MATHÉMATIQUES APPLIQUÉES À LA BIOLOGIE

MATHEMATICAL BIOLOGY

Lecturers: Philippe MICHEL, Laurent SEPPECHER

| Lecturers : 16.0 | TC : 8.0 | PW : 0.0 | Autonomy : 0.0 | Study : 8.0 | Project : 0.0 | Language : FR

Objectives

The course is an introduction to mathematical methods in biology and medicine. It will be illustrated by numerous examples and applications.
The course has two parts:
I - Dynamic systems
II - Spatio-temporal models

Keywords : Mathematics for biology, ordinary differential equations, partial differential equations, population dynamics, Markov chains, propagation phenomena

Programme

Partie I - Systemes dynamiques
Partie II - Modeles biologiques spatio-temporels

Learning outcomes

- understand basic mathematical models in biology and medicine acquire mathematical skills (EDO, EDP, CM) apply mathematical concepts to the study of different models

Independent study

Objectifs :

Méhodes :

Core texts

J. Murray, *MATHEMATICAL BIOLOGY*, Springer, 2002

Assessment

> Final mark = 50% Knowledge + 50% Know-how
> Knowledge = final exam
> Know-how = continuous assessment