performance that should be improved? Answers: 4

Murtazo måste utveckla sin tavelteknik så att den blir mer strukturerad.

Föreläsningarna känns inte så välplanerade, taveltekniken har brustit en hel del och framförallt har saker inte gjorts i en bra ordning eller med rätt typ av fokus. Väldigt mycket tid gick åt i början i ämnen som var lätta och sen gick saker som vi behövde för att överhuvudtaget ha en chans att klara av andra projektet inte igenom förens det var för sent och då mycket fort och ytligt.

Murtazo var ibland lite för långsam under föreläsningarna vilket ledde till att det blev stressigt på slutet av vissa föreläsningar.

Sometimes the lectures jumped a little too much within the topics (1D / 2D, when, where and how to implement BC)

Learning activities
Different kinds of learning activities has been used througout the course. Evaluate how valuable these activities has been for your learning.

23: To what extent has the lectures contributed to your learning?   Answers: 11

Answer options: Median: 4 Mean: 3.7 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. Not at all	1 responses	9%
2.	0 responses	0%
3.	3 responses	27%
4.	4 responses	36%
5. To a very high extent	3 responses	27%

24: To what extent has the computer labs contributed to your learning?   Answers: 11

Answer options: Median: 4 Mean: 3.6 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. Not at all	1 responses	9%
2.	0 responses	0%
3.	2 responses	18%
4.	7 responses	64%
5. To a very high extent	1 responses	9%

25: To what extent has the problem solving classes contributed to your learning?   Answers: 11

Answer options: Median: 4 Mean: 4.3 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. Not at all	0 responses	0%
2.	0 responses	0%
3.	0 responses	0%
4.	8 responses	73%
5. To a very high extent	3 responses	27%

26: To what extent has the assignments contributed to your learning?   Answers: 11

Answer options: Median: 5 Mean: 4.2 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. Not at all	0 responses	0%
2.	1 responses	9%
3.	3 responses	27%
4.	0 responses	0%
5. To a very high extent	7 responses	64%

27: Comments related to learning activities

Answers: 2

> The assignments are not so hard but the instructions contains typos that confuses. The instructions also need to be extended because there are a lot of things we havent gone through during the lectures(specially assignment 2 and 3).
>
> Inlämningsuppgifterna behöver tydligare instruktioner på de svårare uppgifterna.

Text books and course material

The text book *Larson, Mats G. and Bengzon, Fredrik: The Finite Element Method: Theory, Implementation and Applications* has been used in the course.

28: Has the text book been useful?

Answers: 11

Answer options:

Median: 5 Mean: 4.4 / 5

0. Do not know/not relevant/do not wish to answer	0 responses	0%
1. No, not at all	0 responses	0%
2.	1 responses	9%
3.	1 responses	9%
4.	2 responses	18%
5. Yes, to a high degree	7 responses	64%

29: Has handouts such as slides been useful?

Answers: 11

Answer options:

Median: 2 Mean: 1.7 / 5

0. Do not know/not relevant/do not wish to answer	4 responses	36%
1. No, not at all	3 responses	27%
2.	3 responses	27%
3.	1 responses	9%
4.	0 responses	0%
5. Yes, to a high degree	0 responses	0%

30: Comments related to text books and course material

Answers: 1

> The book is awesome.

Examination

31: Examinations accorded well with the content of the course.			Answers: 10
Answer options:			Median: 4 Mean: 4.2 / 5
0. Do not know/not relevant/do not wish to answer	1 responses	9%	
1. Do not agree at all	0 responses	0%	
2.	1 responses	9%	
3.	0 responses	0%	
4.	4 responses	36%	
5. Agree completely	4 responses	36%	

32: Examinations have given me fair opportunities to demonstrate my knowledge.			Answers: 10
Answer options:			Median: 5 Mean: 4.3 / 5
0. Do not know/not relevant/do not wish to answer	1 responses	9%	
1. Do not agree at all	0 responses	0%	
2.	0 responses	0%	
3.	2 responses	18%	
4.	2 responses	18%	
5. Agree completely	5 responses	45%	

33: Examinations have given me fair opportunities to demonstrate my knowledge. (COPY)			Answers: 9
Answer options:			Median: 5 Mean: 4.5 / 5
0. Do not know/not relevant/do not wish to answer	1 responses	9%	
1. Do not agree at all	0 responses	0%	
2.	0 responses	0%	
3.	1 responses	9%	
4.	2 responses	18%	
5. Agree completely	5 responses	45%	

Summary of free-text responses/comments for the whole course evaluation