

Mathematische Modellierung II 2017

Lecture Material

A script from SS2009 "[Einführung in die Theoretische Systembiologie](#)" (in German).

We will cover several topics from this lecture in the Quantitative Biologie Bachelor

A one-page summary of the [modified Verhulst equation](#) (logistic growth with low density correction)

A chapter on [stability analysis](#) of stationary states (in German)

Python Code and instructions to simulate diffusion and reaction-diffusion systems: contact Oliver Ebenhöf

Exercises

[exercise1](#) (logistic map, bucket with hole)

[exercise2](#) (Brusselator, Lotka-Volterra)

[exercise3](#) (matrices, eigenvalues, eigenvectors)

[Exam paper](#) from 2014 (for exercise purposes only)

Solutions

10.05.2017:

- [exercise_1.py](#)
- [ExerciseSheet_1.py](#)