Information Theory

Instructor: Prof. Dimitris Maroulis

Semester: 5th

Basic Course - Sector of Communications and Signal Processing

Optional Course - Sector of Computer Systems and Applications

[Course Website](#)

Overview. Basic concepts. Definition and measurement of the quantity of information. Useful SIZES
and functions
.
Study of
discrete
messages
sources
(
entropy
, redundancy
,
source
codes
,
rate
of
information provision)

.
Memoryless
sources
and
Markov
sources

.
Discrete
messages
channel capacity

.
C
onsecutive
messages sources
and reduction to
di
screte.
Sampling theorem
s.
Excellent
channel

,
ideal
system

,
channel
with
noise

,
continuous
message
channel

.
Comparison of
communication systems.
Data
error
control
coding

.