

**Course Name:** Electronics for Analog Signal Processing - I

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Introduction - Diode - Diode Characteristics - Rectifier - Voltage Multiplier - Full Wave Rectifier and Peak Detector - Diode as a GATE - Analog GATE - Small Signal Analysis of Diode Circuit - Zener Regulator and Voltage Regulator - Varactor Diode - Amplifiers - Cascading of Amplifiers - h and g Parameters - Two Port Analysis - Amplifier Applications - Frequency Limitations Of An Amplifier - Distortion In Amplifiers - Bipolar Junction Transistor - Transistor Inverter - Transistor Biasing - Stable Way of Biasing - Common Emitter Amplifiers - Transistor Biasing Using Single Supply - Metal Oxide Semiconductor - Construction of a MOSFET - Varieties of MOSFETS and JFETS - Characteristics of MOSFET - Cascading Amplifiers - Cascading (Direct Coupling) - The Differential Amplifiers - BJT Differential Amplifiers - MOSFET Differential Amplifiers - Cascading Differential Amplifiers - Current Source and Current Sink - NMOS Inverters and CMOS Inverters - Active Components used in Electronics