

1. Name of the department : PHYSICS
2. Year of Establishment : 2001
3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.):
(i) B.Sc. (General)-Since 2001-2002 (ii) B.Sc. (Honours) - Since 2012-2013;
4. Names of Interdisciplinary courses and the departments/units involved : Nil
5. Annual/ semester/choice based credit system (programme wise): Annual
6. Participation of the department in the courses offered by other departments:
Some classes of the Biochemistry department are taken by our faculty members, when invited.
7. Courses in collaboration with other universities, industries, foreign institutions, etc. : Nil
8. Details of courses/programmes discontinued (if any) with reasons: Nil
9. Number of Teaching posts:

	Sanctioned	Filled
Professors	Nil	Nil
Associate Professors	Nil	Nil
Asst. Professors	Two	One

10. 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 for the last 4 years
Dr. Suman Sinha	Ph.D.	Assistant Professor	Atomic & Molecular Physics ; Material Science	Eight	Nil
Dr. Tapati Banerjee	Ph.D.	College approved Part-time Lecturer	Biophysics	Eleven	Nil
Arpita Bose	M.Sc.	Guest Lecturer	Electronics	Five months	Nil
Abhedananda Bhattacharya	M.Sc.	Guest Lecturer	Solid State Physics	Four months	Nil

11. List of senior visiting faculty: Nil

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty:

Course	Lectures	Practical Classes
B.Sc. (Honours)	67%	70%
B.Sc. (General)	67%	65%

13. Student -Teacher Ratio (programme wise):

B.Sc. (Hons.): 8: 1

B.Sc. (General) : 20:1

14. Number of academic support staff (technical) and administrative staff

sanctioned and filled : Sanctioned : Nil Filled - One (temporary)

15. Qualifications of teaching faculty with D.Sc./ D.Litt/ Ph.D/ MPhil / PG.:

Ph.D.: Two PG : Two

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received: Nil

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received : Nil

18. Research Centre /facility recognized by the University: No

19. Publications:

* Publication per faculty:

Dr. Suman Sinha : 7

Dr. Tapati Banerjee : 10

* Number of papers published in peer reviewed journals (national /international) by faculty and students

Faculty:

Dr. Suman Sinha : 7

Dr. Tapati Banerjee : 10

Students: Nil

* Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.):

Dr.Suman Sinha : 5

Dr. Tapati Banerjee : 10

Publications in National and International Journals :

Dr. Suman Sinha :

1. *Magnetoimpedance of a glass-coated amorphous microwire*, Journal of Applied Physics, **105**, 07A311 (2009), **S. Sinha**, B. Das and K. Mandal. (citations : 4, SNIP : 1.206, SJR: 1.49, IF: 2.185, Web of Science : 3)
2. *Magnetization dynamics in wire-shaped amorphous magnetic materials as probed by Barkhausen noise measurement*, Journal of Physics D : Applied Physics, **40**, 2710 (2007), **S. Sinha**, K. Mandal and B. Das. (citations : 5, SNIP : 1.556, SJR: 1.399, IF: 2.521, Web of Science : 4)
3. *Study of magnetic barkhausen noise from amorphous $Fe_{70}Ni_8Si_{10}B_{12}$ and $Fe_{40}Ni_{40}B_{20}$ Ribbons*, Journal of Non destructive Testing and Evaluation, **5**, 49 (2006), **S. Sinha** and K. Mandal.
4. *Giant magnetoimpedance in amorphous $(Co_{0.93}Fe_{0.07})_{63}Ni_{10}Si_{11}B_{16}$ glass-coated microwire*, Journal of Magnetism and Magnetic Materials, **302**, 223 (2006), **S. Sinha**, K. Mandal and M. Vazquez. (citations : 2, SNIP : 1.568, SJR: 0.935, IF: 2.002, Web of Science : 1)
5. *Contributions to giant magnetoimpedance from different domain regions of $Co_{68.15}Fe_{4.35}Si_{12.5}B_{15}$ amorphous wire*, Journal of Applied Physics, **99**, 033901 (2006), K. Mandal, **S. Sinha** and P. Anil Kumar. (citations : 11, SNIP : 1.631, SJR: 1.944, IF: 2.185, Web of Science : 5)
6. *Size and temperature dependent cationic redistribution in $NiFe_2O_4(SiO_2)$ nanocomposites : positron annihilation and Mossbauer studies*, Journal of Physics D : Applied Physics, **39**, 4228 (2006), Subarna Mitra, K. Mandal, **Suman Sinha**, P M G Nambissan and S. Kumar. (citations : 10, SNIP : 1.664, SJR: 1.412, IF: 2.521, Web of Science : 5)
7. *Effect of tensile stress on the magnetic Barkhausen noise in amorphous $Fe_{70}Ni_8Si_{10}B_{12}$ ribbon*, Indian Journal of Physics, **79(9)**, 991 (2005), **S. Sinha** and K. Mandal. (SNIP : 0.918, SJR: 0.322, IF: 0.072)

Dr. Tapati Banerjee :

1. The crystal and molecular structure of N-(3,4,5-trimethoxycinnamoyl)- Δ^3 -piperidine-2-one, an amide alkaloid (piperlongumine), $C_{17}H_{19}NO_5$. Banerjee T; Chaudhuri, S. Canadian Journal of Chemistry, 1986, 64(5), 876-80.

2. 'Synthesis and spectroscopic characterization of nickel(II) complexes with 3,5-dimethyl-1-(o-aminophenyl)pyrazole (DAPz): x-ray crystallographic studies of [Ni(DAPz)₂(H₂O)₂]Cl₂.H₂O and [Ni(DAPz)₂(NCS)₂].H₂O.' Saha, N; Saha, A; Chaudhuri, S; Mak, T. C. W.; Banerjee, T; Roychoudhury, P. Polyhedron, 1992, 11(18), 2341-9.
- 3 'N-benzenesulfonylglycylglycine, (I), and tetrakis(μ-N-benzenesulfonylglycyl glycinato) bis[aquacopper(II)](Cu-Cu)-water (1/4), (II).' Mukherjee, K; Banerjee, T; Roychowdhury, P; Yamane, Takashi. Acta Crystallographica, Section C: Crystal Structure Communications, 1995, C51(10), 2025-8.
- 4 'N-benzenesulfonylglycylglycine, (I), and tetrakis(μ-N-benzenesulfonylglycyl glycinato) bis[aquacopper(II)](Cu-Cu)-water (1/4), (II).' Mukherjee, K; Banerjee, T; Roychowdhury, P; Yamane, Takashi. Acta Crystallographica, Section C: Crystal Structure Communications, 1995, C51(10), 2025-2028
- 5 'X-ray crystal structure of bis-(p-nitroacetophenone-4,6-dimethyl-2-pyrimidyl hydrazone)copper(I) perchlorate.' Mitra, A; Banerjee, T; Roychowdhury, P; Saha, N; Das, S. Polyhedron, 1996, 15(19), 3371-3375.
- 6 'Synthesis and spectroscopic characterization of cobalt(III) complexes with S-benzyl dithiocarbamate of 5-methyl-3-formyl pyrazole (HMPzSB): x-ray crystal structure of [Co(MPzSB)₂]Cl.' Mitra, A; Banerjee, T; Roychowdhury, P.; Chaudhuri, S; Bera, P; Saha, N. Polyhedron, 1997, 16(21), 3735-3742.
- 7 'Synthesis, characterization and crystal structure analysis of bis (pyridine-2-carbaldehyde thiosemicarbazone)cobalt(III) thiocyanate monohydrate.' Chattopadhyay, S. K.; Banerjee, T; Roychowdhury, P; Mak, Thomas C.W.; Ghosh, S. Transition Metal Chemistry (London), 1997, 22(3), 216-219
- 8 Studies of nickel(II) complexes of 3-hydroxyiminobutanone thiosemicarbazone and 3-hydroxyiminobutanone (4-phenylthiosemicarbazone). Crystal structure of bis[3-hydroxyiminobutanone (4-phenylthiosemicarbazone)]nickel(II) nitrate, monohydrate, [Ni(C₁₁H₁₄N₄O₅)₂](NO₃)₂·H₂O.' Chattopadhyay, S. K; Chattopadhyay, D; Banerjee, T; Kuroda, R; Ghosh, S. Polyhedron, 1997, 16(11), 1925-1930.
9. 'X-ray elucidation of 17α-pregna-2,4-dien-20-yne-(2,3-d) isoxazole-17β-ol.' Dey, R; Banerjee, T; Chowdhury, P. Roy; Chaudhuri, S. Journal of Chemical Crystallography, 2001, 31(5), 263-266.
10. '5-Amino-1-[2-(diethylamino)ethyl]-1H-imidazole-4-carboxamide'. Dey, R; Banerjee, T; Langer, V; Ray, S; Roychowdhury, P. Acta Crystallographica, Section E: Structure Reports Online , 2006, E62(2), o814-o816.

20. Areas of consultancy and income generated: Nil
21. Faculty as members in
 a) National committees b) International Committees c) Editorial Boards:
 Nil
22. Student projects: Nil
 a. Percentage of students who have done in-house projects including inter departmental/programme: N.A.
 b. Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies: N.A.
23. Awards / Recognitions received by faculty and students: Nil
24. List of eminent academicians and scientists / visitors to the department:
 Nil
25. Seminars/ Conferences/Workshops organized & the source of funding:
 Nil
 a. National
 b. International
26. Student profile programme/course wise: 2013-2014

Name of the Course/programme (refer question no. 4)	Applications received	Selected	Enrolled		Pass percentage
			*M	*F	
B.Sc. (Honours)	96	20	08	03	Physics (Honours) was introduced in 2012, no batch has passed out till now.
B.Sc.(General)			43		51.16⁰%

*M = Male *F = Female

27. Diversity of Students

Name of the Course	% of students from the same state	% of students from other States	% of students from abroad
B.Sc. (Honours)	100%	0%	0%
B.Sc. (General)	100%	0%	0%

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.?

Nil

29. Student progression: Our first B.Sc. (Honours) batch has not yet graduated.

Student progression	Against % enrolled
UG to PG	Not Applicable (N.A.).
PG to M.Phil.	N.A.
PG to Ph.D.	N.A.
Ph.D. to Post-Doctoral	N.A.
Employed <ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	N.A.
Entrepreneurship/Self-employment	N.A.

30. Details of Infrastructural facilities:

a. Library: Seminar Library with Reading facility

Number of books in the Central library : 650 (approx.)

Number of books in the seminar library : 50 (approx.)

b. Internet facilities for Staff & Students: Desktop and Laptop Computers with wireless

Broadband

c. Laboratories: Physics laboratory is equipped with instruments and experimental set-ups which covers the syllabus of the University.

31. Number of students receiving financial assistance from college, university, government or other agencies:
B.Sc. (Honours): One (Government of West Bengal) B.Sc (General) :
32. Details on student enrichment programmes (special lectures workshop / seminar) with external experts: Nil
33. Teaching methods adopted to improve student learning:
 - i) Use of Powerpoint presentations for selected lectures.
 - ii) Use of computers.
34. Participation in Institutional Social Responsibility (ISR) and Extension Activities: Nil
35. SWOC analysis of the department and Future plans:

The Physics department is successfully conducting the B.Sc. (General) Course of the University of Calcutta since 2001. The B.Sc.(Honours) course has been introduced in the session 2012-2013.

The department has a seminar library with a good collection of valuable reference books. Lectures and practical classes are held with utmost regularity. The laboratory is well equipped with scientific instruments and experimental set-ups.

The lack of adequate faculty members is a serious concern for the department.

The M.Sc.(Distance Education) course of the Directorate of Distance Education, Vidyasagar University, West Bengal is introduced from the current session (2014-2015).