Virtual Exchange Program

**COM-303: Signal processing for communications**

**Start date:** 17/02/2020, **End date:** 29/05/2020  
**Platform:** Coursera

Ecole Polytechnique Fédérale de Lausanne

**COURSE SYNOPSIS**

**Domain:** Physics  
**Title(s) of the course(s) as it appears on the platform:** Digital Signal Processing  
**Language (ISO-639-1 code):** en

**Short description of the course:** Students learn digital signal processing theory, including discrete time, Fourier analysis, filter design, adaptive filtering, sampling, interpolation and quantization; they are introduced to image processing and data communication system design.

**Instructor(s):** Paolo Prandoni

**Level:** MA1  
**ECTS:** 6.0

**Workload in student hours:** 180

**Semester:** 1: jan-june


**Prerequisites:** Required courses calculus, linear algebra Recommended courses Circuits and systems, basic probability theory Important concepts to start the course vectors and vector spaces, functions and sequences, infinite series

**Link to course on platform:** https://www.coursera.org/learn/dsp

**Link to course in University studyplan:** http://isa.epfl.ch/moniteur_ISAP/IGEDPUBLICREPORTS.pdf?ww_i_reportModel=1696552884&ww_i_reportModelXsl=1696552963&ww_i_itemplan=2372813318&ww_c_langue=fr

**Course registration opening date:** 01/02/2020  
**Course registration deadline:** 17/02/2020

**Course withdraw date:** 04/05/2020

**Midterm:** No

**Midterm details:** -

**Exam period start:** 15/06/2020  
**Exam period end:** 04/07/2019

**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: Could be organised on Saturday. The date and place for the final exam will be announced towards the end of the semester. Online students, please find out with your local officials how the exam will be administered. The final grade for the class will be based entirely on your performance during the written final exam. There will be no midterm exam but I will hand out a "mock" midterm just before spring break that you can use as a checkpoint to see if you're up to speed with the class. The final exam is closed-book. However, you will be allowed to bring with you two A4 sheets of \textit{handwritten} notes, front and back: no photocopies please. Calculators and all other electronic devices are not allowed (yes, just like during takeoff and landing).
Exam requirements for home university (computer, VOIP, recording materials): proctored room, could be organised on Saturday
Cap (maximum number of exchange students): 10
Offered to which partners: -, All partners of the Alliance(s) selected above
Link to course image: https://drive.google.com/open?id=17KH328G9dm6LP4jd_syeMntPlqnbShsX