University Informatics Centre
Bharathidasan University

Profile



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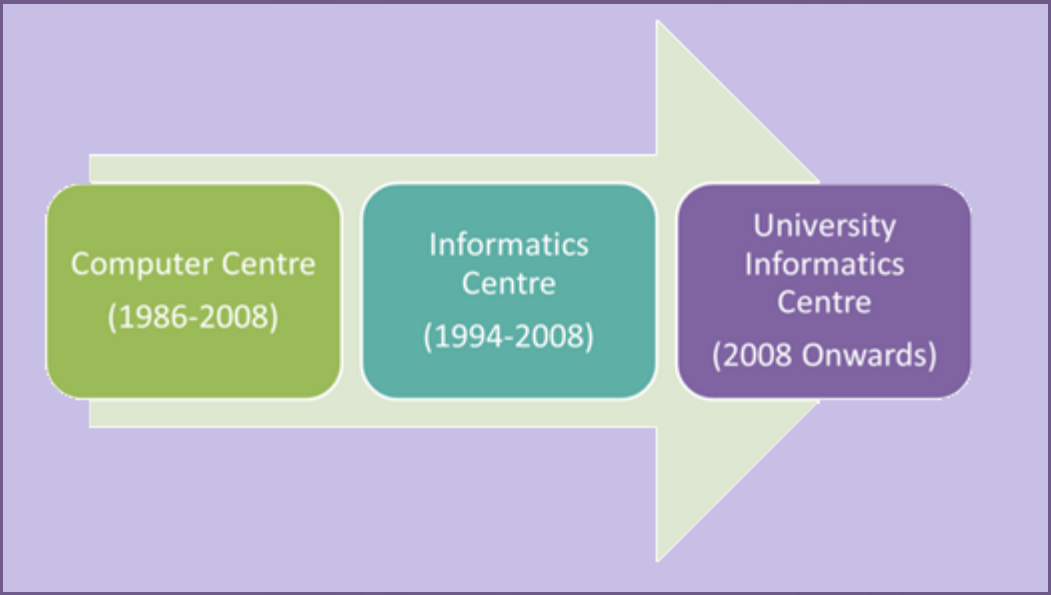
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About the Centre

The University Informatics Centre (Computer Centre and Informatics Centre), has been functioning since 1986 for delivering best-in-class Information Technology Services and Facilities to support the University's Research, Teaching-Learning and Administrative functions.

Genesis and History

The Computer Centre of Bharathidasan University was established 1986 and has been utilized for research oriented activities by the students and faculty members of the University. The Informatics Centre was established in 1994, for providing Information Technology Services and e-Governance solutions to the University. In 2008, the Informatics Centre and Computer Centre were merged and named as University Informatics Centre (UIC).



Aim

To provide best-in-class IT services to support top-notch education, distinguished research and effective administration.

Goals

To deliver and sustain a Secure, Robust and Ubiquitous access to Information Technology Resources.

Objectives

- To transform the Teaching and Learning process by harnessing Information Technology tools and services
- To promote Research by providing state-of-the art computing, networking, software and storage technologies
- To create the right technology platform to promote e-Governance and m-Governance
- To enhance information security, privacy and accessibility to all the users

Team



- Prof. Balamurugan M, Director
- Balasubramanian V, Portal Developer
- Manimaran R, Network Engineer
- Sudhakar A, TOTE Facility Supervisor
- Venkatesan S, Videographer
- Ramesh P, Office Assistant

Information Technology Services

The Real digital transformations in the University, requires building an IT backbone that is simplified, modern, and secure. That technology infrastructure can serve as a platform for adopting new processes and tools and rethinking the way the University Business Processes have operated for decades.

All the e-Governance and Digital transformation initiatives of the University do involve embracing digital technology wherever possible. Towards this the following services are offered to the students, faculty and staff of the University.



Our Service Offerings

- Networks & Connectivity
- Web Design & Development
- IT Help Desk
- E-Mail Services
- Software Development & E-Governance
- Database / Storage / Server Management & Web Hosting
- Multimedia Services
- IT Infrastructure Development

Networks & Connectivity

Wired Network

The University has 1 Gbps bandwidth Internet Connectivity under the National Knowledge Network (NKN) for both the campuses. Internet connectivity is provided to all the buildings.

Wireless Network

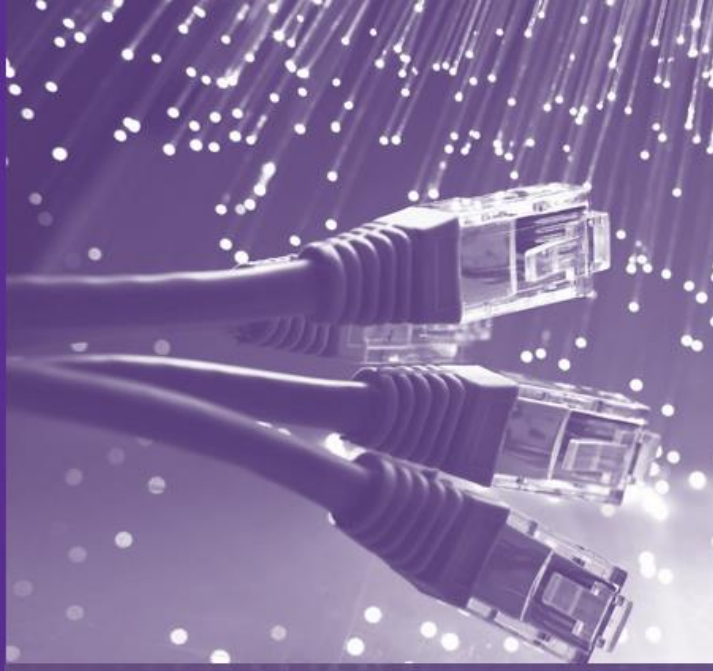
Along with the wired network, Wireless Internet connectivity using Wi-Fi technology is also established as a secondary backbone. Wireless networking allows faculty, staff, students, and authenticated guests/visitors to access the network. The Wireless Internet (WiFi) facility has been enabled provided to all the buildings of Palkalaiperur campus. A Wireless Controller has been installed to provide maximum WiFi coverage, authentication and security. With 125 access points, around 1400 authenticated WiFi users are connected to BDU wireless network.

Network Security

To provide end-to-end network security, packet filtering and intrusion prevention services, a firewall has been configured with a throughput of 20 Gbps with 16 Interfaces. In addition to that a top-notch antivirus has been installed to provide maximum defence against malware and to safeguard the desktop systems from viruses, spyware, worms, Trojans, and other security risks. To control and monitor the network traffic, a Network Monitoring System (NMS) has been deployed to monitor the network switches, bandwidth usage and network traffic.

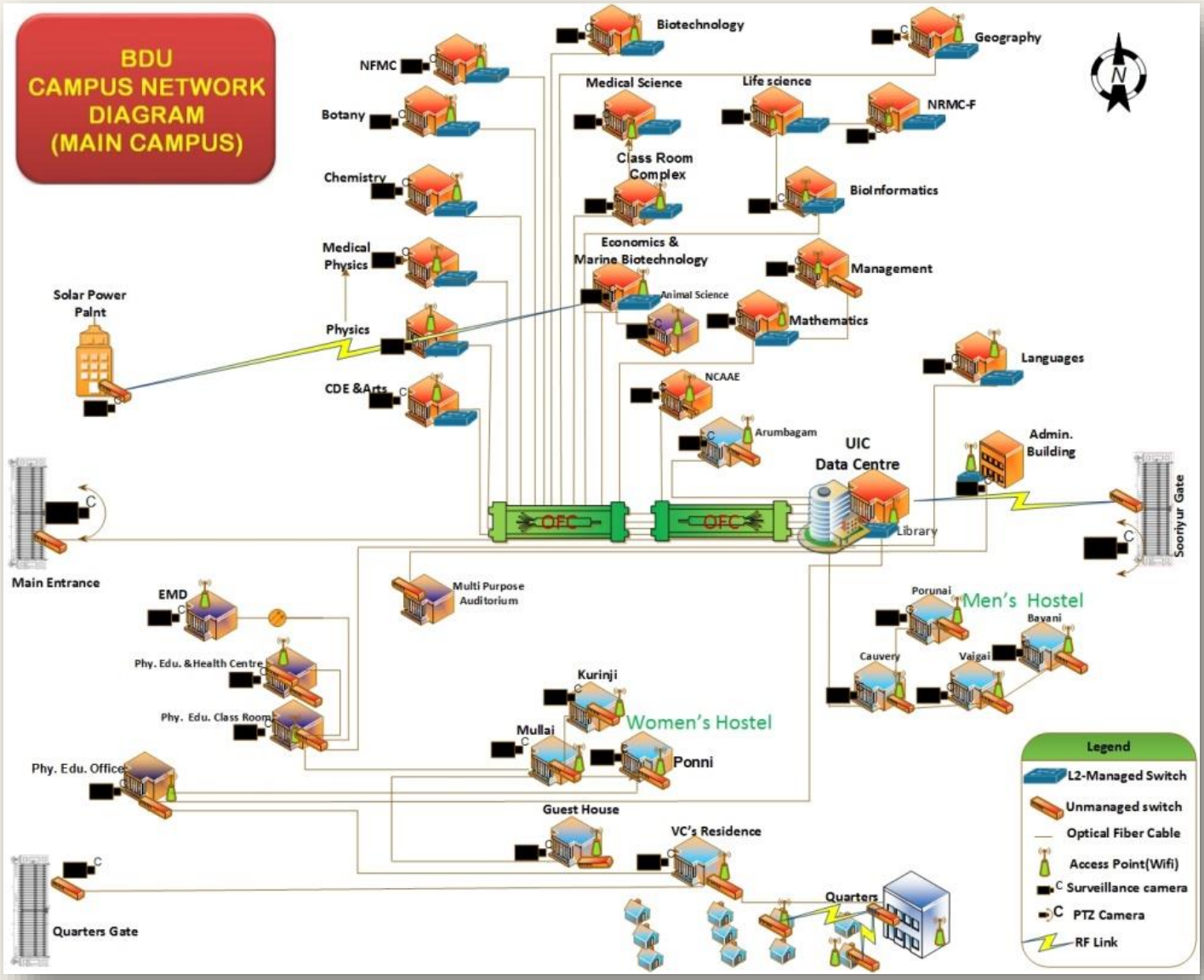
Quick Facts

Wired Network








BDU
CAMPUS NETWORK
DIAGRAM
(MAIN CAMPUS)
Biotechnology
Geography
NFMC
Medical Science
Life science
NRMC-F
Botany
Class Room
Complex
Chemistry
BioInformatics
Medical
Physics
Economics &
Marine Biotechnology
Management
Solar Power
Palnt
Animal Science
Physics
Mathematics
Languages
CDE &Arts
NCAAE
Arumbagam
UIC
Data Centre
Admin.
Building
OFC
OFC
Library
Sooriyur Gate
Main Entrance
Multi Purpose
Auditorium
EMD
Porunai
Men's Hostel
Bayani
Phy. Edu. &Health Centre
Cauvery
Vaigai
Kurinji
Phy. Edu. Class Room
Women's Hostel
Mullai
Ponni
Phy. Edu. Office
Guest House
VC's Residence
Quarters
Quarters Gate
N
Legend
L2-Managed Switch
Unmanaged switch
Optical Fiber Cable
Access Point(Wifi)
Surveillance camera
PTZ Camera
RF Link

Web Design & Development

The Web Design and Development Service include support for the University's official website (https://www.bdu.ac.in) and other related websites. The web design and development team develops the overall strategy of the University's internal and external communications on the web. The team works closely with University's offices, schools, departments and centers in creating / maintaining / updating website content and design.

Frequently Updated Information on the Website

- Semester Exam. Timetables / Fee Notifications / Semester Results
- Circulars and Notifications / Advertisements and Tenders
- Conferences / Seminars / Training Programmes and other Events
- Campus Interview Notifications / Placement Opportunities / Walk-in Interviews
- Downloadable Forms for Students / Faculty / Colleges

Few Popular Websites and Microsites

- National Repository for Microalgae and Cyanobacteria - Freshwater (NRMC-F)
- Centre for Distance Education
- UGC Human Resource Development Centre
- BDU Blood Donor's Website
- A Website to mark the 125th Birth Anniversary of the Poet Bharathidasan
- Digital Manuscript Gallery - மின்னணுச் சுவடிக் காட்சியகம்
- Knowledge Repository
- BDU's Multimedia and NPTEL Channel





Information Technology Help Desk



Our IT Help Desk service provides support and assistance to the University faculty, staff and students on a wide range of IT issues related to computing, communications and information technology. Technical support is provided for the following categories.

- Software installation and troubleshooting
- Maintenance and servicing of desktops, notebooks, anti-malware and printers
- Maintenance and Servicing of Network Switches
- Wired / Wireless Internet connectivity Issues

The technical support is provided in-person, online or through phone.

BDU Academic E-Mail Services



Bharathidasan University E-mail service is facilitated by the Google app's G-Suite's academic email services. The faculty, staff, principals of all the affiliated colleges, MPhil and Ph.D. students are provided with accounts in BDU academic email domain. The 831* users of BDU G-Suite domain can use the key features such as Docs, Calendar, SPAM filtering and Zero Downtime service.

Software Development & E-Governance

Our Software Development Service includes design, development and deployment of software applications and services for the Digital Transformation / e-Governance initiatives taken by the University. A mixture of traditional & agile software development methodologies are followed to develop new systems or re-engineer the existing systems and processes. These services/applications are delivered over the web or through traditional terminal-based services. Applications are centrally deployed and support / enhancements are provided based on the request made by the users.



Successful E-Governance Initiatives taken in the Recent Past

Student Admission and Support
Self-Service Portal (Feb. 2016)
Student Information Management System (Jan. 2016)
Online Admissions (From Apr. 2016)
Administration
Information System for Special Grant Projects (Feb. 2015)
Employee Information System (June 2016)
Faculty Database for Board of Studies (2012-2015, 2015-2018, 2018-2021)
Examinations
Pre-Examination Portal (Nov. 2015)
An Integrated System for Ph.D. Section's Internal Functions (Apr. 2016)
An Multi-tenant web application for MPhil Section - Panel Selection & Claims Management (Nov. 2017)
Examiner's Panel for Central Valuation and Online Valuation Orders (Apr. 2016)
Finance & Accounts
Payroll Portal - for University Colleges (May 2018)
Research Section - Payment / Claims Management System (Mar. 2018)
Other Offices / Units
Online Feedback Submission and Feedback Result Analysis System for IQAC (Nov. 2015)

Database / Storage / Server Management & Web Hosting



Our Data Management services includes managing a high-density data centre that provides safe, secure, and reliable data management, hosting and storage services. Dedicated Data / Web servers, storage and networking services are provided to deliver optimal performance for the University's web and other applications. Our Web / Database Hosting service delivers the infrastructure and storage space needed for all the e-Governance initiatives developed for the University Departments and Administrative offices.

The services include administration processes for Linux, Windows and Mac includes installation, configuration, security scanning and vulnerability remediation, maintenance, patch management, stabilization, monitoring, user management, and integration with the campus infrastructure.

Multimedia Services



Multimedia Services at the University Informatics Centre offers professional audio/visual presentation support, computer display, sound reinforcement, audio recording services, video conference services, and audio/visual equipment setup and operation. The service array includes professional audio and visual presentation support, computer large-format display, sound reinforcement, audio recording services and video conferencing services.

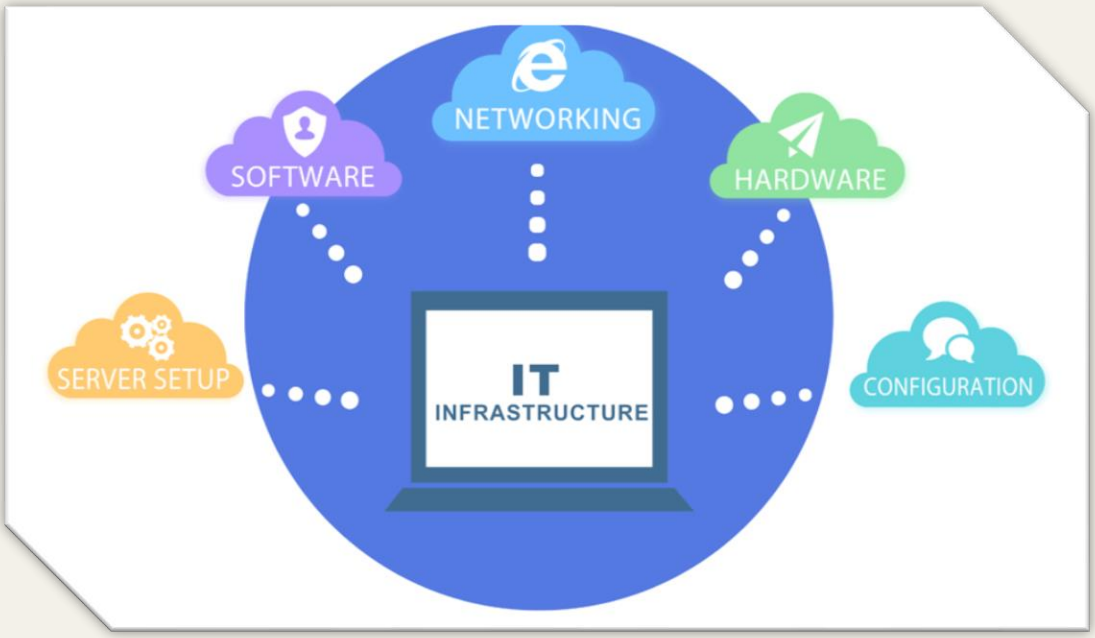
The Informatics Centre has been providing Multimedia support for several University Events such as:

- Online Viva-Voce Examinations
- Online Interviews
- Webinars
- Live Streaming of Events / Seminars / Conferences
- Recording of Senate/Syndicate Meetings

A state-of-the Art Full HD 10-point Multi Casting Unit (MCU) equipment is used for Video Conferencing facilities under the RUSA grant.

Information Technology (IT) Infrastructure Development

Our IT Infrastructure Development services assist the University Departments / Centres and Offices in implementing their technology components. This support services include advice and support for the purchase of computers, installation of computer and other related machines or consultancy for development of technology components.



IT Infrastructure development activities supported by DST PURSE

The Promotion of University Research and Scientific Excellence (PURSE) initiative is taken by Department of Science & Technology, Government of India to initiate value added proactive measures through introduction of R&D Incentive Grant. With a liberal grant from DST PURSE, Campus Network Facilities have been upgraded with state of the art equipment's. For improving network security, packet filtering and intrusion prevention services, a Firewall have been configured with a throughput of 20 Gbps with 16 Interfaces to deliver end-to-end security to our Campus Network. To protect the computer systems and to give them maximum defense against viruses, malware, spyware, worms and Trojans, powerful antivirus software's have been installed. In addition to that, A Network Monitoring System (NMS) has been deployed to monitor the network switches, bandwidth usage and network traffic.

IT Infrastructure development activities supported by RUSA

Rashtriya Uchchatar Shiksha Abhiyan (RUSA) is a Centrally Sponsored Scheme, launched in 2013 aims at providing strategic funding to eligible state higher educational institutions. With the RUSA grant following activities are being carried out.

- CCTV Surveillance System
- Biometric System
- State-of-the Art Desktop Systems
- Additional Servers
- Antivirus
- OFC Cabling (Extending to all the newly constructed buildings)
- Structured Cabling
- Video Conferencing Equipments

Facilities

1. High-Performance Computing Facility (DST – PURSE)

The High Performance Computing facility at Bharathidasan University has been installed to provide software resources and services to solve computationally-intensive research problems. This facility has been implemented with a cost of ₹ 1.3 Crores and has One Head Node and 10 Compute Nodes with each compute node consisting of 2 numbers of 10 core processors. This system also has a storage



capacity of 18 Tera Bytes. The facility is utilized by the researchers for their Numerical Analysis, Molecular Modelling, Docking and Dynamic Simulations of Biological Macromolecular systems such as protein and DNA. This facility is utilized by the faculty and students through the campus network.

2. Central Computing Facility

The central computing laboratory has been catering to the academic, research and general purpose computing needs of the students, faculty, and staff. The Laboratory is also utilized by the students from constituent colleges and affiliated colleges. The laboratory is also used for giving hands-on training programmes and webinars to participants of Refresher courses, Orientation courses, Short term courses, Workshops etc. The computing laboratory has 90 Computers connected to a central Server. The lab functions from 8 AM to 8 PM on all days except National Holidays. The Laboratory is equipped with Necessary Software Tools, IP Surveillance Cameras, Audio System and a Smart Board to teach and demonstrate.



3. Smart Class Room / Video Conferencing Room

A Smart Classroom is a traditional lecture style teaching space that has available technological equipment that can be used to aid and enhance instruction of a course. The Smart Class Room in the University Informatics Centre has a classical podium, a notebook computer with 1 Gbps Internet Connection, Interactive Projector, HD Camera and a Touch Screen Smart Board. This class room also has the necessary facilities to conduct video-conferencing sessions. This smart class room is utilized by the University Departments and Constituent Colleges for conducting Special Lectures, Ph.D., Viva Voce Examinations, Programming Courses, Refresher / Orientation Courses (conducted by the UGC Human Resource Development Centre), Training Workshops, Conference Sessions etc.,



Training and Outreach Programmes

Training Programmes are offered regularly to the academic administrative staff of the University for making them effectively utilize the University's IT infrastructure. Lectures are delivered to the participants (faculty members from various colleges across the country) of the refresher / orientation Programmes organized by UGC Human Resource Development Centre on ICT, Smart Board Utilization Skills, Tamil Computing, Awareness programmes on Information Security/Privacy, Big Data and E-Learning Resources.

Students from various academic institutions in and around Tiruchirappalli visit the University Informatics Centre to learn about the University's IT infrastructure and recent development in the field of Computing Sciences.

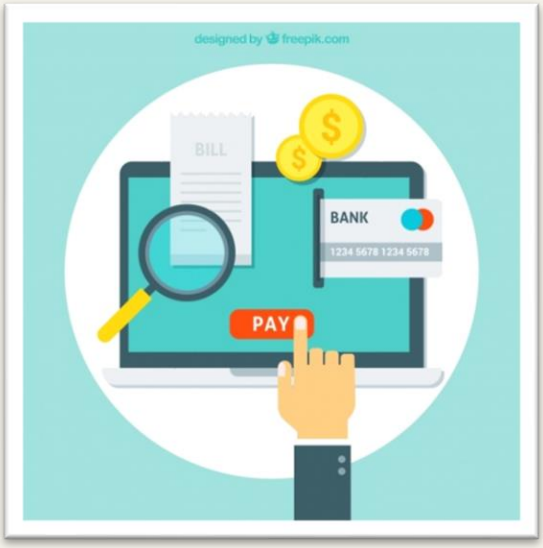


Best Practices & ICT initiatives for the Benefit of Students

▪ CCTV Surveillance System

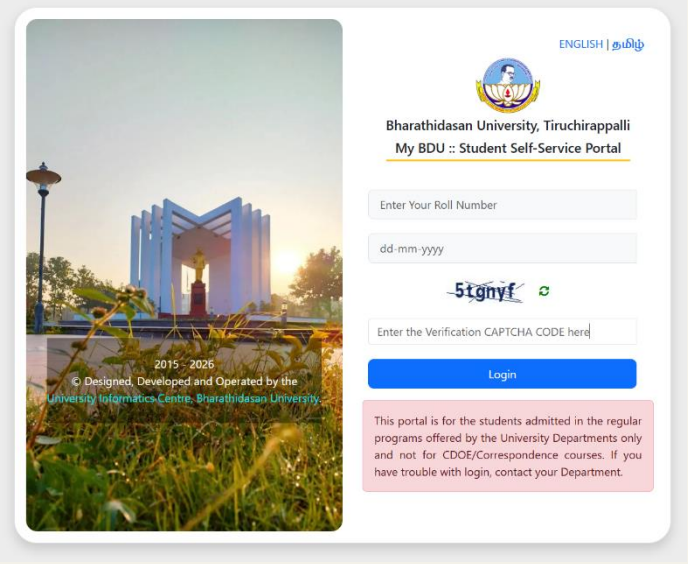
To strengthen the campus safety and security, the University under the RUSA grant, has installed round the clock CCTV surveillance cameras. There are 241 cameras covering a large geographical area in 25 different buildings of the Palkaliperur Campus.

▪ Online Payment



University Informatics Centre has played a key role in successfully implementing the **'Online Payment Facility through SBI-iCollect'** from 2015 onwards. All the fee payments can be made through online either by Internet Banking or by using Debit / Credit cards of any bank from anywhere. From Dec. 2018, **Axis Bank Gateway** has been provided as an additional option for the users.

▪ Student Information Portal



The University Informatics Centre of Bharathidasan University on 16/02/2016, launched the **Student Information Portal** for the benefit of the students. This self-service capabilities portal reduces the time and effort taken by the students to obtain various certificates / necessary information from the Departments and Administrative Offices.

Successfully Implemented Projects

1. As a part of the e-Governance initiative, Pre-Examination Monitoring System (PEMS) for the Office of the Controller of Examinations and Institutions Affiliation Monitoring System (IAMS) for the College Affiliation Section of the Registrar's Office module development activities are entrusted to the National Informatics Centre (NIC) from June 2018. This portal has been a full-fledged ERP system to integrate the College Affiliation with Examinations. This portal was launched in the Academic Year 2019-2020.

2. For enhancing information security, Digital Signature and SSL Implementation with an exclusive Internal Payment Gateway was implemented for all the student payment services since 2023.

Plans for the Future

- Cloud Enabled Centralized Data storage facilities for all the administrative offices sections

- Delivery of Emp. Self-Service Capabilities via an exclusive portal for the Employees.

- Promotion of Green computing initiatives in all possible arenas.