

Information and Entropy

PHYS 150

Offered by Taylan Akdoğan
taylan.akdogan@boun.edu.tr
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This course presents the unified theory of information with applications to computing, communications, thermodynamics, and other sciences. It covers digital signals and streams, codes, compression, noise, and probability, reversible and irreversible operations, information in biological systems, channel capacity, maximum-entropy formalism, thermodynamic equilibrium, temperature, the Second Law of Thermodynamics. This course has been originally designed at MIT [1] jointly by the Departments of Electrical Engineering and Computer Science and Mechanical Engineering for freshmen as an elective and was slightly changed to fit in our program.

The subjects are covered at an introductory level which are intended for students in science and engineering programs who have **basic** mathematics and physics background.

For more information send e-mail to the instructor.

[1] <http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-050j-information-and-entropy-spring-2008/>