



UNIVERSITÀ DI PAVIA

Anno Accademico 2016/2017

MODELS OF BIOLOGICAL SYSTEMS

Enrollment year	2016/2017
Academic year	2016/2017
Regulations	DM270
Academic discipline	ING-INF/05 (DATA PROCESSING SYSTEMS)
Department	DEPARTMENT OF MATHEMATICS "FELICE CASORATI"
Course	MATHEMATICS
Curriculum	PERCORSO COMUNE
Year of study	1°
Period	2nd semester (01/03/2017 - 09/06/2017)
ECTS	6
Lesson hours	78 lesson hours
Language	ITALIAN
Activity type	WRITTEN AND ORAL TEST
Teacher	MAGNI PAOLO (titolare) - 6 ECTS
Prerequisites	Elements of dynamic models and statistics
Learning outcomes	=
Course contents	<p>Introduction to mathematical modelling</p> <p>Compartment models</p> <p>Elements of Pharmacokinetics</p> <p>Tracer experiments</p> <p>A priori identifiability</p> <p>Parametric estimation</p>

	<p>Case studies</p> <p>Advanced techniques such as deconvolution, population modeling, optimal design</p> <p>Hands-on</p>
Teaching methods	<p>Lectures (hours/year in lecture theatre): 36</p> <p>Practical class (hours/year in lecture theatre): 0</p> <p>Practicals / Workshops (hours/year in lecture theatre): 24</p>
Reccomended or required readings	<p>Slides. The course is in italian</p> <p>E. Carson, C. Cobelli. Modelling methodology for physiology and medicine (2nd edition). Elsevier.</p>
Assessment methods	<p>Oral examination including hand-on discussion</p>
Further information	<p>Oral examination including hand-on discussion</p>
Sustainable development goals - Agenda 2030	<p>\$lbl_legenda_sviluppo_sostenibile</p>