

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

School of Computer and Communication Sciences

Handout 1

General Course Information

Principles of Digital Communications

Feb. 24, 2016

Principles of Digital Communications

Time and location:

Wednesdays, 15–18, INM 202

Fridays, 10–13, INM 202

Instructor:

Rüdiger Urbanke (INR 116, rudiger.urbanke@epfl.ch)

Office hours: by appointment.

Graduate teaching assistants:

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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: 9781107116450.

Online version: nb.mit.edu.

Course mechanics:

Weekly reading and problem assignments,

Midterm quiz (35%, tentative date: Friday April 22),

Project (15%, to be announced in April),

Final exam during finals period (50%).

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)