

St. Edmund's College
Departments of Computer Science and Bachelor of Computer Applications
Established in 1992 and 2009

- Courses offered: Bachelor of Computer Science and Bachelor of Computer Applications
- Names of Interdisciplinary courses and the departments/units involved:

Course	Department	Paper
Basic Electronics	Dept. of Electronics	BCA-102
Statistical Techniques	Dept. of Mathematics	BCA-202
Computer Oriented Numerical Methods (half paper shared with Computer Dept)	Dept. of Mathematics	BCA-202
Discrete Mathematical Structure and Coordinate Geometry	Dept. of Mathematics	BCA-204
Financial Accounting and Business Studies	Dept. Of Commerce	BCA-304

- Semester System:

Programme Name	System
B.Sc. (Computer Science)	Semester
Bachelor of Computer Applications	Semester

- Participation of the department in the Courses offered by other departments:

Course	Department	Paper
Genomics, proteomics and computer application	Dept. of Bio-Technology	Paper VIII
Tools & Techniques in Environmental Science	Dept. of Environmental Science	EVS-221
Computer Awareness	Dept. Of Commerce	Paper IV
Information Technology in Business	Dept. Of Commerce	BC-203 (b)

- Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. / Ph.D./ M. Phil. Etc.)

Name	Qualification	Designation	Specialization
Dr. Sajid Nagi	M.C.A. Ph.D	Associate Professor	C, Networking, Data Mining and Bioinformatics
Ms. Sarmistha Karmakar	B.E., M.Sc. (CS)	Assistant Professor	UNIX and C
Dr. Hiten Choudhury On lien	M.C.A., Ph.D.	Assistant Professor	Network Security & Mobile Computing
Ms. Preeti Thapa	M.C.A., M. Phil	Assistant Professor	Artificial Neural Networks

Mr. Jeremy Kharchandy	M.C.A. (N.E.T. qualified)	Assistant Professor	Linux, Computer Architecture
Ms. S. Sunila Chanu	M.C.A.	Assistant Professor	Internet and Web Technology, Object Oriented Programming
Ms. Reema Joshi	M.Sc. (CS)	Assistant Professor	Operating Systems, Software Engineering
Ms. Rajni Khyriem	M.C.A. (N.E.T. qualified)	Assistant Professor	Object Oriented Programming, Compiler Design
Mr. Bertrand Dkhar	M.C.A. (N.E.T. qualified)	Assistant Professor	Computer Architecture

➤ Number of academic support staff (technical) and administrative staff, sanctioned and filled: 1

> Publications:

Name of Faculty	Publications per faculty	No. of publications in peer reviewed journals	Books with ISBN/ISSN (Proceedings)
S Nagi	5+2	5 published, 2 under review	<ul style="list-style-type: none"> • S Nagi, D K Bhattacharyya and J K Kalita. A Preview on Subspace Clustering of High Dimensional Data. <i>International Journal of Computers and Technology</i>, 6(3): 441-448, 2013. ISSN 2277-3061 • S Nagi and D K Bhattacharyya. Classification of Microarray Cancer Data using Ensemble. <i>Network Modeling Analysis in Health Informatics and Bioinformatics. Springer Vienna</i>. 2(3):159-173, 2013. DOI: 10.1007/s13721-013-0034-x. ISSN 2192-6662 • S Nagi, D K Bhattacharyya and J K Kalita. Gene expression data clustering analysis: A survey. <i>Proc. of NCETACS, 1-12, 2011, IEEE Explore</i>. ISBN: 978-1-4244-9579-5 • S Nagi, D K Bhattacharyya and J K Kalita. Subspace Clustering in Gene Expression Data: Challenges and Issues. <i>Proc. of NCTMI, 211-219, 2011, Narosa, India</i>. ISBN: 978-81-8487-140-1 • S Nagi, D K Bhattacharyya and J K Kalita. A Survey of Supervised, Unsupervised and Semi-Supervised Ensemble Approaches involving Microarray Gene Data. <i>Informatica</i>. - under review • S Nagi and D K Bhattacharyya. Cluster Analysis of Cancer Data using Semantic Similarity, Sequence

			Similarity and Biological Measures. <i>Network Modeling Analysis in Health Informatics and Bioinformatics. Springer Vienna.</i> - - under review
H Choudhury	7	7	<ul style="list-style-type: none"> • H Choudhury, B Roychoudhury and D K Saikia. A New Trust Model for Improved Identity Privacy In Cellular Networks. International Journal of Computer Applications. Foundation of Computer Science USA, 56(14): 1-8, 2012. DOI: 10.5120/8956-3172. ISBN 973-93-80870-99-5 • H Choudhury, B Roychoudhury and D K Saikia. End-To-End User Identity Confidentiality for UMTS Networks, in IEEE International Conference on Computer Science and Information Technology (ICCSIT' 10), Chengdu, China, 46-50. ISBN 978-1-4244-5537-9 • H Choudhury, B Roychoudhury and D K Saikia. UMTS User Identity Confidentiality: An End-To-End Solution, in IEEE International Conference on Wireless and Optical Communications Networks (WOCN' 11), Paris, France, 1-6. ISBN 978-1-4577-0262-4 • H Choudhury, B Roychoudhury and D K Saikia. Enhancing User Identity Privacy in LTE, in IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom 2012), Liverpool, UK, 949-957. ISBN 978-1-4673-2172-3 • H Choudhury, B Roychoudhury and D K Saikia. Improving Identity Privacy In 3GPP-WLAN, International Conference on Telecommunication and Networking 2013 – Accepted for presentation and publication • H Choudhury, B Roychoudhury and D K Saikia. Desirable Features Of An Identity Privacy Ensuring Solution For UMTS, in National Workshop on Network Security (NWNS 2013), Tezpur, India, 143-157. <i>Narosa, India.</i> ISBN: 978-81-8487-314-6 • H Choudhury, B Roychoudhury and D K Saikia. Modified UMTS Authentication And Key Agreement Protocol For Enhanced User Identity Confidentiality, in National Workshop on Network Security (NWNS 2010), Tezpur, India, 143-157. <i>Narosa, India.</i> ISBN: 978-81-8487-088-6

➤ Faculty as members in:

Board of Under-Graduate Studies (BUGS) – BSc	Mr. Sajid Nagi, Ms. Sarmistha Karmakar, Dr. Hiten Chowdhury, Ms. Preeti Thapa
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Board of Under-Graduate Studies (BUGS) – BCA	Mr. Sajid Nagi, Ms. Sarmistha Karmakar, Ms. Preeti Thapa
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➤ Student projects:

2009-2010			
BSc.			
Project	Student	Project	Student
Admission & Fees Mgmt.	Samrat Chowdhury	Location Based Services using Android	Ialamlang Jyrwa
Audio Steganography	Resham Rana	Mathematical Modelling	Ritu Agarwal
Credit Card Mgmt. System	Jhuma Dhar	Photo Editor	Aedgar Peter Nongrum
Crypt-Encryption based on Client-Server Arch.	Ranjana Thakur	Session Security	Afrooja Begum
FTP Server & Client	Rupa Rani Das	Tourism Website	Y. Bijoy Chandra Singha
Hospital & Patient Record Mgmt.	Khongdailung	Utopia Chat Server	Mousumi Deb
LAN Mailing System	Nirmal Sharma	V-D-O Converter	Jhumli Paul
2010-2011			
BSc.			
Calculator	Priyanka Shome	LAN Messenger	Saurav Shah
Digital Watermarking	Anirban Bhattacharjee	Protocol Analyser	Joydeep Dey
2011-2012			
BSc.			
"Projectilogram" (Projectile & its motion)	R.K.Varnisa Sunn	Net Banking	Sangeeta Chakraborty
Airline Reservation System	Md. Nurul Amin	Online Fee Payment	B. Tamang
Audio Player	Meban S. Marwein	Online Railway Reservation System	Rupa Kumari
Digital Signatures	Sukanya Rabha	Port Scanner	Crescent D. Marak
Edmundians' Network System	Syeda Z. Marshoodulla	School Website	Tarawati Pradhan
Electronic Voting Machine	Sujoy Das	SEC Website	Rashmi Baruah
File Scanner	Khamborlang Malngiang	SMS Sender Application	El Bethel Lalhuapzawa
Hotel Mgmt. System	Sarovar Subedi	Solo Card Game	F.B.E. Nongrum
Insurance Mgmt. System	Geeta Singh	Splitter & Joiner	Prakash Tamang
LAN Utilities	Pynkhrabok Thabah	Text Editor	L. Dapuni
Library Mgmt. System	Remmy A. Khongwir	Text Hiding Tool for Image & Audio files	Arkydon Lyngdoh

MyBlogging Tool	Nessar Mawlong		
2012-2013			
BSc.			
Chat Server	Reynold Ryan Lyngdoh	Network Mgmt. System	Mudang Nado
College Attendance Mgmt. System	Chayan Dutta	Optical Character Recognition	Raphael Jojo
Controlling of Stepper Motor using Arduino-based Microcontroller	Moirangthem Robi Meitei	PDF Converter	Sugam Pradhan
Electronic Calculator	Rajorshi Chowdhury	Sudoku	Luckystar Kharmudai
Face Recognition	S.R.Ngamwal Anal	Text Editor	Sanjay Kumar Ram
Hash Generator & Checker	Fondaliza Sohphoh	Tonic Solfa to Tab Converter	Ferdinand Tangsang
Image Converter (.bmp to .jpg)	Damodar Gharti	Video Compression	Tyngshain Khongngain
Media Player	Fabiola Hazel Pohrmen		
BCA			
"Crowd Sourcing"-Debate Forum	Supriya Das	E-mail System	Minakshi Thakur
"e-Property"-Real Estate Mgmt. System	Fivestarily Lathong	EZL Loop & Learn	Elizabeth Thma
"Geeseekaa" Construction Firm Software	S.Iubanniewkor Syiem	Folder Lock	Joblystar Lyngdoh
"Hangman"-Mystery Game	Tuton Paul	Image Format Converter	Subir Kumar Nath
"Pyndait Ktien"	Luella Banbet Sohtun	PEARL Antivirus	Victor Myrthong
"RAAR"-Media Player & Video Converter	Rumon Sinha	Process Manager	Namsungbou Joy Thiumei
"Safeland"-Prevent Improper Shutdown	Celestial Passah	School Fees Mgmt. System	Ranju Kumari Yadav
Accounting Software	Malcom Lyndem	Scientific Calculator	Sherub Wangmo
Chat System using NTRUEncrypt	Nabanita Goswami	Scrabble	Ibanylla Mary Thabah
Desktop Theme Manager	Preciousson Kharbyngar	Sen Duplicate File Searcher	Prabal Sen
Download Manager	Baishali Sikdar	Slide-show Software	Suraj War
E-Learning	Marbianglang Kharpran		
2013-2014			
BSc.			
Audio Steganography	Kordor L. Pyrbot	Mobile Browser for Android	Mukesh Singh
Data Mining Comparison Chart	Khamborlang Malngiang	Online Career Guidance Website	Temsu Temjen
File Locker	Sudam Sapkota	Scientific Calculator	Banda Mary Pyngrope

Logic Gate Simulation	Md. Sameer	Web Designing Software	Sitthiporn Smanthap
BCA			
"B-C-A" Tourism Website	Rafshanjani Haque	LANChat Server	Deibormi Phyllei
"TechConnect.com"- Social Networking Site	Embok P. Ramde	NCC Website	Anita Kumari Giri
Crime Mgmt. System	Sarita Kumari Rai	Network Shield	Rupayan Dasgupta
End-to-End Security for Email Users	L. Renthlei	Online Electronics Shop	Mandeep Singh
ER-Diagram Creator	Satorupa Deb	Online Exam	Badashisha Kurbah
Event Organiser	Panchami Paul	Online Jewellery Store	Aisha S Laskar
Exam Duty Mgmt. System	Md. Shahabuddin	Online Job Portal	Samudra Chakrabarty
Eye-Bank Mgmt. System	Chanda Thakur	Online Matrimonial Site	Zinnia Acharya
Geno Tool	Rewath Kafley	Online Music Store	Regina Nongkynrih
Global Warming Impact Analyser	Gaj Raj Wagley	Online School of Music	Lydia H. Sowo
Gross National Happiness Online Survey	Moni Kumar Chamlagai	Online Vehicle License Monitoring System	Sonil Masi
Healthcare Hospital Mgmt. Software	Chumki Paul	Picture Art	Alok Das
Hypothetical Compiler	Sushant Adhikari	Project Progress Management System	Nisha Rai
Inventory Mgmt. System	Panchali Paul	Spreadsheet	Monika Pundir
Kids' Educational Application	Alliameda R. Patlong	University Mgmt. System	Rinzin Wangdi

➤ Awards/Recognitions received by students:

Name of Student	Programme	Award	Date
Abinash Rajkumar	IEEE Seminar organized by the IEEE Students Cell, St. Anthony's College, Shillong	Certificate for securing 1 st place, Memento & Cash prize	27 th July 2013
Sushant Adhikari	IEEE Seminar organized by the IEEE Students Cell, St. Anthony's College, Shillong	Certificate for securing 2 nd place, Memento & Cash prize	27 th July 2013

➤ List of eminent academicians and scientists/visitors to the department

Name	Date	Activity
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Prof. Dhruba K. Bhattacharyya, Dean, School of Technology, Tezpur University, Tezpur	July 18 th , 2013	Data Mining in Network Anomaly Detection
Prof. Dilbagh Singh Broca of XLRI (Xavier Labour Relations Institute), Jamshedpur	September 12 th , 2013	One-day Workshop on Business Process Simulation

➤ Seminars/Conference/Workshop organized & the source of funding:

Title	Date and Year	Source of Funding
Data Mining in Network Anomaly Detection – A Popular Talk by Prof. Dhruba K. Bhattacharyya, Dean, School of Technology, Tezpur University, Tezpur,	July 18 th , 2013	College
One-day Workshop on Business Process Simulation by Prof. Dilbagh Singh Broca of XLRI (Xavier Labour Relations Institute), Jamshedpur	September 12 th , 2013	College

➤ Student profile programme/course wise:

Exam	No. of students appeared	No of students passed	Pass %	No of First Divisions	No of Ranks in University	University Positions
BSc Final 2009	8	8	100	5	3	7 th , 9 th , 10 th
BSc Final 2010	22	21	95	17	7	1 st , 2 nd , 3 rd , 5 th , 7 th , 9 th , 10 th
BSc Final 2011	7	6	86	6	3	4 th , 6 th , 7 th
BSc Final 2012	22	22	100	19	5	2 nd , 5 th , 8 th (2), 9 th
BSc Final 2013	9	7	78	7	5	3 rd , 4 th , 6 th , 8 th , 10 th

➤ Diversity of Students

Name of the course	% of students from the same state	% of students from other states	% of students from abroad
BSc Final 2009	75	25	0
BSc Final 2010	91	9	0
BSc Final 2011	86	14	0
BSc Final 2012	82	18	0
BSc Final 2013	78	11	11
BCA Final 2013	46	46	8

➤ Details of Infrastructural facilities

Total number of PCs	99 (Student PCs) + 3 (Faculty PCs)
Laboratories	5
Rooms for staff	2

- Details of students enrichment programmes (special lecturers/ workshops/ seminar) with external experts

Title	Date and Year
Data Mining in Network Anomaly Detection – A Popular Talk <i>by</i> Prof. Dhruva K. Bhattacharyya, Dean, School of Technology, Tezpur University, Tezpur,	July 18 th , 2013
One-day Workshop on Business Process Simulation <i>by</i> Prof. Dilbagh Singh Broca of XLRI (Xavier Labour Relations Institute), Jamshedpur	September 12 th , 2013

- Teaching methods adopted to improve student learning

Classrooms	<ul style="list-style-type: none"> • Conventional chalk-and duster method for illustration & problem-solving • All classrooms are equipped with LCD Projectors to allow for teaching using Microsoft Power Point slides and other audio/visual aids
Laboratories	<ul style="list-style-type: none"> • 2 labs with whiteboards for conventional teaching • 3 labs equipped with LCD Projectors • 2 labs have Overhead Projector (OHP) • Practical programming classes conducted in labs result in more interactivity

- SWOC analysis of the department and Future Plans

Strength: Qualified and experienced staff, with a mix of young and old. Good infrastructure and facilities

Weakness: To conduct courses on latest and path-breaking areas in the field of Computer Science

Opportunities: To motivate young minds (students) so as to generate interest to pursue cross-disciplinary research on latest topics

Challenges: To have an updated syllabus on a need basis, since the syllabus comes under the purview of the University