

APM_51175_EP (ex MAP 575): Advanced probability topics (P1)

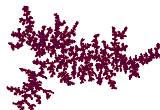
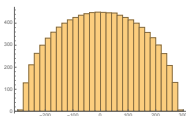
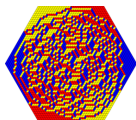
Instructor: **Igor Kortchemski** – *The course is delivered in English.*

↪ **Pedagogical goal:** provide a **deep understanding** of **modern probability theory** through the use of **measure theory**, and to see applications in different **models**.

↪ **Format:** “**flipped classroom**”, material to read at home every week; discussion of the material and exercise solving session in person.

↪ **Skills acquired:** mathematical strength, communication skills in English, synthesis capacity, teamwork, maturity and focus.

↪ **Examples of models:** percolation, random matrices, Brownian motion.



↪ **What for?** (1) forge **intuition** (2) see **nice results** (3) become familiar with concepts used in other 3A courses and later in M2 courses (4) have **solid foundations** to apply probability during a **PhD** or in **business** (a good understanding of probability theory is essential in order to be able to orient oneself in the world of applications and to innovate there).

↪ **Evaluation:** based on an **oral presentation** of a **research or overview article** on a model, done in **pairs**.



Numerus clausus quickly reached.

