ORIHONA

COMPUTER SCIENCE & ENGINEERING

" EDUCATION IS THE MANIFESTATION OF PERFECTION ALREADY IN MAN "

-- Swami Vivekananda

BY EDUCATION I MEAN AN ALL
ROUND DRAWING OUT OF THE BEST IN
CHILD AND MAN IN BODY, MIND & SPIRIT.

- Mahatma Gandhi

ORIHONA

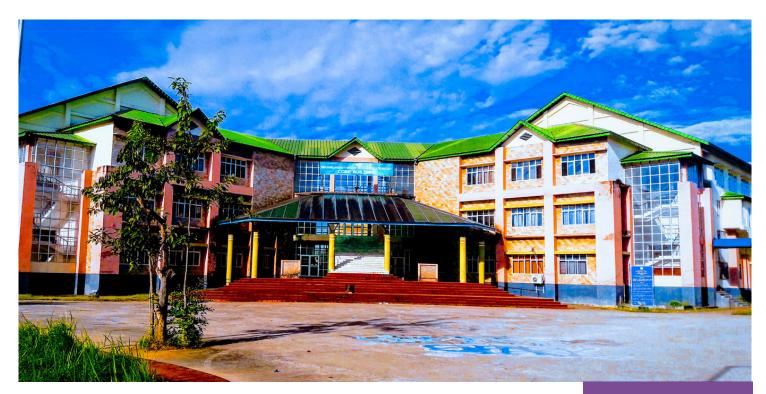*Your limitation—it's only your imagination.*

Why the name "Orihona"?

"Orihona" is an Assamsese word which means Contribution. Orihona is an initiative to contribute to the growth of Science, Technology, Engineering, Mathematics and High-Tech Manufacturing.
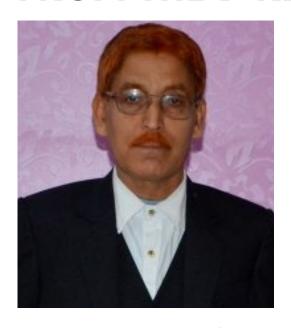
COMPUTER SCIENCE AND ENGINEERING

The Department of Computer Science & Engineering was started in August, 2009 with AICTE recognition. The department has a team of eight highly qualified, experienced and dedicated faculties and two staff members to impart quality technical education. The department caters to the latest requirements and demands of the IT Industry and aims at providing valuable workforce for the Ind--ian Silicon Valley. The department has high speed broadband Internet connectivity at all the labs which is necessary to complete the different practical ventures. The department has four labora-tories including two programming laboratories, one network and and security laboratory and one artificial intelligence laboratory. The department has been facilitated under a voluminous library located at the Core building of DUIET, which caters to the needs of students, research scholars and faculty.

FROM THE DIRECTOR'S DESK

I strongly believe that learning through enjoyment produces highest benefit and the same should be adopted to impart education to the young minds.

The Department of CSE is filled with young, energetic, dynamic set of faculty members to maintain a healthy reationship with students. I feel proud to share that most of the alumini of the department are placed in respectable positions in the country and abroad.

I wish the newsletter a grand success !

It gives me immense pleasure to introduce the first Edition of the newsletter of the CSE department of DUIET. At the onset, I sincerely thank the editorial board members and the Department of CSE as whole for their wonderful work. We at DUIET work as a team and live as a family.

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learning through enjoyment produces highest benefit

HOD'S MESSAGE

India in the wake of its technological advances is charting new courses towards innovation. This demands an ardent need of a professional and well equipped technical work-force to push it through the demands of forth-coming development. At Dibrugarh University Institute of Engineering and Technology (DUIET), we are inculcating the necessary steps, facilities and environment, along with a Training and Placement Cell, ensuring a bright future to its students. Learning is a continuous process and it does not end with the acquisition of a degree, specially because steady and rapid advances in computing technologies shorten the life of tools and techniques prevalent today. Therefore we do not aim to make our students walking manuals of any language or package. Instead, they are given a strong foundation in computer science and problem - solving techniques, and are made adaptable to changes.

The Department of Computer Science Engineering is striving hard towards the goal of providing innovative and quality education with high standard to achieve academic excellence and provides platform for the students to achieve their career goals. We train and empower our students to make the world a better place with the help of engineering principles & techniques and grow to be the leaders in their careers adhering to good ethical values.

Shifting to the new housing of the Computer Science department from its earlier establishment at the I.T. Building, Dibrugarh University, we look forward to scaling greater heights with more improved and well equipped labs and facilities hereafter.

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"Programming can be fun, so can cryptography; however they should not be combined."

-Kreitzberg and Shneidmerman

OUR VISION AND MISSION

Our Vision :

- Build a strong research and teaching environment that responds swiftly to the challenging problems of the humanity.

Our Mission :

- Provide quality undergraduate education in both the theoretical and applied foundations of Computer science & engineering and train students to effectively apply this knowledge to solve real-world problems thus amplifying their potential for lifelong high-quality careers and give them a competitive advantage in the ever-changing and challenging global work environment.
- Conduct research to contribute and for further advancements in computer science and integrate research results and innovations into other scientific disciplines.
- Provide computer science education and training to students in other departments at DUIET.
- Provide computer science expertise to the people of the nation.

"Keep your dreams alive. Understand to achieve anything requires faith and belief in yourself, vision, hard work, determination, and dedication. Remember all things are possible for those who believe."
~Gail Devers

"My mission in life is not merely to survive, but to thrive; and to do so with some passion, some compassion, some humor, and some style"

~Maya Angelou

Our Courses

The Department of CSE offers B.Tech in Computer Science and Engineering with an intake capacity of sixty students per year. The program objectives for the course are :

1.Develop engineered solutions that are well-conceived and carefully implemented to meet public and private sector needs.

2.Contribute effectively to organizations as leaders and/or team members.

3.Foster personal and organizational success in a dynamic, globalized professional environment.

4.Improve society by applying humanistic values to their professional and civic responsibilities.

5.Earn advanced degrees in computer science or professional credentials.

6.Contribute to the development of the next generation of information technology either through research or through practice in a corporate setting.

7.Bring critical intelligence, formed through the University's commitment to liberal humanistic learning, to the development of information technology.

" EDUCATION IS THE MOST POWERFUL WEAPON WHICH YOU CAN USE TO CHANGE THE WORLD. "

- NELSON MANDELA
Former president of South Africa

Major Courses

Computer Graphics	Design and Analysis of Algorithms
Operating Systems	System Software
Computer Networks	Computer Networks
Data Communication	Formal Language and Automata theory
Digital Logic and Design	Object Oriented Programming using C++
Electronic Devices and Circuit	Real Time Systems
Data and File Structures using C++	Discrete Mathematics
Microprocessors and Microcontrollers	Database Systems
Artificial Intelligence	Software Engineering
Computer Architecture and Organization	Cryptography and Network Security

ELECTIVE

Graph Theory	Advanced Computer Architecture
VLSI Design	Mobile Computing
Data Mining	Wireless Communication
Information Theory and Coding	Fuzzy Logic and Neural Networks
Robotics	Image Processing

FACULTY PROFILE

MR. KAUSHIK DAS

Mr. Kaushik Das joined the institute in 2011 as an Assistant Professor in the Department of Computer Science and Engineering. He did his B.Tech in Computer Science and Engineering from NIT Silchar and M.Tech in Information Technology from Tezpur University. His areas of interest lies in Information Technolgy (Data Mining) and Computer Vision.

MR. M. TIKEN SINGH

Mr. M. Tiken Singh joined the institute in 2011 as an Assistant Professor in the Department of Computer Science and Engineering . He did his B. Tech in Computer Science and Engineering from Manipur University and M. Tech in Information Technology from Tezpur University. His area of interest lies in Real Time System and Algorithmic Game Theory.

MR. ABHIJIT BORUAH

Mr. Abhijit Boruah joined the institute in 2012 as an Assistant Professor in the Department of Computer Science and Engineering . He did his B. Tech and M. Tech from Tezpur University. His area of interest lies in Logic and Reasoning, Machine Learning and Robotics.

MR. SUDIPTA MAJUMDER

Mr. Sudipta Majumder has been working as an Assistant Professor in the Department of Computer Science and Engineering since August 2011.He did his B.Tech in Computer Science and Engineering and M. Tech in Information Technology from NERIST. His area of interest lies in Computer Network Security and VoD Security System.

FACULTY PROFILE

MR. RABINDER KUMAR PRASAD

Mr. Rabinder Kumar Prasad has been working as an Assistant Professor in Computer Science and Engineering department of DUIET (Since 2011 till present). He did his B. Tech in Computer Science and Engineering from Jorhat Engg. College and M.Tech in Information Technology from Tezpur University. His area of interest lies in Data Mining and Spatial Data Mining Techniques in Networking Field.

MRS. NOMI BARUAH

Mrs. Nomi Baruah joined the institute in 2012 as an Assistant Professor. She completed her B.E. in Computer Science and Engineering from Jorhat Engg. College, M.E in Software Engineering from Thapar University. Her areas of interest lies in software Engineering, Software Process Improvement, Agile Software Development and Requirement Engineering.

MISS CHARU GULERIA

Miss Charu Guleria has joined the Institute in Sep 2018 under TEQIP (MHRD, Govt. of India) as an Assistant Professor. She completed her B.Tech from PTU Jalandhar and M.Tech from NIT Jalandhar. Her area of interest lies in Data Mining, Information Security and Machine Learning.

DR. MANOJIT GHOSE

Dr. Manojit Ghose has joined the Institute in January 2018 under TEQIP (MHRD, Govt. of India). He has done his B.E. from Jorhat Engg. College, followed by M.Tech. and Ph.D. from IIT Guwahati. He has published several articles in International journals and conferences of repute. One of his publication received Best Paper Award in INDICON 2016. His research areas includes Cloud Computing, Multi-Processor Scheduling and Computer Architecture.

NEWS, EVENTS AND SEMINAR

Interactive Session on Startup and Entrepreneurship

The session was held in DUIET on 28th March, 2019 jointly organized by Startup Cell, DUIET and Dr.SSBUICET, mentor institute - DUIET.

RESOURCE PERSONS :

Abhishek Hand and Akshay Asija, Founders of Source Facility

GIST OF THE LECTURE:-

· Startup : Importance and Need

· Entrepreneurship : Meaning and Insight

· Briefing on Source Facility and its impact

· Interaction on the domains of Fuel, Fertilizer and Food

FACULTY VISIT TO PEC :

Smart city operation centre inauguarated by sri V.P singh badnore, governor of punjab to establish a living lab and urban observatory for smart city solution.

FACULTY DEVELOPMENT PROGRAMME

Glimpse of the Lectures

1. Classroom Assessment techniques: CA7,P2A forum
2. Ice-Breaking Team Building
3. Micro-teaching by participants
4. Enhancing Pedagogy with Technology
5. Yoga in Education
6. Revamping Technical Education

Inside the Issue

INTERACTION WITH UIET

Interaction with the research scholars of Department of CSE, UIET. A fruitful exchange of proceedings and methodologies ensured a constructive and effectual visit to the institution.

AICTE STARTUP SELECTION

25th – 26th June – Student Startup Venture 'Cybrosec India' selected for the AICTE startup mentorship programme at AICTE Headquarter, New Delhi.
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LECTURE ON INTELLECTUAL PROPERTY RIGHTS AND STARTUP

Professor Ganguli is presently working as the advisor of VISION-IPR in Mumbai. He obtained his M.Sc. in Chemistry from the Indian Institute of Technology (Kanpur), Ph.D. in Chemical Physics from the Tata Institute of Fundamental Research, Mumbai, and completed his Post Doctoral Research in Germany and Canada. He was a Visiting Scientist at the Bhabha Atomic Research Centre in 1981 before joining Hindustan Lever, Ltd. as a Research Scientist. He is the CEO of his consulting firm "VISION-IPR" offering services in management of Intellectual Property Rights knowledge management.

STTP : TEQIP-3

TEQIP-3
Technical Education Quality Improvement Programm

VOL NO. 1

-- A Student and Teacher Development Program

Short Term Training Program 2018

Inside The Issue :

1. MACHINE LEARNING
2. NEURAL NETWORK
3 DATA SCIENCE USING R
4. DEEP LEARING , IMAGE PROCESSING & IMAGE CLUSTERING

Department of Computer Science and Engineering, DUIET organized the Short Term Training Programme on -- "Machine Learning and its applications" from 18th to 22nd March, 2018. The STTP was blessed with speakers from renounced research and development institutes.Renounced experts from ISI, Kolkata, C-DAC, Silchar and NIELIT, Mizoram gave their expert talk on Machine Learning and its application.

Some of the imported topics covered in the STTP are Neural network, R-Programming, Deep learning, Image Processing, Image clustering, etc.Also at the end of the STTP, all participants who have successfully completed the workshop were given certificates.

SHORT TERM TRAINING PROGRAMME : 2019

Held in CSE department from 25th to 29th March under TEQIP-III

Dr. Barbhuiya started by briefing on the Industrial Revolution then concluded by stating the current scenario of a Data Centric Economy followed by briefing on the basic know how of Cloud Computing. The session concluded by a brief hand on Amazon Web Services and its basics were introduced to the attendees.

Prof Deka introduced MOOCs, their usage and relevance and ended the session with a brief on "SWAYAM" Government of India's initiative to achieve the cardinal principles of access, equity and quality, the three cardinal principles of Education Policy.

Mr. Lakhya Borah started with an interactive session emphasizing on the importance of latest advancements and trends in the technical sector then paved way to thorough hand on session with Python. A detailed overview of the topic was achieved by the end of the session.

Dr. Sahu started the session with a brief on the basic fundamentals behind Cloud Computing, its needs and applications. He gave a detailed overview on the server sided issues of Cloud Computing and a brief on algorithms related to achieve that purpose.

ALUMNI MEET

Inside the Issue

Alumni Meet, a teacher-parent meeting was organised in October, 2018 with an agenda of students and parents participation in developing vision-mission of the respective department.

OBJECTIVE

1. Re-establish full-fledged contact with the past students of DUIET

2. To promote and support various activities, both curricular and extracurricular of the college.

ALUMNI MEET 2018

It was a gathering of passed out students of the Institution. It was a very proud moment to see the successful alumni of the institute. During the meet the alumni community shared their experience in the outside world, which they faced after stepping out of the Institution.

LECTURE SERIES

--Held In CSE Campus

Inside the Issue

LECTURE ON STARTUP

Edward Hussain gave a lecture on startup culture in 2018,October which inspired the students to develop a viable bussiness model to meet marketplace needs or problem

LECTURE ON EVOLUTION OF SCIENCE

Dr. Dinesh Chandra Goswami, a renowned Scientist from Assam, awarded with three Assam Sahitya Sabha Awards for- Best Scientist and Technology coverage in mass media by National Council for Science and Technology Communication (NCSTC), Gopal Chandra Goswami Award, Premdhar Dutta Award. During his one day stay as the guest lecturer for the Auxesis lecture series, he delivered a lecture on the topic of "Progress of Science and the increasing need of Science Communication".

While speaking about Progress of Science, he briefly discussed how the human civilization practiced science in their daily life and how they discovered and invented revolutionary things to fulfill their needs. He spoke about the great philosopher Aristotle, physicist Galileo, Einstein, and Marie Curie and their great inventions, who devoted their lives to science.

He also discussed the increasing need for Science Communication and how a Science Communicator can bridge the gap between Scientists and common people by explaining the complex scientific concepts to them in a very simple way.

STARTUP SUMMIT

A two day Startup Summit namely "Lets Startup" was held at Indira Miri Conference Hall. The summit was organised by, "ABHYUDAY" - the startup cell under TEQUIP-III of DUIET on 2nd and 3rd of May, 2019. The main objective of the summit was inception and ignition of innovative and entrepreneural ideas into young minds.The speakers spoke about the tools and components for startup, dynamics of entrepreneurship and their journey of startups which highly motivated the audience.

The speakers present in the summit were-
~Mr. Rajive Gulati
        -Head of Haryana State Electronic Development Corporation (HARTRON)

~Mr. Brijesh Singh
        -CEO, Brigosha Technologies Pvt Ltd.

~Mr. Dipan Sahu
        -Executive Consultant at Start-up Policy Implementation Unit of AICTE and Core Member of Innovation Cell, MHRD.

~Mr. Rajkumar More
        -Director of Federation of Industry & Commerce for North Eastern Region(FINER) and Director & Founder Chairman of Torsa Machines Ltd.

~Mr. A.S.S Dewan
         -Assistant Faculty Member of Indian Institute of Entrepreneurship (IIE), Guwahati

STUDENT STARTUP

Farhad Sajid Barbhuiya is a Certified Ethical Hacker and Cyber Security Specialist from IBM, Microsoft and EC - Council with specialization in Cyber Crime investigation and forensics.He started Cybrosec India, an Information Technology Company solely focusing on the domain of Cyber Security and Computer Forensics to build and deliver information security platforms and services.
Farhad along with his team started their workflow with Law enforcement agencies and Ministry of Defense of India, Israel and Kurdistan. In India they are member consultant to Indian Army, Assam Rifles and Central Reserve Police Force. They were awarded with Parivartan Award at 3E-Global Entrepreneur Conclave for their innovative solutions in Cyber Space Security and also was one of the Top 27 startups who were selected for AICTE Startup Mentorship Policy.

Achievements and Publications by Department Faculties

Mr. Tiken M. Singh visited Queens University as Research Associate for two months from 1st Nov to 31st Dec 2018.

Mr. Tiken M. Singh presented and published four papers in three different International Conferences (IC3 Sikkim, Recent innovation in Electrical Electronics and Communication Engineering (ICRIEECE-2018) and International Workshop on Game theory and Mechanism Design.

Kaushik Das, Utpal Deka and Rajib Baruah has published a paper on "Detecting Homophone Errors in English Text" at Science & Technology Journal Vol 6.

Mr. Kaushik Das received appreciation from MHRD, Govt. Of India for his sincere contribution to the TEQIP-III project as a coordinator.

Partha Pratim Barman and Abhijit Boruah has published a paper on "A RNN based Approach for next word prediction in Assamese Phonetic Transcription." at Procedia Computer Science (Elsevier) 143 (2018): 117-123.

Anurag Narayan Sarmah, Abhijit Boruah, Daisy Kalita, Darshana Neog and Saumay Paul has published a paper on "A Bio-Inspired Implementation of Walking and Stair Climbing on a Quadruped Robot." at Procedia Computer Science (Elsevier).

Arpan Phukan, Pronam Phukan, Rohit Sinha, Shyamal Hazarika and Abhijit Boruah has published a paper on "Information Encoding, Gap Detection & Analysis from 2D LiDAR Data on Android Environment" at 3rd International Conference on Advanced Computing and Intelligent Engineering (ICACIE) 2018.

Parismita Bharali, Chandrika Bhuyan, Abhijit Boruah has published a paper on "Plant disease detection by leaf image classification using Convolutional Neural Network". at the International Conference on Information, Communication & Computing Technology (ICICCT-2019).

A Boruah, N M. Kakoty, T Ali published an article "Object Recognition based on Surface Detection - A Review" in Procedia Computer Science 133, 63-74, 2018.

A Boruah, N.M Kakoti, T Ali published a paper "Reasoning on Objects' Geometric Shapes for Prosthetic Hand Grasping" in 4th International Conference on Advances in Robotics, 2nd -6th July 2019, IIT Madras.

Achievements and Publications by Department Faculties

Nomi Boruah and Kaushik Das has published a paper on ,"Software Project Management and SMEs of India", International Journal of Advanced research in Computer Science and Software Engineering, vol 5 no, 12,pp,11-14, December ,2017.

John Bharali Boruah, Nomi Boruah and Dipankar Dekaraja has published a paper on "An Advance Approch to people Capability Maturity Model" at International Journal of Advanced Research in Computer and Communication Engineering, Vol 6 .

Kaushik Dutta, Nomi Boruah and John Bharali Boruah has published a paper on "A Rigorous Study of P-CMM in Indian IT industry" at Internatioonal Journal of Engineering Research and Development vol 14.

Debabrata Khargharia, Rituraj Boruah and Nomi Boruah has published paper on "Statistical approaches of text Summarization in Indian Languages" at the recent Trends in Theoritical and Applied Statistics-III (RTTAS-III).

Rabinder Kumar Prasad has published a paper on "Partition Based outlier Detection", at International Journal of Computer Trends and Technology, vol 59.

Rabinder Kumar Prasad has published a paper on "A Comparative Study on partition based Clustering methods", at International Journal of Creative Research Thoughts (IJCTT), vol 6

Sudipta Majumdar has published a paper on "Black Hole Attack, in P2P based VoD Service, and its Effects on Swarm Sizes and Seeders" at International Journal on Recent and Innovation Trends in Computing and Communication, vol 6.

Sudipta Majumdar has published a paper on "Effects of Grey-Hole Attack on P2P Based Video on Demand (VoD) Services" at International Journal of and Technology (IJCTT), vol 55.

Sudipta Majumdar has published a paper on "Secure Key Issuing Scheme in Bit-Torrent Network" at IJARCS, vol 9 2018.

Charu Guleria has presented a paper on "Improved Detection and Migration of DDos Attack in Vehicular and hoc Network" at 4th International ieee ICCCA Conference.

Manojit Ghose Completed Ph.D. from IIT Guwahati in December 2018

Dr. Manojit Ghose Published an article "Energy Efficient Online Scheduling of Real Time Tasks onto Large Multi-threaded Multi-processor Systems", in The Journal of Information Science and Engineering (SCI) in October 2018.

SOCIAL INITIATIVES

SANKALP

A NGO donation programme held by the students at Prerna Child Home to serve humanity to the orphans.

AAROGYA

A mega medical camp conducted by the students in collaboration with "Centre For Women Studies" and "NSS DUPG Unit" at Bogibeel High School.

TREE PLANTATIONS

A tree plantation programme held at DUIET core building and CPA with an aim to highlight the conservation of nature, inauguarated by "Jadav Payeng" .

CLEAN THE CITY

"Clean the City" is the most significant event by the students that aimed to clean up the streets,roads and infrastructure of Dibrugarh.

RECRUITMENT RECORDS

The Training and Placement cell of the institute is headed by Mr. Kaushik Das (Training and Placement Officer, DUIET) under which the placement cell of the department functions, actively led by Mr. Abhijit Boruah and Dr. Manojit Ghose. A few recent placements are as follows-

Kakon Dey	Maverick Technologies
Kishor Kumar Das	HCL
Zinnat Afrin Sultana	Cognizant
Malay Hazarika	Subex Limited
Hriday Pratim Bharali	Subex Limited
Nilabh Pratim Sharma	Infosys
Mohammad Shahzad Uddin	Infosys
Anindita Choudhury	Infosys
Hriday Pratim Bharali	TCS
Deepranjan Gogoi	Wipro
Pratim Prasad Singha	Dell Technology
Prandeep Bhattacharyya	Amtron
Sagarika Kashyap	HP India
Angshu Dutta Chowdhury	TATA Consultancy Services
Abhijit Rajkhowa	CTS

TRAINING AND INTERNSHIPS

"*Do not be embarrassed by your failures, learn from them and start again.*
-Richard Branson"

LIFE @ DUIET

2015-19 Batch

DEPARTMENT OF
CSE

" The highest education is that which does not merely give us information but makes our life in harmony with all existence. "

– Rabindranath Tagore

OUR TEAM

Standing from left to right : Richa Baruah, Bikash Baruah, Soumarjit Gogoi, Dikhit Kumar Bhuyan, Arjun Gogoi, Bhargab Sarma, Kashmiri Moni Mahanta

Sitting from left to right : Dr. Manojit Ghose and Miss Charu Guleria

Word from Faculty-In-Charge

- DR. MANOJIT GHOSE

It is a matter of pride, privilege and joy for me to bring the first newsletter of the department, Orihona. This will definitely help the reader to understand the department and to build a pragmatic perception about it. In this context, I sincerely thank the student team for the wonderful job. I thank the Director, DUIET and all my colleagues for their constructive comments and suggestions. I also thank my co-coordinator Ms. Charu Guleria for her time and effort.
I hope the upcoming volume of the same indeed becomes a page-burner.

THE END