EduPaper Archive

RGPV B.Tech – ECE 6th Semester Syllabus

📚 Core Subjects

EC-601: Digital Signal Processing

> Discrete-time signals, z-transform, DFT/FFT, filter design (IIR/FIR), convolution, and MATLAB-based analysis.

EC-602: VLSI Design

> CMOS technology, logic design, layout techniques, fabrication process, and VHDL/Verilog basics.

EC-603: Microwave Engineering

> Microwave tubes, waveguides, scattering parameters, Smith chart, and microwave components.

📖 Departmental Electives (EC-604)

EC-604A: Microcontroller & Embedded Systems

> PIC, ARM, DSP processors, real-time clocks, interfacing, and embedded architecture.

EC-604B: Biomedical Electronics

Bio-signals, sensors, amplifiers, ECG/EEG systems, and medical instrumentation.

EC-604C: Optical Communication

Fiber optics, light propagation, sources/detectors, and optical networks.

🌐 Open Electives (EC-605)

EC-605A: Data Structures

Arrays, linked lists, stacks, queues, trees, graphs, and algorithm complexity.

EC-605B: Entrepreneurship

Startup lifecycle, business models, funding, and innovation strategies.

EC-605C: 3D Printing & Applications

Additive manufacturing, materials, CAD modeling, and industry use cases.

🧪 Labs & Projects

EC-606: DSP Lab

Signal generation, convolution, FFT, filter design using MATLAB.

EC-607: VLSI Lab

Layout design, simulation, and HDL-based circuit modeling.

EC-608: Seminar & Minor Project

Research presentation and hands-on project with minimum 90 hours.

Download Official Syllabus

- Career Shiksha – ECE 6th Sem Breakdown
- RGPV Official PDF – ECE Sem 6