UNIVERSITÀ DI PAVIA

Anno Accademico 2019/2020

HISTORY OF MATHEMATICS

Enrollment year	2018/2019
Academic year	2019/2020
Regulations	DM270
Academic discipline	MAT/04 (COMPLEMENTARY MATHEMATICS)
Department	DEPARTMENT OF MATHEMATICS "FELICE CASORATI"
Course	MATHEMATICS
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	2nd semester (02/03/2020 - 09/06/2020)
ECTS	6
Lesson hours	48 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	ROSSO RICCARDO (titolare) - 6 ECTS
Prerequisites	Knowledge of elementary probabilty at the level of an undergraduate student.
Learning outcomes	The course aims to presenting the historical development of the theory of probability.
Course contents	Prehistory of probability. Problems in combinatorial analysis related to game of chances. The problem of points from late-medieval manuscript to De Moivre. Early applications of the calculus of probability to mortality tables and life annuities. Jacob bernoulli's "Ars Conjectandi". The Bernoulli-De Moivre theorem. The Saint Petersburg's paradox. The birth of inverse probability: Bayes, Price and Laplace. Error theory. The criticism on the foundations of pobability. The different approaches to probability: frequentist (von Mises), logicist (Keynes), subjective (De Finetti and Ramsey). The axiomatic approach to probability calculus from Bohlmann to Kolmogorov.

Teaching methods	Lessons in a class
Reccomended or required readings	I. Hacking "L'emergenza della probabilità" Il Saggiatore (1975). A. Hald: "History of Probability and Statistics and their applications before 1750" Wiley (2003). A. Hald: "A History of Mathematical Statistics From 1750 to 1930" Wiley (1998). M.C. Galavotti: "Philosophical Introduction to Probability" CSLI (2005). I. Dale: "A History of Inverse Probability. From Thomas Bayes to Karl Pearson" Springer (1999). T.M. Porter: "The rise of statistical thinking 1820-1900" Princeton University Press (1986). S.M. Stigler: " The History of Statistics. The measurement of Uncertainty before 1900". J. von Plato: "Creating modern probability" Cambridge University Press (1998). Notes available on the website of the course.
Assessment methods	Oral exam. The student chooses a topic to present among those covered in the course. Other questions are chosen by the teacher, clearly among topics covered in the course
Further information	
Sustainable development goals - Agenda 2030	$lbl_legenda_sviluppo_sostenibile