



Course 2 : Advanced Electronics

Chapter4: **Signal Processing**

1 / Filters

- Low-pass, high-pass, band-pass filters.
- Design filters using capacitors and inductors.

2/ Fourier Transform:

1. Basics of signal frequency analysis.
2. Applications in audio and communication systems.

3/ Communication Systems

- **Analog Communication:**
 - Amplitude modulation (AM), frequency modulation (FM).
- **Digital Communication:**
 - Serial communication protocols (UART, SPI, I2C).
 - Example: Send data from a sensor to a PC using UART