

DN2260 Finite Element Methods

Result of course evaluation

questions to answer.

1. Do you regard the course to be easy or hard?

1. 0% (0 st) Very easy.
 2. 3.3% (1 st) Easy.
 3. 36.7% (11 st) Average.
 4. 46.7% (14 st) Rather hard.
 5. 13.3% (4 st) Very hard.
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2. Were the goals of the course clear to you from the start?

1. 53.3% (16 st) Yes.
 2. 30.0% (9 st) Not sure.
 3. 16.7% (5 st) No.
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3. Do you think the course is interesting and meaningful?

1. 56.7% (17 st) Yes, very.
 2. 40.0% (12 st) Yes.
 3. 3.3% (1 st) Neutral.
 4. 0% (0 st) Not really.
 5. 0% (0 st) No.
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4. Do you think you had sufficient knowledge about mathematics and computing when the course started?

1. 3.3% (1 st) Yes.
 2. 23.3% (7 st) Not sure.
 3. 26.7% (8 st) No.
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5. What do you think about the course book Computational Differential Equations (CDE)?

1. 13.3% (4 st) Very good.
2. 20.0% (6 st) Good.
3. 36.7% (11 st) Ok.
4. 20.0% (6 st) Not that good.
5. 6.6% (2 st) Bad.
6. 3.3% (1 st) I have not used it.

Comments on the book:

Some time it confuses by linking one problem to another problem. Even problem and equation number have the same notations.

yeh the book was ok but not very good

What i feel is that CDE is not explaining any particular topic in an easiest way. Sometimes its very abstract. If someone just not have good mathematics concept at the beginning of course then its difficult to catch up.

not too many examples for the beginner

Maybe include some basic easy problems first for the student to get familiar and comfortable with the content. Solutions to the problems would also help.

Unfortunately little time to read the concerned chapters due of the workload in the Master programme. The book

seemed fine in some parts, other parts felt a little bit over-complicated.

I think it's not very good to start the course with but it could be a good reference for the future.

The book was used in the 2010 Finite Elements masters course at the KTH Stockholm.

As someone who was knew to the FEM, but who had a profound background in calculus, I found the book a good revision of the latter, but the FEM part was hard for me to read and grasp.

The first part the book revises the required fundamental mathematics like calculus in several dimensions, quadrature error estimation and linear algebra.

The approach to the FEM itself is rather theoretical. Most theorems are proven, but few is explained in an clear manner. The given examples are abstract and there are no concrete examples concerning problems arising in engineering and physics. In my course even those students struggled with the book who had already taken another course in FEM. Furthermore there are no solutions for the given exercises.

In addition the book sticks mostly to basic ODEs and refers to the "Advanced Companion Book" whenever it gets interesting, e.g. when it comes to PDEs or non-linearity.

So who would one recommend this book? Obviously it neither suits beginners in the FEM, as it's approach is to complicated. However, experienced students also will not get happy with the book, as the it lacks advanced methods. Maybe it suits best mathematicians, who are looking for an introduction to the FEM without being bothered to much with physics and engineering.

emphasis so much on the details

Any good book with out good coaching is useless.

6. What do you think about the course homepage?

1. 23.3% (7 st) Very good.
2. 60.0% (18 st) Good.
3. 16.7% (5 st) Ok.
4. 0% (0 st) Not that good.
5. 0% (0 st) Bad.
6. 0% (0 st) I have not used it.

Comments on the homepage:

the homepage was good and all the information was there.

Fair enough

It's good to have the lecture notes on the web in case you need to look up a particular lecture.

It was managed properly and timely. I found no difficulty in finding any information from home page.

7. How many of the lectures have you attended?

1. 10.0% (3 st) Less than 20%.
2. 3.3% (1 st) 20-40%.
3. 10.0% (3 st) 40-60%.
4. 20.0% (6 st) 60-80%.

5. 53.3% (16 st) More than 80%.

8. What do you think about the lectures from a pedagogical point of view? (Is the material presented well? Is the lecturer speaking and writing clear? Is the projector used sufficiently/too much?)

1. 40.0% (12 st) Very good.
2. 23.3% (7 st) Good.
3. 30.0% (9 st) Acceptable.
4. 3.3% (1 st) Not that good.
5. 0% (0 st) Bad.
6. 3.3% (1 st) Have not participated.

Comments on the lectures (constructive suggestions welcome):

to much writing, so less time for thinking. If I had more time for thinking questions would have come up and things would be clearer

For the students who doesn't have the good background in Mathematics has to made clear to prepare in advance or to provide an introductory sessions on that.

yes the lectures were very good and very helpful in understanding the subject, the lecturer speaking and writing was very much clear

I really liked his lectures.

In my opinion all the lectures were very comprehensive and delivered properly.

the presentation of the course was very good

A bit hard to understand certain parts. Would have liked a thorough explanation of what the dual problem signify for instance.

Despite the student's thought about the lecture, I'll found it more useful at the end.

To make this course pedagogical there is needed more time to learn. About 2-3 times more lectures than today. That means that the course should extend to 12-18 weeks. As a student FEM is not the only course that shall be preferred.

Murtazo did his well to teach us this course but the main problem i observed was, Course material was more in less time. Murtazo tried to cover more course in less time. If you try to minimize the course or maximize the time , then it will be very good in understanding difficult concepts.

9. Are you preparing for the lectures (reading relevant sections in the book etc.)?

1. 13.3% (4 st) Yes, always.
2. 23.3% (7 st) Often.
3. 16.7% (5 st) Sometimes.
4. 30.0% (9 st) Seldom.
5. 16.7% (5 st) Never.

10. How many of the exercise sessions have you attended

1. 16.7% (5 st) Less than 20%.
2. 10.0% (3 st) 20-40%.
3. 20.0% (6 st) 40-60%.
4. 16.7% (5 st) 60-80%.
5. 36.7% (11 st) More than 80%.

11. What do you think about the exercise sessions pedagogically? (Is the teacher writing clear? Is there a good contact between teacher and student?)

1. 10.0% (3 st) Very good.
2. 43.3% (13 st) Good.
3. 30.0% (9 st) Acceptable.

4. 10.0% (3 st) Not that good.
5. 0% (0 st) Bad.
6. 6.7% (2 st) Have not participated.

Comments on the exercise sessions (constructive suggestions are welcome):

*to much writing, so less time for thinking. If I had more time for thinking questions would have come up and things would be clearer,
more exam preparation would be fine*

the session i have attended was not so much good just one question solved out of 10 to 15 questions in the whole session

Writing is clear. Sessions were good.

The teacher was cooperative in the entire session.

Good exercise teacher.

Better give exercises as a homework and compare them in the sessions.

Stressful lectures, but an engaged teacher.

In start Tutor in the exercise session was always in hurry. Looks like he wants to get rid of us. But at the end he was quite good. I think he lacks teaching style and methods. May be he will be vary intelligent but not good teacher.

12. Do you get sufficient help at the computer sessions?

1. 50.0% (15 st) Yes, always.
2. 23.3% (7 st) Often.
3. 10.0% (3 st) Sometimes.
4. 3.3% (1 st) Seldom.
5. 3.3% (1 st) Never.

Comments on the computer sessions:

Received good help when we had questions.

The assistant helped very much in lab sessions.

I did all work with a friend without attending the computer sessions.

I would prefer several smaller labs instead of one large project.

Sessions was more than enough to cover the things.

I did not attend the computer sessions.

13. How much time did you spend on the laboration?

1. 26.7% (8 st) Less than 9 hours.
2. 16.7% (5 st) 9-14 hours.
3. 26.7% (8 st) 15-20 hours.
4. 30.0% (9 st) More than 20 hours.

Comments on the laboration:

it was a good exercise

The effort for labs and homeworks was well estimated. This was much better as in some other courses, e.g. mathematical modelling, whose homeworks are daunting.

Very interesting laboration, applying theorethical knowledge and practical skills in programming

14. How much time did you spend on the project?

1. 10.0% (3 st) Less than 9 hours.
2. 13.3% (4 st) 9-14 hours.
3. 2.0% (6 st) 15-20 hours.
4. 56.7% (17 st) More than 20 hours.

Comments on the project:

Very bad problem descriptions, vague formulations

the project was very much tough

15-20 hours per person, and we were two

The project description hand-out had quite a few errors -- e.g. refers to wrong problem number -- which should be corrected. Also it would've been helpful if it had stated that it's necessary to use Robin condition in Puffin.

I think if we had more time I could perform better.

Need more time to complete such big project.

15. How much time did you spend on part A and B of the problem sheet?

1. 20.0% (6 st) Less than 9 hours.
2. 30.0% (9 st) 9-14 hours.
3. 16.7% (5 st) 15-20 hours.
4. 23.3% (7 st) More than 20 hours.

Comments on part A and B of the problem sheet:

Did not have time to do these due to other courses

Did mostly part A.

I did partially the Part B problems

It was a good experience in solving problem sets and it helped understanding concepts more clearly.

the problem sets help me to understand the knowledge more clearly

Didn't have time to pass these

I only did part A

16. Do you think the written exam reflects the content of the course?

1. 23.3% (7 st) Very good.
2. 46.6% (14 st) Good.
3. 6.7% (2 st) Ok.
4. 3.3% (1 st) Not that good.
5. 0% (0 st) Bad.
6. 16.7% (5 st) Did not take the exam.

17. How many other courses have you studied at the same time as this course?

1. 10.0% (3 st) One.
2. 50.0% (15 st) Two.
3. 26.7% (8 st) Three.
4. 6.7% (2 st) Four or more.

18. How large part of your total study time have you spent on this course?

1. 0% (0 st) Less than 15%.
2. 30.0% (9 st) 15-30%.
3. 30.0% (9 st) 30-50%.
4. 30.0% (9 st) 50-70%.
5. 6.7% (2 st) More than 70%.

19. This course gives 6p. What do you think about that compared to other courses?

1. 56.7% (17 st) It is fair with 6p.
2. 0% (0 st) Should be 4p.
3. 43.4% (13 st) Should be 7.5p.
4. 20.0% (0 st) 6p is too much.

20. Suggestions to improvements the course:

The exam really needs to be redone on a conceptual level. Embracing the fact that this course is very much an applied subject, and as such focusing on usage of the methods.

For the scientific computing program, I think it might be better to do this course after doing the numerical courses (DN2221 and DN2222).

The pace of the lectures was bit fast in my point of view. Because the first few sessions I couldn't understand anything. It would be great if during the initial sessions to go at a slower pace and then once we understand the concepts we can go faster.

course was good but the exercise session should be improved

The course is squeezed in one period. It would be good if it's extended for 2 periods perhaps with few more concepts.

Course contents are very interesting but these contents are too much to be completed in just one and a half month. This course should be given an entire semester time with increased points.

I think the course is better not be given in the first period - first semester, but maybe later in the program

I think it is necessary to apply some elementary lectures to introduce basic knowledges.

1. A better book
2. a semester course not a periodic one

Extending the course-time to be two periods.

Please, use another book! The books in the other courses, e.g Strang or Edsberg are easier to understand. Mr. Edsberg approach to the finite difference method is much more comprehensible as the FEM approach used in the CDE book.

For me as an engineer, understanding a problem and applying a numerical to it is more important than proving every detail. Of what use is the proof of a method if one does not grasp the nature of a problem?

I think Finite Element Method is very interesting and it should be for whole semester (two term) because 1 or 2 months are not enough to learn FEM.

More time or less material.

21. Additional comments on the course:

- Prerequisites for the course has to be stated clearly and if possible to give initial few lessons on that.
- More course books has to be recommended
- The goals of the course has to be explained in detail

course was really nice and was very helpful in my research work

It would be better if this course is offered in the second semester of the programme as it is quite tough as a primitive course at the start of programme.

I should be thankful from the lecturer because he spent more time for the course and his aids in office hours.

A lot of supported lab sessions. The lecturer really did it's best.

Interesting course but the tempo is to high

*Can't answer 17-18 since I did't attend any other classes. (I work full time). The laborations and the projekt were good.
Thank you for a fun and interesting course.*

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Denna sammanställning har genererats med [ACE](#).