Facilities

(singlePage.php?id=17&type=SP)

Infrastructure and State-of-art facilities

The infrastructure of the department includes Smart Class Rooms for UG and PG, air conditioned laboratories, Seminar Hall, Girls common room, Library, and other amenities. The laboratories are well equipped with latest and sophisticated equipments, software tools and other state-of-art facilities to ensure quality exposure to the engineering students. Besides, students are given a good experience in computational techniques and latest software, computer aided design and drafting including EDA tools, MATLAB, CMOS; Optical, RF & Antenna Design tools. The laboratories are configured to impart practical exposure to the students with focus upon following areas:Artificial Intelligence & IOT, VLSI and System Design, ASIC Design & Development, Wireless Broadband System Design, Analog Electronics & Instrumentation, Sensors and Microcontroller based design.

Major Facilities

- Optical Network analyzer
- Vector Network Analyzer
- Hand held & Desktop Spectrum Analyzer
- Antenna & PCB prototype Fabrication Machine
- Wireless Access Research Platform(WARP) to support 4*4 MIMO system.
- Logic analyzer.
- Anechoic Chamber
- Radar Cross Section Training System (RCS12)
- Vector Signal Generator
- Touch Screen 4 channel DSO with vector signal analyzer software
- High Gain Antenna
- Microcontroller Development & Interfacing Boards.
- Embedded system development.
- Advanced IOT Training System
- Optical Spectrum Analyzer
- Optical Light Runner.
- Wireless Sensor Network development system.
- Microprocessor Development Boards.
- Digital Signal Processing Development system.
- Robotics Traainning System.
- DSP Development Board (TMS320DM6437 DSK)
- Wireless Sensor Network Development System

Software Tools

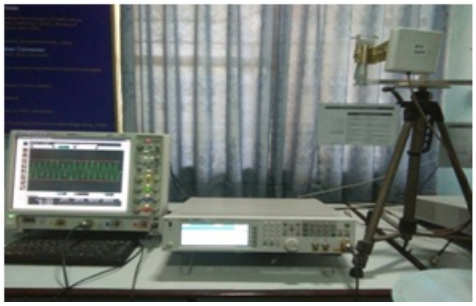
- MATLAB Version 2013
- System Vue
- Microwind CMOS Tools
- FEKO antenna Simulation Tools
- ORCAD P spice EDA Tools
- Optiwave-CAD Tools

Laboratories

Research Laboratory

Features:

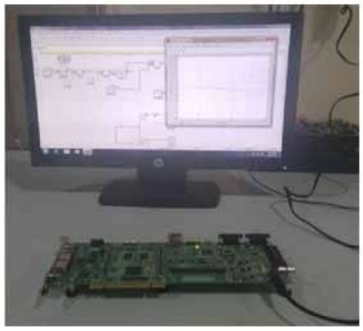
- 4*4 MIMO wireless channel modeling and measurement.
- 2*2 MIMO Field Measurements.
- Sensor module design & development.
- Mixed signal CMOS interface designing.
- Front end design using Warp.



System Design & VLSI Laboratory

Hardware Features:

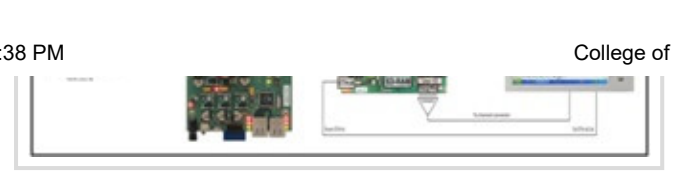
- CMOS circuit design with “Microwind” tools
- Reconfigurable and polymorphic design facility.
- Analysis of different types of sensor applications
- Embedded system designing facility.
- Linear & digital system designing facility using ORCAD tools.
- Mixed signal CMOS interface designing.
- Embedded JTAG support via USB
- High-quality 24-bit stereo codec
- Four 3.5mm audio jacks for microphone, line in, speaker and line out
- 512K words of Flash and 16 MB SDRAM
- Expansion port connector for plug-in modules
- On-board standard IEEE JTAG interface



Software Features:

A complete Integrated Development Environment (IDE), an efficient optimizing C/C++ compiler assembler, linker, debugger, data visualization, a profiler, advanced optimization tools, and a flexible project manager.

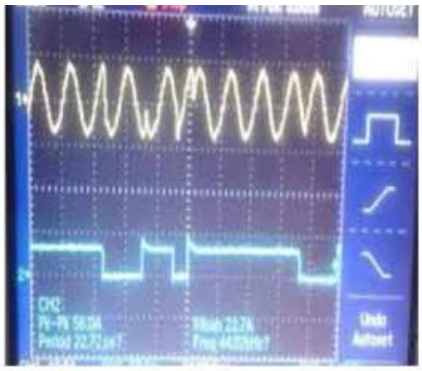
- Target board specific Code Composer Studio development tools.
- DSP/BIOS real-time kernel.
- Target error recovery software DSK diagnostic tool.
- "Plug-in" ability for third-party software for additional functionality.



Analog Electronics Lab

Features:

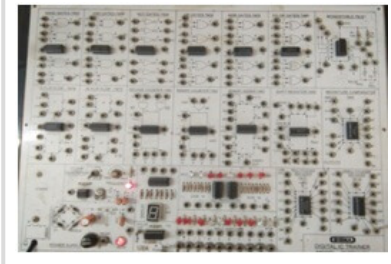
- Design & development of analog circuits on EDA tools
- Linear IC Hardware design & development.
- Analog circuit fabrication and testing.
- On board Programmable DC Power Supply
- On board Temperature Monitor
- On board Soldering Station
- On board LCR Meter
- Wheel (with locking mechanism) is provided at legs of workstation so that it can be easily moved.
- MCB is provided with AC supply for safety purpose.



Digital Electronics & Microprocessor Lab

Features:

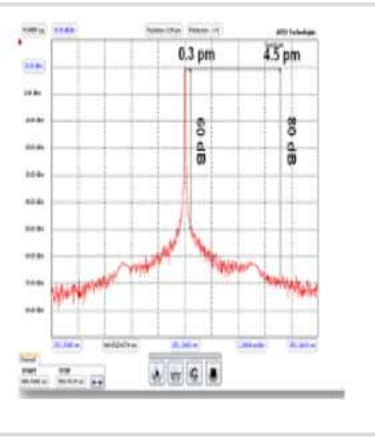
- Facility for Study & Practical Analysis of various Microprocessor Architecture, interfacing and Programming.
- Digital hardware design and test analyzer.
- Performance analysis on Logic analyzer.



Optical Fiber Lab

Features:

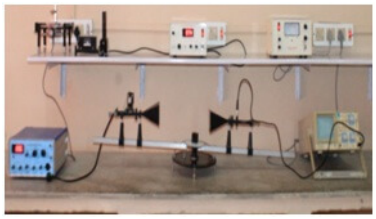
- Communication link development and basic experiments.
- Eye pattern and BER measurement for OFC link.
- Design and development of OFC sub system on Optiwave tools.
- Design and development of OFC sub system on Light Runner.
- spectral analysis of OFC system using optical spectrum analysis.
- Full-band measurement: 1250nm up to 1650nm.
- ±0.05nm wavelength accuracy guaranteed with built-in wavelength calibrator.
- High Power measurement version (up to +30dBm) for CATV applications (OSA-110H).
- In-band OSNR measurement version (OSA-110R).
- Compatible with the T-BERD/MTS-6000A, -8000 Platforms.



Microwave & Antenna Lab

Features:

- X-Band & Ku band microwave source and component Characteristics.
- RF Power Measurements.
- Microwave Antenna Characteristics.



Electronic Workshop & PCB Fabrication Lab

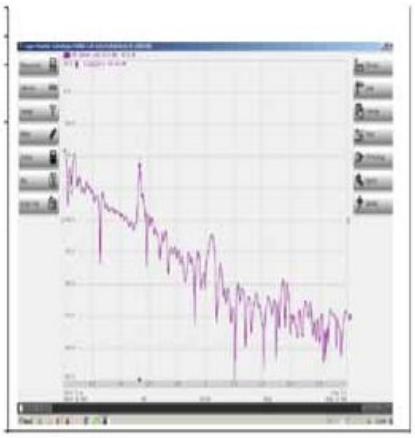
Features:

- PCB Design and fabrication facility.
- Antenna Design and Fabrication facility.
- Design & Implementation of various electronics Projects.
- Testing of prototype designs.

Radar & TV Lab

Features:

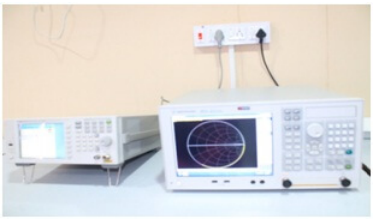
- Study and testing facility on LCD,LED,CRT TV hardware.
- RADAR demonstration and basic experiments.
- SATCOMM demonstration and basic experiments.
- For testing of radar cross section of real life scaled targets in spherical coordinates.
- Time domain with Gating distance & trace math for high accuracy.
- Use of X band allows smaller wavelength for measurement, allowing smaller features to be tested for high correlation to real targets.
- Low radiated power combined with very high sensitivity allows large range of measurements.
- Direct measurement in dB with 0.1dB resolution with accurate log processing with temperature.

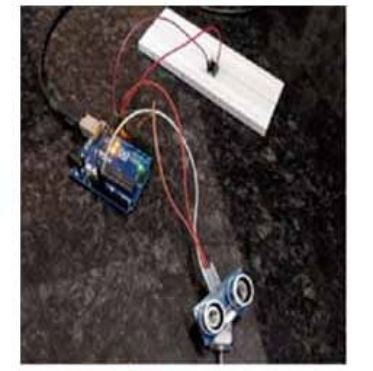


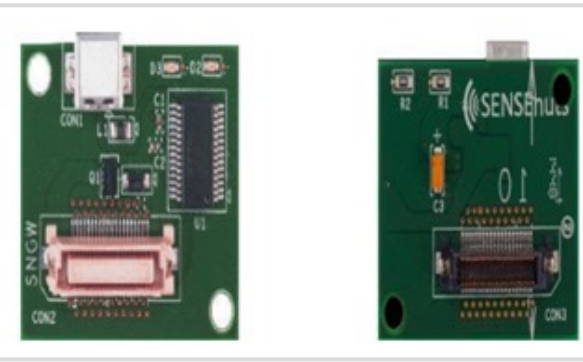
Advance Communication & Artificial Intelligence Lab

Features:

- Study & design experiments of Wireless Sensor Networks (WSN).
- Characterstics and application of Various Sensors in Embedded Systems & Microcontroller Interface.
- Latest Microcontroller applications.
- Analog Fronted
- Multi Sensor Module
- Single Chip Wi-Fi MCU
- Wi-Fi Network Processor
- Air Boost
- Wireless Development Kit
- ARM Cortex M4
- Ultra Low Power Microcontroller
- GPS application module
- RS 485 interface
- Bluetooth application module
- GSM/GPRS application module
- Ethernet application module
- Zigbee application module
- Internetworking of physical devices, vehicles, sensors and actuators.
- Power consumption constraints for nodes using batteries or energy harvesting.
- Ability to cope with node failures (resilience)
- Some mobility of nodes (for highly mobile nodes see MWSNs)







Communication Engineering Lab

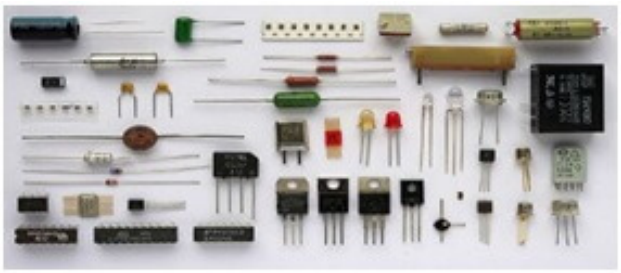
Features:

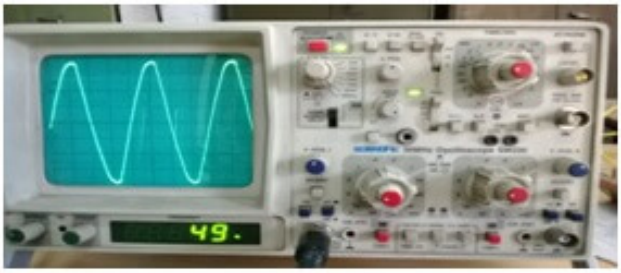
- Performance Analysis of Telecomm Network Components.
- Analog Modulation/Demodulation Spectrum Analysis.
- Performance testing of communication systems.

Basic Electronics Lab

Features:

- Identification, testing & application of all types of components, ICs &appliances.
- Facility for Practical Implementation of various electronic circuits & its performance analysis.
- Test & measurement facility for electronics parameters of various systems.

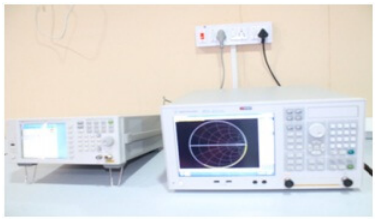


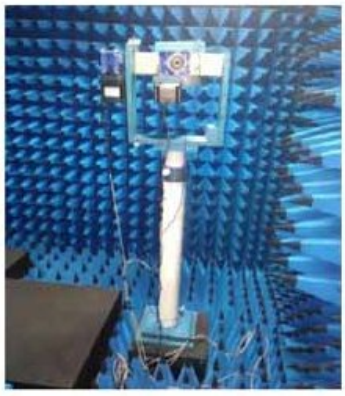


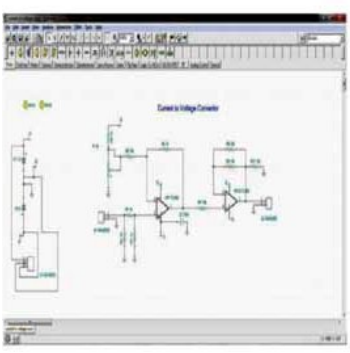
Anechoic Chamber Lab

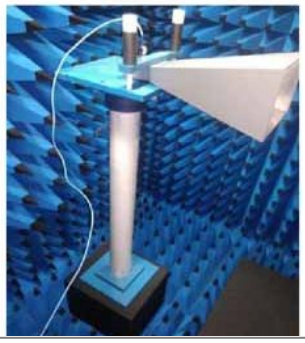
Features:

- Anechoic chamber is a room designed to completely absorb reflections of electromagnetic waves.
- Measurement of RF properties of antennas (Gain, Radiation pattern, Return Loss, Polarization pattern etc.) is carried out in the Anechoic Chamber.
- It provides testing facility for research pertaining to Microwave engineering applications.
- Antenna Measurements, Mono static/ Bi-static RCS Measurements, Near Field Measurements, Bore Sight Measurements, Network parameters can be carried out in it.
- Versatile PCB prototyping
- Auto depth adjustment
- Micro drilling and milling
- Process Logging
- PCB based Software with interactive GUI
- Testing facility for experimentation and implementation of Radio frequency circuits.
- Test component specification and verify design simulation to make sure systems and their components work properly together.
- Test system that enables the RF performance of radio frequency (RF) and microwave devices to be characterised in terms of network scattering parameters, or S parameters.
- Working frequency range is up to 10 GHz.



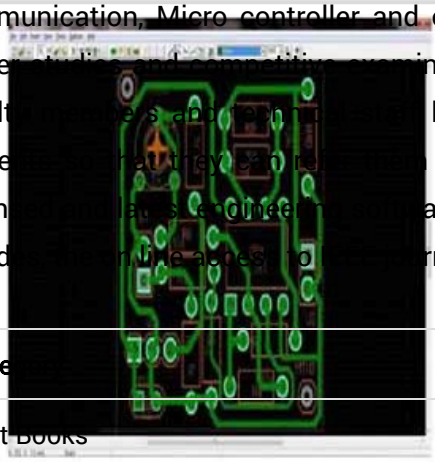




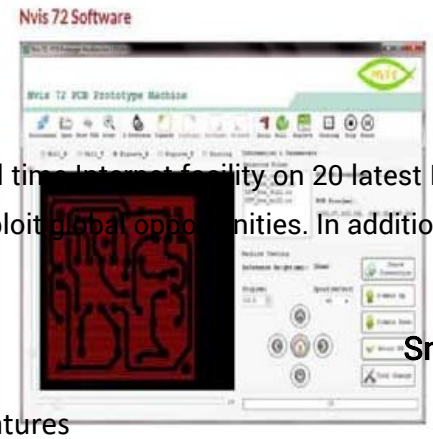


Details of Department Library

Apart from the rich collection of over 16000 books in the college's central library, Electronics & Communication Engineering department is having a separate library for its staff members and students. The library has got enough space for reading room and reference room. Faculty and staff members get benefited with the treasure of communication journals, periodicals and books available in the library. The library has over 1500 books on various basic and advance courses in electronics & communication engineering like Microwave Engineering, Wireless communication, Satellite and Radar Technology, Navigational Systems, Optical communication, MIMO systems, Basic Electronics, Advance communication, Micro controller and embedded systems etc. Some of the books are very useful for higher studies and competitive examinations also. A very good number of lab manuals prepared by its faculty members and students have also been placed in the library for ready reference to the students so that they can refer them in non-practical hours. The library is having good collection of License free labs engineering software's like ORCAD, CMOS Design tool and Antenna simulation tools. Besides these in the above lib journals facility is available within the department itself.



Category	No. of Titles/volume
Text Books	1300
Reference books	150
Others (Booklets/manuals/proceedings)	50



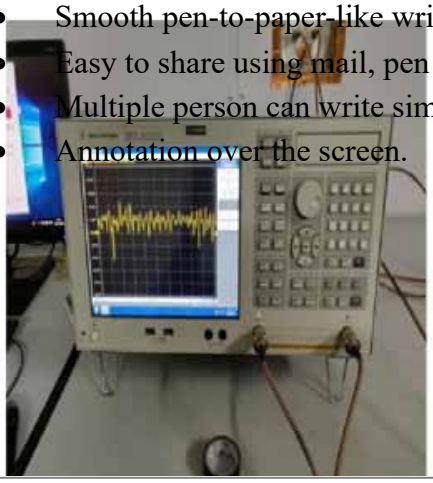
Internet Facilities

Full time Internet facility on 20 latest Desktops are available to the students so that they can access and exploit global opportunities. In addition, the Department is Wi-Fi connected with broadband access..

Smart Boards for Classrooms

Features

- Samsung Flip is an interactive display that simplifies teamwork without any hassle.
- Smooth pen-to-paper-like writing experience.
- Easy to share using mail, pen drive, etc.
- Multiple person can write simultaneously
- Annotation over the screen.



Menu

Quick Links

- Home (index.php)
- Sitemap (singlePage.php?id=17&type=SP)
- National Institute Ranking Framework : CTAE Reports (singlePage.php?id=31&type=SP)
- TEQIP-III (singlePage.php?id=34&type=SP)
- Bhartiya Chatra Sansad (singlePage.php?id=44&type=SP)
- Prayaag 2013 (CTAE TechFest) (singlePage.php?id=15&type=SP)
- C-GOLD-2014-Activities (singlePage.php?id=17&type=SP)
- Gold Fiesta-2014 (CTAE TechFest) (singlePage.php?id=19&type=SP)
- Promoting Innovations in Individuals, Start-ups and MSMEs (singlePage.php?id=21&type=SP)
- IUMS (singlePage.php?id=22&type=SP)
- STUDENT PORTAL LOGIN (singlePage.php?id=23&type=SP)
- Tech View 2019 (singlePage.php?id=24&type=SP)
- CTAE TECHFEST-2015 (singlePage.php?id=26&type=SP)
- Students No Dues Form (singlePage.php?id=28&type=SP)
- GLOBAL RAJASTHAN AGRITECH MEET (GRAM-2016) (singlePage.php?id=29&type=SP)

SP)

ubmission Report 2020.pdf)

- Package of Practices, Publication & Patent Facilitation Cell (singlePage.php?id=46&type=SP)
- STATE LEVEL SPORTS CHAMPIONSHIP KARMATH-2020 (singlePage.php?id=49&type=SP)
- C.T.A.E. STUDENT FEED BACK SYSTEM (B.Tech. Program) (singlePage.php?id=58&type=SP)
- NewGen IEDC-CTAE (singlePage.php?id=59&type=SP)
- ARIIA 2021 CTAE REPORT (images/staticContent/ARI-I-1067.pdf)
- MPUAT Staff Directory (images/staticContent/Telephone-Directory-MPUAT-(2022).pdf)
- Farm Machinery Testing Centre (singlePage.php?id=72&type=SP)

Udaipur, IN

24°

7:38 pm IST

Cloudy

(https://www.accuweather.com/en/in/udaipur/190217/weather-forecast/190217?utm_source=www-ctae-ac-in&utm_medium=oap_weather_widget&utm_term=link_current&utm_content=accuweather&utm_campaign=current)

Contact Us

College of Technology

and Engineering,

Udaipur(Rajasthan) 313001

Tel.No. +91 294 2470837 (o)

Fax No. +91 294 2471056

Email: deanctae@mpuat.ac.in

(mailto:deanctae@mpuat.ac.in)

ctaedean@gmail.com (mailto:ctaedean@gmail.com)

Web: www.ctae.ac.in (http://www.ctae.ac.in)

Visitors: 0003482

Last Updated: 02-09-2024