Wireless Communications Networks & Systems, Spring 2025

HW # 01- Overview of Wireless Communication and The Wireless Channel

Max. Marks: 100; 5% of course credits.

CLO # 01	Demonstrate an in-depth understanding of wireless network system's architecture, protocols, and Services.	**Cog. 3**
CLO # 02	Explore advanced technologies and features in wireless networks related to coverage, capacity, interference management, and mobility.	**Cog. 3**
CLO # 03	Examine the evolution of Wi-Fi networks, highlighting architectural differences across its various standards.	**Cog. 4**
CLO # 04	Analyze key cellular concepts used in cellular networks and the architectural advancements in 5G and beyond.	**Cog. 4**

Date posted: 4th Feb 2025; Submission Date: 12th Feb 2025(During recitation session)

For late submission, please refer course syllabus.

Topic: 5.1, 5.2, 6.1, 6.2, 6.3 (Read all topics from the textbook)

The objective of this assessment is to meet the following learning outcomes:

- Compute spectrum and antenna-specific problems of wireless communications
- Compute path loss for free space and real-world environments using the path loss exponent.
- Compute path loss based on the Okumura–Hata model.

Back chapter problem: 5.2 and 6.1 to 6.12 (except 6.4)

You are required to submit a detailed version of your solution (hard copy, handwritten), which must include a logical flow of the solutions and detailed steps of your work.

Good luck!