Brukerkurs Matematikk B / Mathematical Methods B / MA0002

Organization

Elisabeth Köbis, elisabeth.kobis@ntnu.no

Welcome!

Plan for today:

- Organization of the course
- Integration (definite/indefinite) - Substitution rule

Wikipage

All important information about the course (exercises, lecture notes, etc.) will be published on our wikipage: `https://wiki.math.ntnu.no/ma0002/2023v/start`. Please check the wikipage regularly for updates. Blackboard will only be used if we need to send you emails (and for ovsys).

Time and Place

Lectures

Tuesday
12:15 - 14:00
GL-VE VE1

Fridays
12:15 - 14:00
GL-SB2 S5

Videos

We plan to replace some of the Tuesday-lectures by pre-recorded **lecture videos**. We will always let you know beforehand if we will offer a usual live lecture or a lecture video.

Time and Place

Exercise sessions

Choose one of the following 5(6) exercise sessions:

Exercise 1: Friday 14:15-16:00 in R90
Exercise 2: Monday 10:15-12:00 in G21
Exercise 3: Tuesday 16:15-18:00 in R90
Exercise 4: Wednesday 12:15-14:00 in H3
Exercise 5: Tuesday 14:15-16:00 in S2
Exercise 6: TBA **online**

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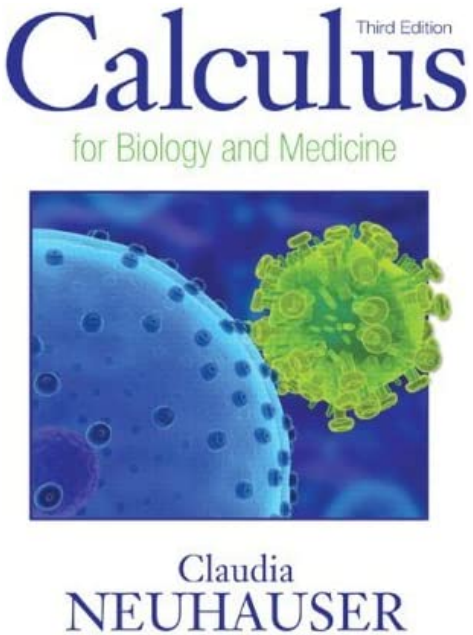
Pensum

Calculus for Biology and Medicine (3rd Edition), Claudia Neuhauser



Mattelab

Please ask **all questions that could be interesting for others** (i.e., that do not apply to just you personally) in the mattelab: `https://mattelab2023v.math.ntnu.no/c/ma0002/24`.
Emails should just be sent if your message contains personal information.

Exercises

Exercises are published each week and should be handed in via ovsys. At least 50% of all exercise sheets should be approved in order to get admission to the exam. More information on the exercises will be conveyed via email to you this week. No exercises this week!

Teaching Assistants

Ole Martin Edstrøm, Sarah May Instanes

Lecture Plan (Tentative)

See wikipage

Week	Topic	Lecture Notes	Exercise	Chapter in book
2	Integration: Substitution. Partial Integration			
3	Integration: Partial Fraction Decomposition			
4	Differential Equations: Pure-Time and Autonomous Differential Equations			
5	Differential Equations: Growth Models. Equilibria and Stability. The Allee effect			
6	Differential Equations: Single Compartment Model. Systems of Autonomous DE's			
7	Linear Algebra: Linear Systems. Matrices. Matrix Operations. Inverse Matrices			
8	Linear Algebra: Determinants & Inverses of 3x3 Matrices. Leslie models			
9	Linear Algebra: Eigenvalues and Eigenvectors			
10	Linear Algebra: Eigenvalues and Eigenvectors of Leslie matrices			
11	Analytic Geometry			
12	Multivariable Calculus			
13	Multivariable Calculus: Partial Derivatives, Tangent Planes, Linearisations, Chain Rule			
14	**Easter Holidays**			
15	Directional Derivatives, Properties of the gradient. Local and Global Extrema			
16	Local & Global Extrema. Extrema under Constraints. Systems of Differential Equations			
17	**Revision**			
18	**Revision**			

Reference Group

We are looking for you as a member of the reference group!

Tasks

- 2-3 meetings during the semester to discuss the course / improvements
- reference group report

Benefits

- service to your fellow students
- you get a certificate
- perhaps there will be pizza

Please send me an email if you would like to serve in the reference group!

Exam

Information on the exam will be published here:
`https://www.ntnu.edu/studies/courses/MA0002#tab=omEksamen`
It will be a school exam.

Support Material: D

No printed or hand-written support material is allowed. A specific basic calculator is allowed.
Support material code D "specific basic calculator". The following basic calculators are permitted:

- Casio fx-82ES PLUS and Casio fx-82EX;
- Citizen SR-270X and Citizen SR-270X College;
- Hewlett Packard HP30S.