ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE
School of Computer and Communication Sciences

Principles of Digital Communications

Time and location:
Wednesdays, 13h15–16h, ME B3 31
Fridays, 13h15–16h, ME B3 31

Instructor:
Emre Telatar (INR 117, `emre.telatar@epfl.ch`)
Office hours: by appointment.

Graduate teaching assistants:
Serhat Emre Coban (INR 018, `serhat.coban@epfl.ch`)
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Prerequisites:
Signal processing for communications
Stochastic processes for communications

Web page:
`https://moodle.epfl.ch/course/view.php?id=15897`
`https://go.epfl.ch/PDC-2024`

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

Course mechanics:
Midterm (35%, tentatively mid April),
Project (20%, tentatively late April – early May),
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)