

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

School of Computer and Communication Sciences

Handout 1

General Course Information

Principles of Digital Communications

Feb. 22, 2023

Principles of Digital Communications

Time and location:

Wednesdays, 15–18, CM 1

Fridays, 10–13, CM 1

Instructor:

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

Office hours: by appointment.

Graduate teaching assistants:

Dina Abdelhadi (INR 032, dina.abdelhadi@epfl.ch)

Adway Girish (INR 018, adway.girish@epfl.ch)

Student assistant:

Daniel Suter (daniel.suter@epfl.ch)

Administrative assistant:

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

Prerequisite:

Signal processing for communications

Stochastic processes for communications

Web page:

<https://moodle.epfl.ch/course/view.php?id=15897>

Textbook:

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

Course mechanics:

Midterm (35%),

Project (20%),

Final exam during finals period (45%).

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)