UNIVERSITÀ DI PAVIA

Anno Accademico 2015/2016

PROBABILITY AND STOCHASTIC PROCESSES	
Anno immatricolazione	2015/2016
Anno offerta	2015/2016
Normativa	DM270
SSD	MAT/06 (PROBABILITÀ E STATISTICA MATEMATICA)
Dipartimento	DIPARTIMENTO DI SCIENZE ECONOMICHE E AZIENDALI
Corso di studio	ECONOMICS, FINANCE AND INTERNATIONAL INTEGRATION - ECONOMIA, FINANZA E INTEGRAZIONE INTERNAZIONALE
Curriculum	FINANCE
Anno di corso	1°
Periodo didattico	Primo Semestre (28/09/2015 - 22/12/2015)
Crediti	9
Ore	66 ore di attività frontale
Lingua insegnamento	ENGLISH
Tipo esame	SCRITTO
Docente	RIGO PIETRO (titolare) - 3 CFU LIJOI ANTONIO - 6 CFU
Prerequisiti	The course is self-contained and no specific prerequisite is needed. Nonetheless, familiarity with the basic concepts in Probability typically taught in an introductory course in Statistics will be helpful.
Obiettivi formativi	This is a first course on Probability and Stochastic Processes, having economic and financial applications in view. Accordingly, after introducing some basic notions of probability theory (including conditional expectation), lectures will focus on those processes which are popular in finance, including martingales, Markov chains and Brownian motion. As far as possible, technicalities are avoided. Various exercises will be discussed as well.
Programma e contenuti	- Random variables and vectors - Distribution functions

	- Transformations of random variables and vectors - Simulation of random variables - Moment generating function - Laws of large numbers - Central limit theorem - Conditional expectation - Martingales - Stopping times - Brownian motion
Metodi didattici	All lectures are displayed on the blackboard. Students are introduced to main theoretical concepts and results through a number of examples and illustrations that considerably ease the understanding of the subject.
Testi di riferimento	Dall'Aglio G. (2000). Calcolo delle Probabilità. Zanichelli, terza edizione. Billingsley P. (1995). Probability and Measure, Wiley, 3rd Edition.
Modalità verifica apprendimento	Oral
Altre informazioni	Altri professori: Pietro Rigo
Obiettivi Agenda 2030 per lo sviluppo sostenibile	$lbl_legenda_sviluppo_sostenibile