Course information

January 13, 2022

Course period. 17 January 2022 to 04 March 2021 (lectures, exercises, computer labs). Schedule available here.

Important dates. This may be subject to change!

- Start of the lecture: 17 January 2022, 08:00
- Last day to register to the exam: 25 February 2022 (Chalmers) and 07 March 2022 (GU)
- Exam: 14 March 2022 (8:30-12:30)
- Last day to register to the re-exam: TBA May 2022 (Chalmers) and TBA June 2021 (GU)
- Re-exam: 09 June 2022 (14:00-18:00)

Lectures. On campus.
In case I cannot come to the campus or we have to move to the online format, you will be informed via Canvas and then will have to access zoom, password: 31415.

Exercises. On campus.
In case Malin cannot come to the campus or we have to move to the online format, you will be informed via Canvas and then will have to access zoom.
Teacher: Malin Nilsson.

Assignments. The course contains two compulsory assignments (Matlab computer labs). Details will be provided in due time.
Teacher: Malin Nilsson.

Examination and grading (TMA372/MMG800: 7.5 ECTS). To pass the course, students should pass the written exam and the two assignments. Expectations for the written exam:

- Students are expected to know and be able to apply the main definitions and results (statements and possibly some ideas of the proofs) from the lecture in order to solve various tasks. Students should explain, analyse, evaluate, and demonstrate their mastery of the course content.
- If the exam takes place online, no detailed proofs will, most probably, be asked. In addition, you may be asked to check a box with a text like this: ”Jag försäkrar att jag gjort tentan på egen hand utan att få hjälp från någon annan person och att jag själv formulerat alla lösningar.”
- No questions will be answered 6 days before the exam.
- Further details will be provided in due time.

Bonus points. Students have the possibility to get bonus points for the exam by doing various activities (see below). The awarded bonus points are only valid on the first two exam dates when the course is given.

- Under *Canvas/Quiz* you will find a couple of feedback surveys and weekly self-test quizes.

  In order to encourage you to study regularly, a student that passes all self-test quizes (one miss is allowed) will earn 1 **bonus point** for the exam. These quizes are multiple choice questions. The following rules apply: The quizes will be open from Fridays 10:00 to Saturdays 12:00. At most one mistake is allowed in each weekly quizes. Students can miss at most one weekly quiz.

- In order to encourage your active participation, a student will earn 1 **bonus point** at the exam if she/he, at least, posts one question and answers two questions on piazza (see below). The questions/answers must be relevant to the course and non-anonymous.

- Extra points to the assignments will give bonus points to the exam. Details follow.

Canvas. All uploaded files will (most probably) be uploaded on the start page *Kursöversikt/Home*. Please, set your Canvas account notification settings to get automatic updates of files and announcements.

Piazza. We will use piazza (password 31415) as a platform for discussion. You can ask questions that also other students can answer. You can also ask questions anonymously (such questions cannot be counted for a bonus point).
You can also post a request to find a study buddy/teammates on piazza.
Common practice: It maybe perhaps better to answer a query, by not just providing the whole solution to an exercise, but rather by giving a way to get to the solution. It maybe a good idea to thank a student/teacher who answered your question(s).

Literature. The lectures should be self-contained and are based on the following references, that one can consult if needed:
M. Asadzadeh: *An Introduction to the Finite Element Method for Differential Equations*,
available under https://www.wiley.com/, see also chalmersstore.se or the .pdf file (there is also a (blue) compendium from October 23, 2018).

W.F. Ames: *Numerical Methods for Partial Differential Equations*,
available under www.lib.chalmers.se (open access).

D. Braess: *Finite Elements*,
available under www.cambridge.org (open access).

A. Iserles: *A First Course in the Numerical Analysis of Differential Equations*,
available under www.lib.chalmers.se (open access).

M.G. Larson and F. Bengzon: *The Finite Element Method: Theory, Implementation, and Applications*,
available under www.springer.com (open access).

E. Süli: *Lecture Notes on Finite Element Methods for Partial Differential Equations*,
available under www.suli.ac.uk (open access).

For all other relevant questions, feel free to post on www.piazza.com (especially if you think that an answer may help other students) or send me an email or pass by my office (L2085).