

Evaluative Report of the Department of Computer Science

1. Name of the Department: Computer Science

Year of establishment:

- a) Computer Application: - 1994
- b) Computer Science: General: 2004
- c) Computer Science: Honours: 2008

2. Name of Courses offered:

- U.G (Honors)
- U.G (General)

3. Interdisciplinary courses and departments involved: Nil

4. Annual/Semester/Choice based credit system:

- Upto 2009 : Annual System (under affiliating system)
- From 2010 : Semester System (after being declared as autonomous college from the session 2010-2011)

5. Participation of the department in the courses offered by other departments:

- Industrial Chemistry
- Avishek Ghosh takes computer classes in a course offered by department of Industrial Chemistry.

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

Designation	Sanctioned	Filled
Professor	NA	NA
Associate Professors	NA	NA
Asst. Professors	1- Gen(PH)	0+3*

*Management Appointed

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided in the last 4 years
Sankarshan Kundu	M.Phil	Assistant Professor*	Artificial Neural Network	10[#]	NA
Arnab Kumar Ghoshal	M.Sc	Assistant Professor*	NA	3.6[#]	NA
Avishek Barman	M.Sc. M.Tech	Assistant Professor*	NA	0.7[#]	NA
Samaresh Maity	MCA	Guest Faculty	NA	3.5[#]	NA
Avishek Ghosh	M.Sc	Guest Faculty	NA	0.7[#]	NA

***Management Appointed ; [#] Approx.**

8. Percentage of classes taken by temporary faculty

- **U.G: 20%**

9. Programme-wise Student Teacher Ratio:

- **6:1 (Approximate)**

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled:

Support Staff	Sanctioned	Filled
Technical Staff	1	1

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise: **NIL**

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc : **NIL**

13. Research facility / center with

- **state recognition: NIL**
- **national recognition: NIL**
- **international recognition: NIL**

14. Publications: (See Annexure 1)

- * **Number of papers published in peer reviewed journal (national / international):**
- * **Monographs: NIL**
- * **Chapter(s) in Books: NIL**
- * **Editing Books : NIL**
- * **Books with ISBN numbers with details of publishers: NIL**
- * **Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.): NA**
- * **Citation Index – range: Arnab Kumar Ghoshal :1 (Found in Google Scholar)**
- **Paper Cited:**

Arnab Kumar Ghoshal, Tuhin Mukherjee, Satyajit Dhar, "An Empirical Study in Indian Share Market Using Neural Network And Genetic Algorithm" , ASIAN JOURNAL OF RESEARCH IN BANKING AND FINANCE (ISSN: 2249-7323) ,Vol. 1, Issue I, pp. 1-19, October 2011.
- **Cited by:**

Z. Han, "Data and Text mining of Financial Markets using News and Social Media". Link: cs.manchester.ac.uk
- **Citation Year: 2012**
- * **SNIP: NA**
- * **SJR: NA**
- * **Impact factor – range / average : NA**
- * **h-index : 1 (Found in Google Scholar)**

15. Details of patents and income generated: NIL

16. Areas of consultancy and income generated: NIL

17. Faculty recharging strategies:

- **Seminars/Conferences/Workshops attended (See Annexure 2)**

18. Student projects

- **percentage of students who have done in-house projects including inter-departmental: 100%**

19. Awards / recognitions received at the national and international level by

- **Faculty: NIL**
- **Doctoral / post-doctoral fellows : NIL**

- **Students : NIL**

20. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Date	Seminar	Funding Agency	Outstanding Participants
7.3.2009	National Seminar on “ Soft computing Techniques and Their Applications ”	UGC	C. A. Murthy, Nagraja Gopalakrishnaswamy, Suryakanth ,V. Gangashetty

21. Student profile course-wise:

Name of the Course (refer question no. 2)	Session	Applications received	Selected		Pass percentage	
			Male	Female	Male	Female
B.Sc (Honours)	2008-09	131	10	NA	100%	NA
	2009-10	100	10	NA	100%	NA
	2010-11	40	10	NA	NA	
	2011-12	98	12	NA	NA	
	2012-13	54	12	NA	NA	

22. Diversity of student

Name of the Course (refer question no. 2)	% of students from the College	% of students from the State	% of students from other States	% of students from other countries
B.Sc	NA	100	0	0

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

Year	No of Admitted students to other Institutes (Institution-Number)
2008	JECA-3
2009	JECA-6, VU-2
2010	PU-2, JECA-4
2011	JECA-4,NIT-1,PU-3
2012	VIT-1,VU-2,PU-4

JECA: Joint Entrance for Computer Application by WBJEE

VU: M.Sc Entrance for Ramakrishna Mission Vivekananda University

PU: M.Sc Entrance for Pondicherry University

NIT: NIMCET (NIT MCA Entrance)

VIT: M.Sc Entrance Vellore Institute of Technology

GATE Qualified:

SI No.	Name	Batch	Examination	Stream
1.	Nabarun Chaterjee	2006-2009	GATE 2011	Computer Science and Information Technology
2.	Nilabja Majumdar	2006-2009	GATE 2012	Computer Science and Information Technology

24. Student progression

Student progression	Percentage against enrolled
UG to PG	100%*
PG to M.Phil.	NA
PG to Ph.D.	NA
Ph.D. to Post-Doctoral	NA
Employed	NA
<ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	
Entrepreneurs	NA

25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	40%

from other universities within the State	60%
from other universities from other States	NIL

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period: 0

27. Present details about infrastructural facilities

a) Library:

- No. of Books in Main Library 1056
- No. of Books in Departmental Library 31
- No. of Magazines subscribed (monthly) 3

b) Internet facilities for staff and students:

- Faculty: 2 laptops and 1 desktop
- Students : 15 desktops + 1 server

Wi-fi facilities are available within the laboratories.

c) Total number of class rooms: 4 classrooms which also serve as labs.

d) Class rooms with ICT facility: 2

e) Students' laboratories: 4 labs which also serve as classrooms.

f) Research laboratories: 0

28. Number of students of the department getting financial assistance from College:

1 st Year Honours	3
2 nd Year Honours	2
3 rd Year Honours	1
Total	6

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

The Computer Application (Major) course was treated as a terminal course by the Home University blocking the prospects of higher studies of the students enrolled. To overcome this problem the Honours course was introduced. Before doing so the suggestions made by the departmental faculties, external experts and other stake holders were taken into consideration.

30. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does

the department utilize it?

Faculties are well aware of the current trends and status of the course. All issues related to teaching-learning-evaluation are discussed at the departmental meetings on a regular basis. Suggestions for improving them are placed before the board of studies for approval and implementation.

b. Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

- There is a compulsory Centralized Online Feedback System.
- The teacher gets informal feed backs from students on a regular basis
- Parent-Teachers meeting are held annually. An issues related to teaching-learning-evaluation are discussed in a comprehensive manner.
- The department analyses these reports and suggestions and corrected measures, if needed are taken

c. Alumni and employers on the programmes and what is the response of the department to the same?

Department is in touch with some of the alumni through personal contacts as well as social network. They offer suggestions for the improvement of the curriculum as well as teaching-learning-evaluation.

A representative of the related industry is part of the board of studies and his suggestions are integral to our decision making process.

31. List the distinguished alumni of the department (maximum 10)

The department is still too young to furnish a list of its distinguished alumni. However, there have been a number of brilliant students in this department since its inception who have become successful in the state and national level competitive examinations and some are doing commendable works in several field of academics and culture. We are furnishing a short list of such ex-students :

- i) Pratyush Pal
- ii) Ranadip Pakira
- iii) Saurav Basak
- iv) Nilabja Majumdar
- v) Ankan Ray

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

Date	Speaker(s)	Institution & Department	Topic
12.11.2005	Prof. Sankar Pal	Director, Indian Statistical Institute	Pattern Recognition and Machine Intelligence
13.9.2007	Prof. Bimal Roy	Indian Statistical Institute	Ideas and Principal of Cryptology
18.7.2008	Dr. Sudhir Kaicker	Prof. & Director, Computer Centre, JNU, Delhi and Presently Prof. Dept of Computer Science Sheridan College, Canada.	Problem solving Using Computer Programming

33. List the teaching methods adopted by the faculty for different programmes.

- Apart from chalk and talk method the department makes use of electronic slide presentation.
- Students are encouraged to make use of e-books and relevant online tutorials.
- Students work on live and industrial projects as part of their learning process.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?

- Internal Evaluation is carried out, mostly after every module is completed.
- Performance of the students in state level and all India level in various entrance tests is monitored.
- Open house meeting is conducted with parents and students separately.

35. Highlight the participation of students and faculty in extension activities.

- Students participate in NSS, NCC, flag day:

Year	Number of Participants #

Year	Number of Participants #
1 st	NSS: 6 NCC: 6 Flag Day: 12
2 nd	NSS: 0 NCC: 1
3 rd	NSS: 0 NCC: 0

Data for current year

36. Give details of “beyond syllabus scholarly activities” of the department.

- Departmental education excursion is carried out in various parts of the states/ country. Most of the students, teachers participate along with some Monastic members.

Date	Place	No. of Students	No. of Monks/Teachers
Jan 2011	Coochbehar, Jayanti, Buxa & Bhutan	24	7 (1/6)
Aug 2012	Jaldhaka,Lava,Rishop	28	6 (1/5)

- Participations in Quiz :

Date	Quiz Type	Organization Body	No. of Participants
6 th Jan, 2013	Technical	Indian Statistical Institute	2 (Raushan Singh, Sidharta Maity from 3 rd year)

37. State whether the programme/ department is accredited/ graded by other agencies. Give details. No

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strengths:

- Favorable student-Teacher ratio.
- Well-equipped laboratories with modern hardware and software.

- iii) Students' participation in industrial and real life projects.
- iv) Regular Upgradation of syllabus which prepares students for various competitive and entrance examinations.
- v) Students work in Linux environment and this equips them in their future research activities.

Weakness:

- i) Lack of full time teachers as the government has not sanctioned more than one fulltime post which has also remained vacant.
- ii) Lack of space for further expansion of the department.

Opportunities:

- i) Masters level curriculum can be conducted after some expansion in terms of faculty strength and infrastructure.

Challenges:

- i) Keeping the department in sync with the fast changing environment of computer science.
- ii) Retention of the faculty in a highly competitive environment due to the encroachment made by industry.

39. Future plans of the department.

- i) Increase in number of seats in the Honours course.
- ii) Preparing a robust departmental library by increasing the available space and enhance funding.
- iii) Introducing Post Graduate course in future.

Post-accreditation Initiatives

- Introduction of Honours course in 2008.
- Framing of a syllabus compatible with the semester system in 2010.
- Creation of a new laboratory for project purposes and upgradation of existing laboratories.
- Introduction of wi-fi and ICT facilities in laboratories.
- Facilitating the creation of the Department of Electronics.

Annexure 1:

Details of Publication

Sankarshan Kundu

- **Conferences**

Year: 2009

1) Sankarshan Kundu, “*To Study Financial Prediction in India : Use of Artificial Neural Network*”, published in proceedings of UGC Sponsored National Seminar on Soft Computing Techniques and Their Applications, RKMV, 2009.

Arnab Kumar Ghoshal

- **Journals**

Year: 2012

1) Tuhin Mukherjee, Arnab Kumar Ghoshal, “*Graph Modeling for Hedging in Equity Portfolio: A Recent Study in Indian Context*”, ASIAN JOURNAL OF MULTIDIMENSIONAL RESEARCH, ISSN: 2278-4853, Vol. 1, Issue 4, pp. 82-89, September, 2012.

Year: 2011

2) Arnab Kumar Ghoshal, Tuhin Mukherjee, Satyajit Dhar, “*An Empirical Study in Indian Share Market Using Neural Network and Genetic Algorithm*”, Published in ASIAN JOURNAL OF RESEARCH IN BANKING AND FINANCE, ISSN: 2249-7323, Vol. 1, Issue 1, pp. 1-19, October 2011.

- **Conferences**

Year: 2012

1) Arnab Kumar Ghoshal, Tuhin Mukherjee, “*A Hypothesis Testing Comparison between MONTE CARLO Simulation and ANN Based Financial Forecasting Models*”, Published in International Conference on Computer Science Medical Engineering (ICCSME-2012), pp. 67-70, ISBN: 978-93-82208-12-9, Inter Science Research Network, Cochin, 2012.

Year: 2011

1) Tuhin Mukherjee, Arnab Kumar Ghoshal, “*Artificial Intelligence Applications in Financial Prediction : Empirical Study in Indian Share Market*” published in UGC Sponsored International Conference on India in the Emerging Order-A Potential Market for World held on 25th-26th Feb , 2011 in DAV College , Punjab.

2) Satyajit Dhar, Tuhin Mukherjee, Arnab Kumar Ghoshal, “*Artificial Intelligence Tools in Financial Prediction: Design, Construction, Implementation and Performance evaluation*” published in 4th International Conference on Management & Social Welfare issues: contemporary perspectives held on 13th-14th Jan, 2011 in IISWBM, Kolkata.

3) Satyajit Dhar, Tuhin Mukherjee, Arnab Kumar Ghoshal, “ *A new soft computing model in financial econometrics to forecast financial time series: Empirical study in Indian stock market* ” published in International Finance Conference 2011 held on 9th-12th Jan ,2011 in Indian Institute of Management, Kolkata.

Year: 2010

1) Satyajit Dhar, Tuhin Mukherjee, Arnab Kumar Ghoshal, “*Performance Evaluation of Neural Network Approach in Financial Prediction: Evidence from Indian Market*” published in IEEE sponsored International Conference on Communication and Computational Intelligence(INCOCCI-2010),pp. 597-602, ISBN: 978-81-8371-369-6, held on 27th-29th Dec , 2010 in Kongu Engineering College, Perundurai. It is published in IEEE Explorer :

<http://ieeexplore.ieee.org/Xplore/login.jsp?url=http%3A%2F%2Fieeexplore.ieee.org%2Fieeexplore%2F5733272%2F5738714%2F05738795.pdf%3Farnumber%3D5738795&authDecision=-203>

Avishek Barman

- **Conferences**

Year: 2010

1) Avishek Barman, Swati Chakrabarti, Soumen Mukherjee. Designing Framework of a Simple Packet Sniffer Based Firewall. *In Proceedings 4th International Conference on Information Processing*. pp. 229-235. ISBN: 978-93-80578-46-0, Bangalore, 2010.

2) Avishek Barman, Swati Chakrabarti, Soumen Mukherjee. Firewall Architecture Design Challenges. *In Proceedings of 5th PIMR National IT Conference*. pp. 234-240. ISBN: 978-81-7446-884-0, Indore, 2010.

Annexure 2:

Details of Seminars/Conferences attended

Sankarshan Kundu

Year	Date	Conference/Seminar Name	Conference/Seminar Type	Institute Name, Place
2009	7th March	Soft Computing Techniques and Their Applications	National	Ramakrishna Mission Vidyamandira, Belur-West Bengal

Arnab Kumar Ghoshal

Year	Date	Workshop	Institute Name, Place
2013	8th -10th March	Embedded System Design: Recent Trends and Techniques	A.K Choudhury School of Information Technology, University of Calcutta

Year	Date	Conference/Seminar Name	Conference/Seminar Type	Institute Name, Place
2012	13th-14th Dec	International Conference on Emerging Trends in Science, Engineering and Technology (Sponsored by SPRINGER & IEEE)	International	J.J. C.E.T, Trichy

	2 nd Sep	International Conference on Computer Science Medical Engineering (ICCSME-2012)	International	Inter Science Research Network, Cochin
2011	25 th - 26 th Feb	UGC Sponsored International Conference on India in the Emerging Order- A Potential Market for World	International	DAV College , Punjab
	13 th -14 th Feb	4 th International Conference on Management & Social Welfare issues: contemporary perspectives.	International	IISWBM, Kolkata
	9 th -12 th Jan	International Finance Conference 2011	International	Indian Institute of Management, Kolkata
2010	27 th -29 th Dec	International Conference on Communication and Computational Intelligence. (Sponsored by IEEE & CSI)	International	Kongu Engineering College, Perundurai

Avishek Barman

Year	Date	Conference/Seminar Name	Conference/Seminar Type	Institute Name, Place
2010	6 th Aug- 8 th Aug	4 th International Conference on Information Processing.	International	University Visvesvaraya College of Engineering, Bangalore