Virtual Exchange Program

BIO-465 Biological modelling of neural networks

Start date: 17/02/2020, End date: 29/05/2020
Platform: courseware.epfl.ch

Ecole Polytechnique Fédérale de Lausanne

COURSE SYNOPSIS

Domain: Life sciences

Title(s) of the course(s) as it appears on the platform: Neuronal Dynamics and Computational Neuroscience: Neuronal Dynamics of Cognition

Language (ISO-639-1 code): en

Short description of the course: In this course we study mathematical models of neurons and neuronal networks in the context of biology and establish links to models of cognition.

Instructor(s): Wulfram Gerstner

Level: MA all years

ECTS: 4.0

Workload in student hours: 120

Semester: 1: jan-june


Prerequisites: Required courses undergraduate math at the level of electrical engineering or physics majors undergraduate physics. Recommended courses Analysis I-III, linear algebra, probability and statistics For SSV students: Dynamical Systems Theory for Engineers or "Mathematical and Computational Models in Biology" Important concepts to start the course Differential equations, stochastic processes.


Link to course in University studyplan: http://isa.epfl.ch/imoniteur_ISAP/GEDPUBLICREPORTS.pdf?ww_i_reportModel=1696552884&ww_i_reportModelXsi=1696552963&ww_i_itemplan=2372843310&ww_c_language=fr

Course registration opening date: 01/02/2020

Course registration deadline: 17/02/2020

Course withdraw date: 04/05/2020

Midterm: Yes

Midterm details: Mini-Project

Exam period start: 14/06/2020

Exam period end: 04/07/2020

Exam date: -
**Exam timing:** Synchronous (exam needs to take place at the same date and time everywhere)

**Exam start time:** -

**Exam end time:** -

**Time zone (at the time of the exam, DST):** UTC+2

**Exam registration date:** 04/05/2020

**Exam resit available:** No

**Exam resit period start:** -

**Exam resit period end:** -

**Exam resit date:** -

**Exam resit time start:** -

**Exam resit time end:** -

**Time zone (at the time of the resit of the exam, DST):** -

**Final exam type:** Written

**Final exam details:** Exam can be on a Saturday. Exam rules: Allowed material: • Bring writing material (Pen, etc.). • Paper will be provided. • You can bring a single A5 (half the size of A4) sheet, handwritten, on which you are allowed write (recto-verso) whatever you think might be useful. • Nothing else. (In particular no books, lecture notes, mobile phones, laptops, calculators, etc.)

**Exam requirements for home university (computer, VOIP, recording materials):** Exam can be on a Saturday. Proctored room necessary

**Cap (maximum number of exchange students):** 10

**Offered to which parteners:** -, All partners of the Alliance(s) selected above

**Link to course image:** [https://drive.google.com/open?id=1i4C-RNaHuUZMj5bEvhU0ATl0wFQT04Uj](https://drive.google.com/open?id=1i4C-RNaHuUZMj5bEvhU0ATl0wFQT04Uj)