

# Mathematics Refresher Course

## First Two Sessions

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### Abstract

This course teaches basic mathematical methodologies for proofs. It is intended for students with a lack of mathematical background, or with a lack of confidence in mathematics. We will try to cover most of the prerequisites of the courses in the master's, i.e. basic algebra/analysis and basic applications.

## 1 Presentation

- Paul Dubois
- 3rd year PhD @ Centrale / TheraPanacea
- Research topic: AI applied to radiotherapy
- Email: `b00795695@essec.edu` (for any question)

### Course structure

- 8\*3h arranged as 1h20min lecture - 1/3h break - 1h20min lecture
- ~~No pb class planned, but lectures will have integrated live exercises~~
- ~~Interrupt if needed (do not wait for the end of the lecture)~~
- In this document, you will find the content of the first two sessions, with the small exercises we did "live".
- The remaining six sessions will be problem solving.  
In case a session is spent on a topic you already, you can skip it  
**on the condition that you submit all compulsory exercises corresponding to that session.**

- Examination

- The course is pass/fail
- Spoiler: All of you will pass
- ~~Home exercises, you will need 80+% to pass~~
- ~~to complete exercises, it should take 30min to 1h~~
- ~~2-4 exercises~~
- ~~Hand in paper or PDF~~
- ~~In the unlikely event of not passing, you will be able to do some extra work to pass~~
- To pass, I will ask you, for each session, to either be in class, or submit the compulsory exercises.
- The submission deadlines for the exercises set is exactly one week after the corresponding class.