Advanced Digital Communications
ECE 562

Lectures: TR 14:00-15:20, online via zoom

Instructor: Dimitrios Katselis
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Office Hours: online via zoom, Tue 4-5pm

Text: None, but you may find the typed notes by Prof. Veeravalli to be useful (posted in Compass).

Suggested References


Topics: Characterizing noise, digital modulation, demodulation, signal space methods, channel models, bit error rate, equalization, wireless channels, multi-antenna systems, coding and modulation, spread spectrum and orthogonal frequency modulation. Additional topics including basic elements of Millimeter Wave Communications and communication algorithms via Deep Learning may be discussed if time allows.

Prerequisite: ECE 459 or ECE 461. Some undergraduate probability and signal processing background is also required.

Midterm: Nov 12, online
Fall Break: Nov 21-29
Final Project: Dec 8

Grading: \[ \begin{align*}
\text{Homework} & \quad -- \quad 30\% \\
\text{Midterm} & \quad -- \quad 20\% \\
\text{Final Project} & \quad -- \quad 50\%
\end{align*} \]

Final Project: Details will be discussed early in the semester.
Homeworks and Exam: Submission details will be provided early in the semester.
Course Policy

- *Lectures will be synchronous, i.e., at the designated times.*
- No late homeworks will be accepted.
- **Midterm:** *Open notes exam.*
- No extra credit work will be assigned.
- A “*dropping the lowest homework score*” policy may be decided during the semester and applied in the end.