SWARNANDHRA COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous)
Narsapur, West Godavari District, A.P. 534280
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

INFRASTRUCTURE

Photo	Description
Class Rooms 	9 no.s Well equipped Classrooms with full ventilation and wifi Facility
Smart Classrooms 	4 no.s Well equipped Smart Classrooms with Audio and video Facilities
Electronic Devises and Circuits lab - 1 	**Objective:** To investigate the characteristics of basic electronic components and their applications. **Used for UG Students:** 1st& 2nd year UG **Outcome:** 1. Understand the basic characteristics and applications of basic electronic devices. 2. Observe the characteristics of electronic devices by plotting graphs. 3. Design MOSFET / BJT based amplifiers for the given specifications.

Electronic Devises and Circuits lab-II 	**Objective:** To investigate the characteristics of basic electronic components and their applications. **Used for UG Students:** 1st& 2nd year UG **Outcome:** 1. Understand the basic characteristics and applications of basic electronic devices. 2. Observe the characteristics of electronic devices by plotting graphs. 3. Design MOSFET / BJT based amplifiers for the given specifications.
Digital Electronics Lab 	**Objective:** To verify the functionality of different ICs. **Special Features of the lab:** digital trainer kits **Used for UG Students:** 2rd year. **Outcome:** 1. Test the functionality of digital circuits using. digital trainer kits 2. Describe the function of basic gates and universal gates. 3. Demonstrate Digital systems using combinational and/or sequential circuits
IC Applications Lab 	**Objective:** To verify the applications of different ICs. **Special Features of the lab:** IC Testers **Used for UG Students:** 3rd year. **Outcome:** 1. Demonstrate the circuits with analog ICs. 2. Test the functionality of circuits using linear Ic's

Microwave & Optical Communications Lab

Objective: to verify the characteristics of microwave and optical sources.

Special Features of the lab:
Antenna Trainer Kit
Used for UG Students: 3rd year.

Outcome:

1. Analyze the characteristics of different microwave sources.
2. Examine the characteristics of optical fiber and sources
3. Analyze the microwave antenna performance.

Communications and PCB Layout Design Lab

Objective: To verify the characteristics of various analog and digital modulators and demodulators.

Used for UG Students: 2nd year.

Outcome:

1. Gain knowledge of Amplitude,Frequency and Pulse Modulation Systems in developing analog Communication systems.
2. Perform measurements likeSensitivity, Selectivity and Fidelity of Communication subsystems and systems..
3. Test equipment to test various communication systems they develop

Simulation Lab

Objective: To utilize the domain specific tools in the area of signal processing and VLSI.

Special Features of the lab:
XILINX Vivado, FPGA Trainer Kits

Used for UG Students: All years.

Research purpose: UG and PG students can do research using FPGA kits and Verilog HDL.

Outcome:

1. Analyze discrete/digital signals using mat lab and the basic operations of signal processing.
2. Obtain the spectral parameters of windowing functions.
3. Design FIR and IIR filters for desired specifications

Processors and IoT Lab

Objective: To familiarize in the programming of various microprocessors and controllers.

Special Features of the lab:
Interfacing modules

Used for UG and PG Students: All years.

Outcome:

1. Develop algorithm and assembly language programs to solve problems.
2. Choose an appropriate algorithm, program and peripheral for the application.
3. Design the micro-processor based system to solve real time problems
4. Understanding of the communication protocols in IoT communications
5. Familiarize with application program interfaces for IoT.

Project Lab

Objectives:
To identify research and practice based innovations in developing circuits for signal processing, IoT, VLSI and Communications using FPGA Kits

Outcomes:

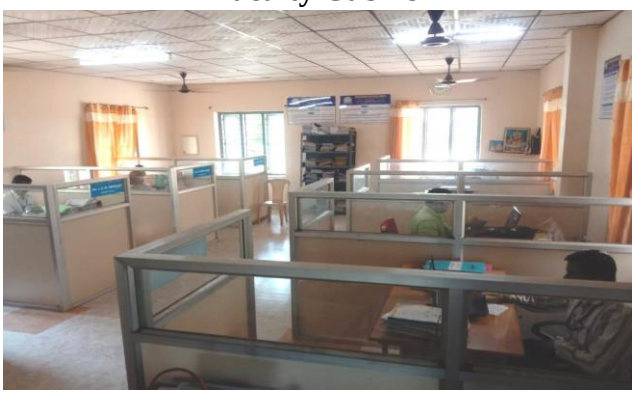
Students are performed project works by developing prototypes

Nano Research Lab

Objective:

- Synthesis of Nano materials for Dielectric properties
- Fabrication of thin Films for High K Dielectrics
- In VLSI thin film based Transistors can be Fabricated
- Fabrication of patch Antennas for Communication Applications

Outcome:
Used by UG/PG students, Research Scholars and Faculty members for design and analysis.

Department Library 	Well equipped library with good number of Volumes, Books and Journals
HOD Cabin 	Well equipped Cabin with all Facilities
Faculty Cabins 	Well equipped Cabins for Faculty with all Facilities

Girls Waiting Hall	
	Well Equipped Girls Waiting hall Adjacent to Girls Washrooms