

Analysis III

MATH - 202(c)

Pablo Antolin

- Lecturer: Pablo Antolin



- Main TA: Anna Paulish



- 17 AEs for exercise sessions

EPFL Course organization

On Tuesdays:

- Theory lecture: 10h15 to 12h00 in **CO 1**
recorded and broadcasted in **CE 1 5** and in mediaspace.epfl.ch (check Moodle for details).
- Exercise session: 08h15 to 10h00 in **CM 0 11, CM 0 12, CM 1 105, CM 1 120, CM 1 121**
Please, check your room on Moodle!!

On Thursdays:

- Theory lecture: 12h15 to 13h00 in **CO 1**
recorded and broadcasted in **CE 1 3** and in mediaspace.epfl.ch (check Moodle for details).
- Office hours: 13h15 to 15h00
(let me know after the lecture).
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EPFL Tentative schedule

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- **Week 1:** course intro and 1 differential operators
- **Week 2:** 2.1 curves, 2.2 curvilinear integrals, 2.3 conservative fields
- **Week 3:** 2.3 conservative fields
- **Week 4:** 2.4 Green's theorem
- **Week 5:** 3.1 surfaces, 3.2 surface integrals
- **Week 6:** 3.2 surface integrals, 3.3 divergence theorem

BREAK WEEK

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EPFL Tentative schedule

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- **Week 7** (online): 3.3 divergence theorem, 3.4 Stokes' theorem
- **Week 8:** 4.1 Fouriers series, 4.2 series of a periodic function
- **Week 9:** 4.2 series of a periodic function
- **Week 10:** 4.2 series of a periodic function, 4.3 properties of Fourier series (Parseval), 4.4 other Fourier formulations
- **Week 11:** 5.1-5.2 Fourier transformation, 5.3 properties of Fourier transformation
- **Week 12:** 6 applications of Fourier to ODEs
- **Week 13:** 7 applications of Fourier to PDEs
- **Week 14:** recap

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- Course follows (not 100%) this book.
- You can find it:
 - Free online version (Moodle link)
(use VPN connection from home)
 - EPFL library
 - Rolex Learning Center bookshop

Analyse avancée pour ingénieurs

4^e édition

Bernard Dacorogna
Chiara Tanteri

$$\left(\frac{\partial v}{\partial t}\right) = \left(\frac{\partial v}{\partial x^2}\right) + \left(\frac{\partial v}{\partial y^2}\right) + \left(\frac{\partial v}{\partial z^2}\right)$$

Presses polytechniques et universitaires romandes

TO APPEAR SOON
ON MOODLE



EPFL Exercise series

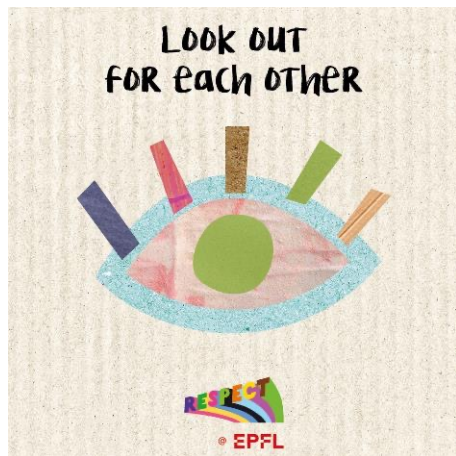
- Related to theory studied in previous weeks.
- Published on Fridays (solutions on Wednesdays).
- Most of the exercises are taken from the coursebook.
- Solutions in the coursebook (not 100% detailed).
- Some exercises maybe not in book: We will provide the solutions.

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- In Moodle you will find:
 - Links to lectures recordings and broadcasting
 - Weekly series
 - Weekly iPad notes of the lectures
 - Polycopie ... soon
 - Ed forum
 - Not a hotline
 - Mostly unattended

- Written exam
- More information in the coming weeks...

- Constructive feedback is very welcome at any time.
- ISA indicative feedback
- Delegates, please, get in contact with me



Welcome!