

Analysis III

MATH - 203(d)

Pablo Antolin

10/09/2024

- Lecturer: Pablo Antolin
- Main TA: Mohamed Ben Abdelouahab
- 13 AEs for exercise sessions
+ 1 AE for Ed Discussion

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EPFL Course organization

On Wednesdays:

- Theory lecture: 08h15 to 10h00 in **STCC Cloud C** recorded and broadcasted in mediaspace.epfl.ch (check Moodle for details).
- Office hours: Tuesdays 13h45 - 15h00 (upon request).

On Thursdays:

- Theory lecture: 13h15 to 14h00 in **STCC Cloud C** recorded and broadcasted in mediaspace.epfl.ch (check Moodle for details).
- Exercise session: 14h15 to 16h00 in Please, check your room on Moodle!!

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STCC will be unavailable on:

- Week 2: Wednesday (Sep 17th)
- Week 4: Wednesday and Thursday (Oct 1st and 2nd)
- Week 5: Wednesday and Thursday (Oct 8th and 9th)
- Week 7: Wednesday and Thursday (Oct 29th and 30th)

There will be a Q&A session on
Thursday October 9th at PO 01 (Polydôme)

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EPFL Tentative schedule

- **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

- **Week 7** (online): 3.3 divergence theorem, 3.4 Stokes' theorem
- **Week 8**: 4.2 Distributions
- **Week 9**: 4.2 Fourier series, 4.3 series of a periodic function
- **Week 10**: 4.3 series of a periodic function
- **Week 11**: 4.3 series of a periodic function, 4.4 properties of Fourier series (Parseval), 4.5 other Fourier formulations
- **Week 12**: 5.1-5.2 Fourier transformation, 5.3 properties of Fourier transformation
- **Week 13**: Applications of Fourier to ODEs
- **Week 14**: Applications of Fourier to PDEs & recap

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ON MOODLE



EPFL Exercise series

- Related to theory studied in previous weeks.
- Published on Thursday before (solutions on Friday after).
- Most of the exercises are taken from the course book.
- Some exercises maybe not in book.
- Solutions will be provided.

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- In Moodle you will find:
 - Links to lectures recordings and broadcasting
 - Weekly series (and solutions)
 - Weekly iPad notes of the lectures
 - Polycopie
 - Ed forum

- Written exam.
- It will have a MCQ (and/or True/False) part and an open part.
- Questions similar to the ones in the Series and some questions of understanding.
- Similar exams will be provided.
- **No proofs asked.**
- Fourier transformations table provided (see § 15.5, page 245 du livre Analyse avancée pour ingénieurs par Dacorogna Tanteri).
- You can bring a *formulaire*: one single A4 page recto verso.
- You cannot use calculators or other type of electronic machines.
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- Constructive feedback is very welcome at any time.
- ISA indicative feedback
- Delegates, please, get in contact with me

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WELCOME TO THE SWISSTECH CONVENTION CENTER

THIS COURSE IS BEING HELD IN A PRIVATE BUILDING. ONLY USE THE ENTRANCE AND FACILITIES CLEARLY INDICATED «COURS EPFL»

PLEASE DO NOT EAT OR DRINK IN THE AUDITORIUM – DON'T LEAVE YOUR WASTE

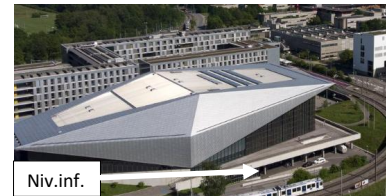
DON'T FORGET TO TAKE ALL YOUR BELONGINGS

SHOULD YOU FORGET SOMETHING, NOTE THAT THE «LOST & FOUND» IS LOCATED AT THE ENTRANCE OF THE AUDITORIUM

THANK YOU FOR YOUR COOPERATION !



Arcades : Entrée par l'Esplanade
 Garden : Entrée par le niveau inférieur



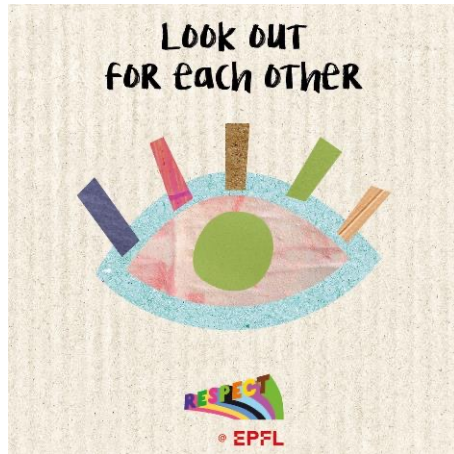
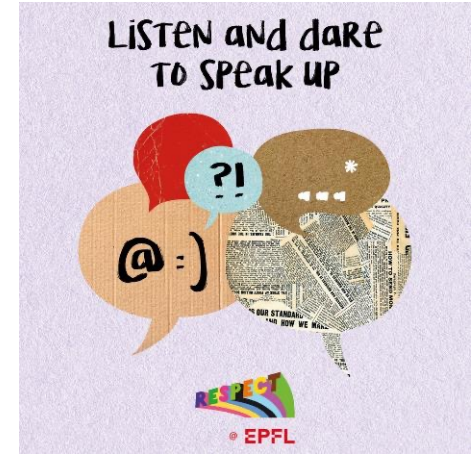
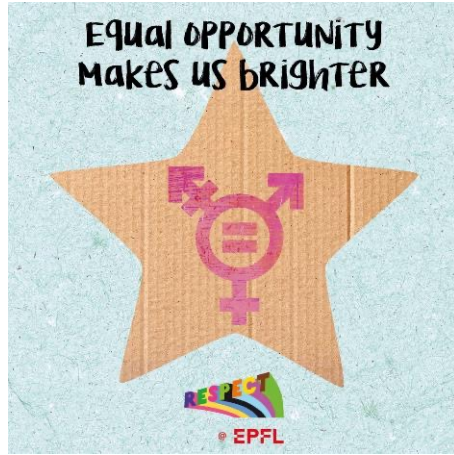
08.09.25	09.09.25	10.09.25	11.09.25	12.09.25	18.09.25	19.09.25	23.09.25	24.09.25	25.09.25	26.09.25	29.09.25	30.09.25
Arcades	Garden	Arcades	Arcades	Arcades	Garden	Garden	Arcades	Garden	Garden	Garden	Arcades	Arcades

13.10.25	14.10.25	15.10.25	16.10.25	17.10.25	27.10.25
Arcades	Arcades	Arcades	Arcades	Arcades	Arcades

04.11.25	05.11.25	06.11.25	07.11.25	10.11.25	11.11.25	12.11.25	13.11.25	14.11.25	17.11.25	18.11.25	19.11.25	20.11.25
Arcades	Arcades	Arcades	Arcades	Arcades	Arcades	Arcades	Arcades	Arcades	Arcades	Arcades	Garden	Garden

21.11.25	24.11.25	25.11.25	26.11.25	27.11.25	28.11.25
Arcades	Garden	Arcades	Garden	Garden	Garden

01.12.25	02.12.25	03.12.25	04.12.25	05.12.25	08.12.25	09.12.25	10.12.25	11.12.25	12.12.25	15.12.25	16.12.25	17.12.25	18.12.25	19.12.25
Arcades	Arcades	Arcades	Arcades	Arcades	Garden	Garden	Arcades	Arcades	Arcades	Arcades	Arcades	Arcades	Arcades	Arcades



Welcome!