

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

School of Computer and Communication Sciences

Handout 1

General Course Information

Principles of Digital Communications

Feb. 20, 2019

Principles of Digital Communications

Time and location:

Wednesdays, 15–18, INM 202

Fridays, 10–13, INM 202

Instructor:

Emre Telatar (INR 117, emre.telatar@epfl.ch)

Office hours: by appointment.

PhD teaching assistants:

Arda Atalık (INR 012, ahmet.atalik@epfl.ch)

Reka Inován (INR 015, reka.inovan@epfl.ch)

Sepand Kashani (BC 322/INR 015, sepand.kashani@epfl.ch)

Student teaching assistants:

Cem Musluoğlu (cem.musluoglu@epfl.ch)

Axel Vandebrouck (axel.vandebrouck@epfl.ch)

Administrative assistant:

Muriel Bardet, (INR 137, muriel.bardet@epfl.ch)

Prerequisite:

Signal processing for communications

Stochastic processes for communications

Web page: <http://ipg.epfl.ch/>

Textbook:

B. Rimoldi, *Principles of Digital Communication: A Top-Down Approach*,
Cambridge University Press, 2016. ISBN: 9781316337387.

Online version: nb.mit.edu.

Course mechanics:

Weekly reading and problem assignments,

Two quizzes (10%, March 22, 2019 & May 10, 2019),

Midterm exam (35%, date: April 12, 2019),

Project (15%, starts April 12, 2019),

Final exam during finals period (40%).

Approximate Outline:

Hypothesis testing and discrete-time receiver design (3 weeks)

Continuous-time receiver design (3 weeks)

Signal constellation design (3 weeks)

Waveform design, coded transmission (3–4 weeks)

Additional topics (1–2 weeks)