



# **Academic and Administrative Audit Report 2025**

## **Report on the Academic & Administrative Audit for the Academic Year 2023-2024**

**of**

**St. Xavier's College (Autonomous),  
30 Mother Teresa Sarani,  
Kolkata 700016**

***Audit conducted on 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> April, 2025***

# **St. Xavier's College (Autonomous), Kolkata**

**Established 1860**

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NIRF INDIA RANKING 2024: 6<sup>TH</sup> Rank in College Category.**

## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

### **1. INTRODUCTION**

A Christian Minority Higher Educational Institution, St. Xavier's was founded in 1860 by a Catholic Minority Religious Body, the Society of Jesus, and was affiliated to the University of Calcutta in 1862. While preference is shown to the educational and cultural needs of the Christian Minority community and the poor i.e. socially and financially marginalized, admission is open to all irrespective of caste, creed and nationality. With a long and rewarding history of achievement of the Jesuits in education, the College community continues to move forward together with confidence, pride and enthusiasm. This institution was created with the objective of providing 360-degree quality education to enable the students not only to thrive in academics but also to motivate them towards character building, leadership, extra and co-curricular activities. A very strong, dedicated and capable team of educators has always been the driving force in the growth of the College.

Principled on the motto "NIHIL ULTRA" meaning "NOTHING BEYOND" and with the vision to promote a society based on love, freedom, liberty, justice, equality and fraternity, St. Xavier's College aims to form young men and women of competence, commitment, compassion and conscience - *men and women for and with others*. This is the ideology of Jesuit Education. This enables students to herald social change - national and global. The College aims to inculcate the highest intellectual standards through rigorous academic commitment and discipline. Students are inspired to aspire to higher levels of academic achievement by mastering the subjects they have chosen to study. The College stands committed to make teaching and learning "Student Centric" which makes the students think, analyze and work independently by inculcating original and creative thinking. Currently the College is offering 21 UG, 14 PG and 9 Ph.D. programmes. The College has already completed the formalities for introducing Doctoral programmes in Sociology and Education. The Academic Council of the College has recommended the introduction of UG programme in Data Science and PG programme in Food Science and Nutrition from the forthcoming session. The College has also signed a MOU for delivering courses in collaboration with Tata Medical Centre.

A significant achievement in regard to the extension activities of the College is the setting up of the rural

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campus at Raghobpur, South 24 Parganas, which is about 25 kms away from the main campus. This campus caters primarily to the academic needs of rural students. A new academic block with a space area of 65,000 square feet has been built up. Along with the regular courses, the campus houses several skill development courses aiming to create job opportunities for the rural youth.

St. Xavier's College is the only Degree College in India with the responsibility of managing an Educational Multimedia Research Centre (EMRC) of UGC. Established in 1986, the EMMRC now known as EMRC, is one of the best centers in the country and has won many awards. This EMRC campus, at Ajoy Nagar, is planned to house Entrepreneurship Development Cell, Incubation Centre (as per the requirements of regulatory bodies in higher education) and other professional and job-oriented courses. Contemporary research activities will also be carried out in this campus. A media hub will also be built up in this campus. The construction work is currently in progress.

St Xavier's College boasts of an illustrious alumni association comprising of eminent personalities in both academics and industry. The alumni group is very active in many ways and organizes meetings on a regular basis to mobilize funds for college welfare, social welfare activities and cultural activities. There are national and international chapters in places like Mumbai, Bangalore, Delhi, Assam, Canada, Bangkok, USA, UK, Singapore, Europe, South Africa and Australia

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### **2. AUDIT COMMITTEE**

The Audit Committee included the following members:

- 1. Prof. Samir Kumar Das, Professor, Department of Political Science, Political Science, University of Calcutta.**
- 2. Prof. Subir Ch. Dasgupta, Hony. Emeritus Professor, Ramkrishna Mission Vidyamandira, Belur math.**
- 3. Prof. Subir Maitra, Former Registrar, Rabindra Bharati University**
- 4. Prof. (Dr.) Jayanti Das, Professor, Department of Education, University of Calcutta, Chairperson, UGBOS in Education, University of Calcutta, Convenor, Ph. D RAC in Education, University of Calcutta, Secretary, West Bengal College Service Commission.**
- 5. Prof. Debajyoti Konar, Registrar, Presidency University.**
- 6. Prof. Sarmistha Banerjee, Professor & Head, Director, MBA-HRD, University of Calcutta**

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### **3. OBJECTIVE & SCOPE OF THE AUDIT**

The Principal, Rev. Dr. Dominic Savio, SJ outlined the broad objectives of the academic and administrative audit as an independent assessment of the College by an external peer team. Accordingly, the audit team decided to look into the prevailing situation at the College along the following aspects in course of the audit at its main campus at 30 Mother Teresa Sarani (Park Street). They also visited the Ajoy Nagar Campus where Educational Multimedia Research Centre (EMRC), run by the College, is situated. It was decided that the audit would be carried out for the academic year 2023-24.

#### **Scope**

- Methodology of teaching and learning conducted for the different courses run by the College.
- Functioning of the Laboratories, Computer Facilities, Smart Classes, Students' Canteen and Finance Laboratory.
- Status of facilities like solar power generation, rain water harvesting, etc.
- Examination and Evaluation system.
- Activities of the Internal Quality Assurance Cell, Academic Council and PhD cell.
- Central Library and Goethals Library.
- Sports Office and Wellness Centre.
- International and National collaborations.
- Outreach Programmes conducted by the College including the NCC and NSS Programmes.
- Implementation of National Education Policy 2020.
- Alumni/ae and their contributions to the College.
- Opportunities and Scope of improvements in the major functional areas.
- Status and functioning of Educational Multimedia Research Centre (EMRC), Girls' Hostel and Boys' Hostel.
- Status and activities of statutory committees as per UGC mandate such as Internal Complaint Committee (ICC), Student Grievance Redressal Committee (SGRC), Anti-Ragging Committee etc.

The team is empowered and expected to express views and give suggestions for the improvement of the systems being followed by the College.

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### **4. METHODOLOGY**

At the introductory meeting (held on 07.03.2025) with the Principal, the Vice Principals, Coordinator - IQAC, Member Secretary Academic Council, the Controller of Examinations, Deans, Honorary Secretary of the Alumni Association and other officials, a presentation was made by the Principal which gave a general and broad profile of the facilities and activities of the College. The new facilities added and the new campuses that are in the process of being developed also found mention.

The Audit team began their visit on April 7<sup>th</sup>, 2025 and spent two more days on Campus. The team visited various departments and made inspection of the facilities like Solar Power Generation and Rain Water Harvesting System etc. They had interactions with the faculty and students of each department and also with the support staff. Visits to the Laboratories, Computer Facilities, Libraries, Smart Classes, Students' Canteen Finance Lab and some of the other facilities of the College were accommodated in the schedule to enable the Audit Committee to acquire relevant firsthand information. They also had separate discussions with the Principal, the Vice Principals and the Deans as administrators. The audit team had elaborate discussion with the Controller and the Assistant Controllers for a detailed assessment of the examination and evaluation process. The team visited the Ajay Nagar campus during their audit. The team also inspected the Central Research Facility and recently added Instrumentation Facility for Biological Science. The team also visited the Hostels and had a detailed discussion with the Honorary Secretary, Alumni Association.

Based on the information/data gathered from the available documents, physical inspections and the interactions with the different stakeholders of the institution, the Audit Committee is putting forward certain views, observations and recommendations in the body of this report with expectations that these recommendations, if implemented, will best serve the interest of the College as intended.

### **5. BRIEF PROFILE OF THE COLLEGE**

#### **Establishment and Purpose**

The College was founded on 16<sup>th</sup> January 1860 and was affiliated to University of Calcutta in 1862. Since its establishment the College has made remarkable strides in the field of Education in India over 158 years of its existence, based on the tenets commitment, care and service in preparing "Men and Women for others". The Vision of St. Xavier's College is "To promote a society based on love, freedom, liberty, justice, equality and fraternity". It has strived to promote a Human Society together with the contributions of its alumni in various walks of life. It is living up to its value statement of "providing education with human face".

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### **Awards and Accolades**

While reputation has grown over the years, formal recognition first came in 2003 from the National Assessment and Accreditation Council (NAAC) as an “A” grade College. Ever since the College has earned the following accolades:

- First Autonomous College in West Bengal.
- College with Potential for Excellence and College of Excellence thereafter, awarded by University Grants Commission (UGC).
- College with a Special Heritage Status awarded by UGC.
- NAAC Graded A++ College (4th Cycle, 2024).
- College with ISO 9001:2015 Certification.
- College securing 6<sup>th</sup> position in NIRF Ranking 2024 and consistently within top 10 since 2019.

### **New Horizons**

The College has several campuses including the main Park Street Campus, Raghobpur Campus, the residential campus (Twin Hostel – Fr. Leeming Boys' Hostel and Mother Teresa Girls' Hostel) for its students at AJC Bose Road and Loyola House at Salt Lake. Educational Multimedia Research Centre (EMRC) at Ajoy Nagar on the E M Bypass Campus has been equipped with gadgets and amenities and is ready to house the research activities. A media hub and a research centre has been proposed to be established in this campus. A full-fledged Entrepreneurship Development Cell will also be established in this campus. The College has already started a number Post Graduate Courses and Ph.D. Programmes and is planning to upgrade the other undergraduate courses to Post Graduate Courses and the Post Graduate departments to Research departments. The College has successfully implemented the new curriculum suggested by the National Education Policy 2020 from the Academic Year 2023-24.

### **Management**

The College has five Decision Making Bodies:

- ❖ Founder Body
- ❖ Governing Body
- ❖ Academic Council
- ❖ Board of Studies
- ❖ Finance Committee

The various aspects of the Academic affairs and administration of the College are organized and looked after by several committees constituted by the Members of the Management and Faculty. In some of these committees, representatives of the students and alumni are also present.



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### **Reaching Out**

The College encourages students' participation in seminars, fests and cultural activities of diverse array throughout the year and also motivates students to participate voluntarily in Social and Outreach Programmes. The NSS, NCC and Sports Departments have distinguished themselves through participation at the State and National levels while the Outreach Programmes have extended support to nine remote villages. The College also runs Computer Courses at four centers for the underprivileged.

A noteworthy practice is the publication of magazine in each department providing avenues for self-expression and interaction among students and teachers. The topics and articles are of high standard.

The College authority, in association with the Alumni Association, has carried out several philanthropic activities for the marginalized as a whole and also for those who need medical assistance.

### **Global perspective:**

The highly commendable International Exchange Programme of the College provides enormous scope for exposure to academic programmes abroad for both the teachers and students. Collaborations have been established with Institutions in the United States, Canada and Europe.

### **Research Facilities & Laboratories at St. Xavier's College (Autonomous), Kolkata**

- Central Research Facility
- Central Instrumentation Facility
- Observatory
- Biotechnology Laboratory
- Microbiology Laboratory
- Finance Laboratory
- Data Science Laboratory

### **Areas of Research Undertaken:**

- Primary area of research interest: Cancer biology involving study of 1) intracellular signaling pathways which promote tumour invasion. 2) cell surface receptors (integrins, EGFR) and their roles in tumour biology. 3) the crucial roles played by matrix metalloproteinase e.g. MMP-2, MMP-9 in tumour invasion and metastasis. 4) the anti-tumorigenic and anti-invasive effects of natural compounds in cancers.
- Gravitational Thermodynamics, Gravitational Waves, Gravitational Collapse
- Genetic and epigenetic regulation of stress signaling

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- Ribosome and protein folding and aggregation
- Structure function elucidation of the transcription regulator involved in flagellar synthesis of pathogenic motile bacteria;
- Structure function elucidation of the ABC transporter involved in nutrient uptake in bacteria
- Structure function studies of proteins.
- Plant Physiology, Biochemistry and Molecular Biology with emphasis on environmental stress
- Primary area of research interest: Cancer biology involving study of
  - a) Intracellular signaling pathways which promote tumour invasion.
  - b) Cell surface receptors (integrins, EGFR) and their roles in tumour biology.
  - c) The crucial roles played by matrix metalloproteinases e.g. MMP-2, MMP-9 in tumour invasion and metastasis.
  - d) The anti-tumorigenic and anti-invasive effects of natural compounds in cancers.
- General Relativity, Cosmology, Relativistic Astrophysics
- Pattern Formation, Porous media, Computational Fluid Flow, Biofilms
- Measurement error: related statistical modelling.
- Physics of Liquid Crystals
- Nonlinear Optics, Photonics and Plasmonics
- Material Physics & Nanoscience, Sports Sc., Physics Education
- Statistical Mechanics and its application in Self Organized systems
- Astroparticle Physics and Cosmology, Synergetics
- Astrophysics of active galactic nuclei, accretion disks and clusters of galaxies, structure formation in the Universe
- Mathematical Physics, Quantum Integrable Systems
- Mathematical Biology: Allometric Scaling, Organic Electronics
- Biosensor, Signal Processing
- Agricultural microbiology, biopesticides, biofertilizers.
- Environmental microbiology, bioremediation, mycoremediation and phytoremediation.
- Medicinally important molecules from plant source and their antimicrobial and anti-cancerous role.
- Contamination of spices and their prevention.
- Soil upgradation to residual microbial consortia.
- Stress biology with respect to heavy metal stress.
- Characterization and identification of bacteria and fungi and ensure proper storage
- Plant metal microbe interaction.
- Preparation of noble metal nanomaterials and their composites in organized media

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- Application of Stochastic search techniques in Physical Chemistry
- Development of Soft computing techniques in solving Eigen problems encountered in Quantum Chemistry
- Location of various maxima, minima and first order saddle points for atomic and molecular clusters, and developing methods to determine reaction paths for such systems.
- Synthesis and reactions of biologically active heterocyclic compounds. Development of the required methodology using transition metal catalysts and photochemical reactions.
- Measurement error: related statistical modelling.
- Environmental Studies
- Operations Research, Biostatistics, Optimization Techniques
- Bayesian Non Parametric Modelling
- Inference on Count Data
- Open Economy Macroeconomics
- General Equilibrium and International Trade

### **SXC - Rev. Fr. Franz Goreaux Central Research Facility**

#### **Departments Accessing the CRF**

- Physics(PG)
- Biotechnology (Integrated PG)
- Microbiology(UG+PG)
- Chemistry (UG)
- Statistics(UG)
- Mathematics(UG)

#### **About CRF**

- The Departments have ongoing personal, Institutional and Instrumental Research grants
- The Central Research Facility houses all the FIST supported equipment in addition to other high-end instruments.
- AMCs of such equipment are undertaken by the Institution.
- Annual Calibration is also done under Institutional support.
- DSIR/SIRO certificate is renewed regularly. The present DSIR certificate is valid till -31st March 2026.

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### Teaching and Research Facilities

#### Teaching:

- (i) Project Work
- (ii) Summer Internships
- (iii) Skill Enhancement Practical (hands-on)

#### Research:

- (i) FTIR analysis of various tea samples by Microbiology Department
- (ii) Wet synthesis of compounds having amide and carboxylic acid groups-study of complexation with Zn(II) using FTIR by Chemistry Department.
- (iii) Analysis of elements from methanolic extracts of green tea leaves and manufactured tea by Microbiology Department.
- (iv) FTIR analysis was done to find the degradation or de-colorization of some industrial dye and pesticides by endobacteria, isolated from the edible mushrooms.
- (iv) Rheological Studies of Combination of CTAB with Sodium Saccharine and Na nbutyl benzene sulfonate
- (v) Experiments with droplets of broth+bacteria drying on different substrates, under different external stimuli are presently being studied using Zetasizer.

### Details of Infrastructure developed:

#### Fourier Transform IR Spectrometer

- **Make:** Bruker Optics GmbH & Co. KG., Germany
- **Model:** ALPHA II
- **Key Features:**
  - A A4 size, 7 Kg weight FTIR having specialized patented permanently aligned Interferometer with Gold coated mirrors for long life and better reflective quality.
  - The specialized ZnSe Beam splitter and ZnSe windows assure immunity to environmental conditions as such almost zero maintenance in long run.
  - Optimized Centre Glow technology for Light source allows for continuous stabilized light flux.
  - High stability against temperature change is possible with DLaTGS detector.
  - Offers one of the highest Signal to Noise Ratio of 55,000:1
  - Performance Guard system diagnostics: Continuous electronic monitoring of all spectrometer components, performance, humidity, and temperature

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- Fully automated test routines for operational and performance qualification (OQ, PQ) and Automatic recognition and individual calibration of Quick Snap modules and ATR-crystal plates.
- Full compliance to cGMP/GMP, US, European and Japanese Pharmacopeia and 21 CFR Part 11

### High Performance Liquid Chromatograph Waters Advance HPLC System

**Make:** Waters

**Model:** 1525 Binary Gradient HPLC Pump, 2489 UV/Visible Detector

#### **Key Features:**

##### 1525 Binary Gradient HPLC Pump with Gradient mixer

- Dual pump with gradient system
- Precise stepper motor control (48 steps/ul resolution) of dual reciprocating pistons to ensure pulse free solvent delivery
- Programmable flow rate range: 0.000-10.00 ml/min/pump in 0.01 ml/min increments
- Maximum operating pressure: 6000 psi
- Automatic seal wash and auto- priming
- Flow precision: 0.1% RSD
- Compressibility compensation: Programmable
- Delay Volume: < 200 ul.
- Flow calibration: Programmable
- The flush front panel design and tactile keypad for error-free programming of pump parameter including flow rate, operating pressure limits, compressibility compensation, purge mode, calibration and diagnostics
- Operating pressure limits: Programmable high and low pressure limits, user selectable in psi, bar, kPa.
- The system should be capable to withstand the retention time variations of less than 0.1% for highly reproducible peak performance.
- Pressure Ripple <2.0%
- Plunger guiding system: Floating, self-aligning mount

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- Primary wetted surface materials: 316
- stainless steel, sapphire, reinforced fluorocarbon polymer seals
- In build gradient mixer
- System has the capability to operate in at least 11 various gradient curve mode including Liner, Step, concave, convex. Exponential etc.

### **2489 UV/VISIBLE DETECTOR**

- Wavelength range: 190 to 700nm
- Bandwidth: 5 nm
- Wavelength Accuracy: 1nm (via patented Erbium filter)
- Wavelength repeatability: 0.1nm
- Linearity: <5% at 2.5AU propylparaben, 257nm
- Baseline noise, single wavelength: <5x10<sup>-6</sup>AU, dry cell 230nm, 10Hz, 1.0s
- Baseline noise, dual wavelength: <12x10<sup>-6</sup>AU, dry cell, 230, 280nm, 1Hz, 2.0s
- Drift: 1x10<sup>-4</sup>AU/hour
- Measurement range: 0.0001 to 4.0000AU
- Data acquisition: Up to 80Hz
- Light Source: Deuterium arc lamp, warranty: 2000 hours or 1-year warranty (whichever comes first)
- Flow Cell design: Patented Taper Slit.
- Path length: 10mm (analytical cell)
- Cell Volume: 10μL (analytical cell)
- Pressure limit: 1000psi (analytical cell)
- Wetted materials: 316 stainless steel, fused silica, FEP, PEEK
- Power requirements: 100 to 240VAC
- Line frequency: 50 to 60 Hz
- Power consumption: 185VA (normal)
- Outputs: Four outputs (2 analogs and 2 event)
- Inputs: Four event inputs
- Operating temperature: 4-40°C (39-104°F)

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- Operating humidity: <95%, non-condensing
- Can also be used as Bench-Top UV Spectrophotometer

### Rheometer

**Make:** Anton Paar

**Model:** MCR 72

#### **Key Features:**

##### **Main Instrument**

- Measuring head type: Direct current synchronous motor with linear relationship between torque & stator current
- Measurement types: Rotational, Oscillatory & Transient
- Torque range: 200  $\mu$ nm to 120 mnm or better
- Frequency range: 10-3 to 600 rad/s or better
- Angular velocity range: 10-3 to 150 rad/s or better
- Angular resolution: 614 nrad
- Strain sensor: High resolution optical encoder
- Gap setting: Fully automatic and force-limited gap-setting function to guarantee an exact and reproducible gap-setting procedure at any time
- Connection types: USB, Ethernet, rs232, analog interfaces, pt100 port
- In-built lighting controlled through rheometer software: The rheometer should be fitted with an in-built illumination to make the sample trimming and gap setting procedure easier and safer.
- Parallel plates: 50 mm – smooth surface – steel plate-01 no.
- 25mm – smooth surface – steel plate-01n0.
- Cone geometries: 40/1 – smooth surface – steel cone
- 25/2 - smooth surface – steel cone
- Temperature control for plate/plate & cone/plate measuring geometries
- Type: air cooled peltier temperature control (without external circulator)
- Temperature range: -10 to 215 deg c
- Heating rate: 40 deg c/minute or better
- Cooling rate: 35 deg c /minute or better

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### Nano Brook Particle Size and Zeta Potential Analyzers

**Make:** Brookhaven

**Model:** Nano Brook 90Plus Zeta

**Key Features:**

- Nano Brook 90Plus Zeta: New, compact, USB driven Particle Size and Zeta Potential Analyzer. Comprises of a 40-mW solid-state laser, 90- & 15-degrees angular measurements and Particle Solutions Software- Integrated DLS, ELS software for particle characterization. Single, filterable database. Excel, PDF, CSV exportable reports. User configurable display and report layout. Temperature control (- 5 to +110 degree C)
- Electrode Assembly: Electrode assembly for use with water/simple polar liquids.
- Reference Material:
  - Particle Size Standard reference material
  - Zeta potential reference material
- Double beam optical system
- Burner system for flame atomization
- **Background correction:** Deuterium system

**Optical System:**

- Echelle monochromator. Focal length: 300 mm. Grating: 36 x 185 mm area, 79 lines/mm, blaze angle 76°. Fused-quartz prism: 95 x 40 mm, 60°.
- Wavelength: 189-900 nm.
- Spectral bandpass: 0.15 nm at 200 nm.
- Dispersion: 2.4 nm/mm.

**Light Sources**

- The coded Electrodeless discharge lamp (EDL System II)
- The coded and non-coded Intensitron hollow cathode lamp (HCL) with adaptors

### Atomic Absorption Spectrophotometer (PinAacle-500)

**Monochromator**

- Littrow design with motorized drive for
- automatic wavelength selection and peaking.



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- Wavelength range: 180 - 900 nm.
- Diffraction grating: 1800 lines/mm blazed at 236 nm and 597nm
- Grating area: 64 x 72 mm
- Reciprocal linear dispersion: 1.6nm/mm (nominal)
- Focal length: 267 mm
- Spectral bandwidths Slits available are 0.2, 0.7 and 2.0 nm
- Detector Wide-range segmented solid-state detector, including a built-in
- low-noise CMOS charge amplifier array

### Background Correction

Deuterium arc lamp: PinAAcle 500 auto built-in continuum source double-beam background correction using a high- intensity deuterium arc lamp.

### Flame Atomizer

Description Gas Controls: Fully computer-controlled with oxidant and fuel monitoring. Touchscreen or keyboard-activated remote ignition system with air/acetylene. Acetylene flow is automatically adjusted prior to the oxidant change when switching to or from nitrous oxide-acetylene operation.

### The Ignitor Assembly

The ignitor assembly includes the glow plug, the ignitor solenoid and ignitor arm, the burner head interface circuit, and the flame detect circuit. When the ignitor is activated (automatically), the glow plug is energized and heats up. The ignitor solenoid, which is also energized, swings the ignitor arm into place. The ignitor arm is a gas-capture tube through which the gases flow from the burner to the glow plug. The gases in the tube are ignited by the heat of the glow plug, which, in turn, ignites the flame at the burner head slot.

### The Gas Controls

The gas controls provide control of the flow rates of the fuel gas (acetylene) and the oxidant (air or nitrous oxide). You select the gas flow rates and optimize the flame via software. The gas control system is incorporated in the spectrometer. The system includes safety interlocks for the flame. If the fuel or oxidant pressure falls below a minimum value for safe operation the flame is shut down in a safe sequence. The system also includes automatic sequencing of the gases when the nitrous oxide-acetylene flame is ignited or extinguished. The burner will be shut down in a safe sequence in the event of a power failure.

### The Drain System

During flame operation, measurement solution that condenses out in the spray chamber runs to waste through the siphon interlock drain trap and is collected in the drain vessel. The siphon interlock drain trap is integral with the burner end cap and includes an internal trap to make certain that back pressure is applied to the burner chamber. This ensures that a fuel/oxidant mixture cannot enter the drain vessel. There is a magnetic float in the drain trap that shuts down the flame if the drain system is not functioning properly. If the liquid level in

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the trap is too low, the switch is activated and the flame is shut down.

### Burner Head Options:

All the burner heads are made from titanium. The 10 cm, air-acetylene burner head is standard with the PinAAcle 500 instrument. All the available burner heads are listed next in numerical order.

- N0400100: 5 cm, single-slot burner head (for nitrous oxide-acetylene operation only).
- N0400101: 5 cm, single-slot burner head (for air-acetylene operation). It features a wider slot than the nitrous oxide burner head. Used to extend linear and working range.
- N0400102: 10 cm, single-slot burner head (for air-acetylene operation - Standard for all PinAAcle instruments.).
- N0400103: 10 cm, three-slot burner head (for analysis of high dissolved solids content solutions with air-acetylene flames).
- N3161240: burner head adjustment tool. Insert the adjustment tool into the burner head and adjust the angle to extend the linear range. This tool allows you to do adjustments while the burner is hot.

### The Gas Connectors

- Burner Gases
- Item Designation Function
- • Air Fitting for connection of the air supply to the spectrometer.
- The air supply is required for the burner and also for the pneumatic system in the spectrometer.
- 3 N<sub>2</sub>O Fitting for connection of the nitrous oxide supply to the burner.
- 2 C<sub>2</sub>H<sub>2</sub> Fitting for connection of the acetylene supply to the burner.

### The Optical System:

A common feature of the PinAAcle 500 compared to previous atomic absorption models is the change from free space optics to fiber optics. This change reduces the number of optical components, decreases the size of the instrument as well as reduces stray light and scattering losses. All glass fibers have been optimized to provide high transmission for the whole wavelength range of interest. The lamp compartment has positions for up to four spectral sources: HCL and/or EDLs. The radiation from the requested source lamp is collected by a movable mirror and coupled into the source fiber.

At the other end of the optical path the fiber bundle coming from the sample compartment is coupled onto the Littrow-configuration monochromator. This contains a parabolic mirror and a large area reflecting grating blazed at two wavelengths; 236 nm for operation in the UV spectral range and 597 nm for operation in the visible spectral range. Various slit widths are available to adjust the signal throughput and resolution to the requirements of each measurement. A double-beam configuration is depicted in the following schematic

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figure. In addition to the HCL and EDL source, the model is equipped with a deuterium lamp for background correction. The light from the source and the deuterium lamps are guided to a fiber coupler, which splits the light into separate sample and reference beams. Thus each channel, sample and reference, contains a certain percentage of the source and deuterium lamp. Both beams pass through the sample compartment before they are coupled into another pair of fibers by a set of ellipsoidal mirrors and guided to the monochromator and detector. The deuterium and source light is split into two beams---one that passes through the sample compartment, and one that is directly coupled together to form the reference beam.

- **Flame:** Fully automated gas box with computer-controlled oxidant selection, automatic gas sequencing, oxidant and fuel monitoring and control.
- **Control:** Software-actuated ignition with air/acetylene. Acetylene flow is automatically adjusted when switching to or from nitrous-oxide/acetylene operation.
- **Burner System:** An inert-polymer mixing chamber provides superior analysis of corrosive and high-solid matrices. The spray chamber is manufactured from a high-strength composite, eliminating the need for pressure-relief devices. The high-precision inert nebulizer maximizes stability and sensitivity. A 10-cm single-slot solid titanium burner head for air/acetylene operation is included. Optional burner heads include: 5-cm nitrous-oxide/acetylene, 10-cm three-slot air/ acetylene and 5-cm single-slot air/acetylene
- The flame can generate temperatures of up to 28000C
- Sample Area: 25 cm wide x 25 cm deep sample compartment for easy access to burner components.

### U-2900

#### UV/VIS Spectrophotometer

**Optical system:** Double Beam

**Wavelength range:** 190 to 1100 nm

**Spectral bandpass:** 1.5 nm

**Wavelength accuracy:**  $\pm 0.3$  nm (at 656.1, 486.0 nm)

**Photometric range:** -3 to 3 Abs / 0 to 300% T

**Wavelength scan speed:** 10, 100, 200, 400, 800, 1200, 2400, 3600 nm/min

**Photometric accuracy:** (certified according to NIST SRM 930)

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±0.002 Abs (0 to 0.5 Abs)

±0.004 Abs (0.5 to 1.0 Abs)

±0.008 Abs (1.0 to 2.0 Abs)

±0.3% T

**Response:** Fast, standard, slow

**Baseline stability:** 0.0003 Abs (at 500nm, 2 hours after power-on)

**Light source:** Tungsten iodide (WI) & Deuterium (D2) lamps

**Detector:** Silicon photodiode

### F-7000 Fluorimeter

- **Sensitivity:** S/N 800 or better (RMS) using Raman band of water
- **Minimum sample volume:** 0.6ml (with standard 10mm rectangular cell)
- **Photometric Principle:** Monochromatic light monitoring ratio calculation
- **Light source:** 150W Xenon lamp, self-deozone lamp house
- **Braze wavelength:** Excitation side 300nm, emission side 400nm
- **Measuring wavelength range (on both EX and EM):** 200 to 750nm and zero order light (expandable up to 900nm with optional detector)
- **Bandpass:** Excitation side: 1,2.5,5,10,20nm
- **Emission side:** 1,2.5,5,10,20nm
- **Resolution:** 1.0 nm
- **Wavelength Accuracy:** ±1.0 nm
- **Wavelength Reproducibility:** ±0.5 nm
- **Wavelength Scan speed:** 30, 60, 240, 1200, 2400, 12000, 30000, 60000 nm/min

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- **Response:** 0 to 98%; 0.002, 0.004, 0.01, 0.05, 0.1, 0.5, 2, 4 Sec

### 2 HP Servers

- **Processor:** 2X Intel Xeon E5645 @ 2.4 GHz CPUs (6 core each)
- **RAM:** 32 GB RAM
- **HDD Capacity:** 1 TB
- **Software installed:** All open source and free
- **Operating System:** Ubuntu Linux 12.04 LTS later upgraded to 14.01 LTS
- **Serial Nos.:** CN72070QRV, CN72070V20
- **Connectivity:** Connected to College LAN

Facility extended to all the faculty members

### Cold Room

#### Indoor Unit:

- **Nominal Capacity:** 10000 Btu/hr.
- **Power Supply:** 230/1/50 V/Ph/Hz
- **Dimensions(L/D/H):** 1245/375/450 mm
- **Weight:** 25kg
- **Air flow:** 1600cfm
- **Air throw:** 12feet

#### Outdoor Unit:

- **Dimensions(L/D/H):** 850/335/540 mm
- **Weight:** 61kg
- **Compressor Type:** Hermetic Recap
- **Quantity:** 1

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- **Power Supply:** 230/1/50 V/Ph/Hz
- **Refrigerant precharged qty:** 1.6kg

### Binocular Microscope

TecWide Field Focusable 10X/18mm eyepiece objective DIN Semiplan Achromatic 4X, 10X, 40X & 100X oil lens. Graduated coaxial mechanical stage, sub-stage condenser with iris diaphragm & blue filter.

### EPI Fluorescence Microscope

Eyepiece WF 10x/20mm, Objective: Plane Achromatic Objectives 4X, 10X, 40X, 100X (Oil). EPI Fluorescent illumination B(Blue), G(Green) exciting light filter system. Digital camera with adaptor and photo relay lens.

### Technical Specification

#### Digital Automatic Polarimeter

**Measuring angle:**  $\pm 45^\circ$

**Minimum indications value:** 0.0010

**RS232 interface**

#### B-H Curve with DEEP

I Core, U Core, Current Sensor, Voltage Sensor, BH curve plotting with DEEP Lite software

### **1. PATENT APPLICATION PUBLICATION (21)**

1. **Application No.** 201931008079 A, INDIA
2. **Date of filing of Application :** 01/03/2019 (43) Publication Date: 29/03/2019
3. **Title of the invention:** HUMECTANT HAND AND SURFACE SANITIZER AND PROCESS OF PREPARING THE SAME
4. **International classification:** A01N25/22
5. **Name of Applicant:** Satwik Majumder, Arup Kumar Mitra
6. **Name of Inventor:** Satwik Majumder, Arup Kumar Mitra, Aditi Das, Anish Pyne, Anwit Sadhukhan, Twisha Chatterjee, Vidhi Agarwal.

### **2. PATENT PUBLISHED: No. 202031029308, Dated 10.07.2020**

- **Subject:** Exocaria agallocha is a natural important source of Bergenin.
- **Published on :** 14.01.2022
- **Name of the Inventor:** Tamanna Sultana, Arup Kumar Mitra and Satadal Das.

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### 3. No.202431005360A, Date: 02.02.2024

- **Subject:** A Novel Plant-Microbial Consortium Combination for In-Situ Arsenic Remediation.
- **Name of Inventor:** Puja Agnihotri, Arup Kumar Mitra and Prashant Shukla.

### 4. PATENT PUBLISHED: No.202431016997. Date: 10.05.2024

- **Subject:** A Bio-active Mechanized Aerobic Composter
- **Name of Inventor:** Agnik Ghosal, Arup Kumar Mitra, Bikram Dhara, Sanjana Ghosh, Debapriya Maitra, BedapranaRoy, Rishab Dugar, Sahil Choudhury, Prashant Toshniwal.

### 5. PATENT PUBLISHED: No.202431043575. Date: 05.07.2024.

- **Subject:** Design of a novel bacterial bio-fertilizer for enhancing crop productivity at varying agro-climatic conditions.
- **Name of Inventor:** Bikram Dhara, Arup Kumar Mitra, Debapriya Maitra, Bedaprana Roy.

### 6. PATENT FILING: 14/12/2023

- **Application number:** PCT/CN2023/138728

### Industrial and Academic Collaborations

#### Academia-Industry collaborations:

- Hindustan Gums & Chemicals – For the development of Bio-grade fertilizers
- EMerck Bangalore for student internship
- RM Lab for testing of blood biochemical parameters

### Educational Multimedia Research Centre (EMRC)

Educational Multimedia Research Centre (EMRC)-KOLKATA is one of the 19 media centers in the country established by the UGC, New Delhi for the proliferation of education through information and communication technology.

Though EMRC Kolkata produces educational programmes of all genre- syllabus oriented, instructional ones and enrichment programmes in documentary format, the mandate presently is mostly to make Massive Open Online Courses (MOOC) for the SWAYAM platform.

EMRC Kolkata, also engages in regular research projects, conducts workshops and seminars and also has lectures on demand for students of remote areas through the multicast facility of EDUSAT platform.

The present activities of EMRC can be classified as:



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- Pre-Production: Helping resource persons to make and upload MOOC proposal in SWAYAM INFLIBNET.
- Production: Shooting the video of Lecture Program.
- Post Production: Preparing the Graphics, Editing the modules, getting the Academic review & Technical Review done.
- Online uploading: Uploading courses in SWAYAM Platform
- Budgeting: Preparing Resource Person Budget + Production budget (according to the guidelines of CEC)
- Research, Seminars and workshops: Undertaking research projects and conducting seminars and workshops in collaboration with colleges and universities.
- Translation - More than 40 courses are being translated in Bangla.
- Documentary films made in house by resource persons are screened in competitive festivals and awards and accolades received.
- The number of MOOCS developed during 2023-24 is 20.

### Astronomical Observatory

Fr. Lafont Observatory, one of the oldest in the sub-continent, set up in 1865 by Rev. Eugene Lafont S. J., who is considered as the “Father of Modern Science in India”. In November 1865 the observatory predicted about an impending severe cyclonic storm, thereby saving hundreds of lives. Recently the observatory has been upgraded by spending more than Rs. 1 Crore. The inauguration took place on 10<sup>th</sup> March 2014. It is definitely one of the oldest and biggest set up in an educational campus, which needs a special mention.

**Table 1: Departments in the College**

Stage	Discipline	Departments
UG	Arts	B.A. in English B.A. in Bengali B.A. in Sociology B.A. in Political Science B.A. in History B.A. in Social Science and Humanities
	Science	B.Sc. in Mathematics B.Sc. in Physics B.Sc. in Chemistry B.Sc. in Microbiology B.Sc. in Economics



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		B.Sc. in Statistics B.Sc. in Computer Science B.Sc. in Mass Communication and Videography
	Commerce	B.Com.
	Management	BMS
	Education	B.Ed.
PG	Arts	M.A. in English M.A. in Bengali M.A. in Sociology M.A. in Political Science M.A. in Education
	Science	M.Sc. in Physics M.Sc. in Microbiology M.Sc. in Economics M.Sc. in Computer Science M.Sc. in Data Science M.Sc. in Biotechnology (5-year integrated) M.Sc. in Multimedia (5-year integrated)
	Commerce	M.Com.
Ph.D.	Arts	Ph.D. in Bengali Ph.D. in English Ph.D. in Political Science
	Science	Ph.D. in Physics Ph.D. in Microbiology Ph.D. in Computer Science Ph.D. in Biotechnology
	Commerce	Ph.D. in Commerce

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Table 2: Student Strength in 2023-24

Sl. No	Department Name	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Total
1	B.Com. (Morning)	662	733	778	-	-	2173
2	B.Com. (Evening)	464	457	645	-	-	1566
3	B.Com. (Raghobpur)	42	46	47	-	-	135
4	BMS	178	196	163	-	-	537
5	B.Sc. Physics	52	36	38	-	-	126
6	B.Sc. Chemistry	48	33	45	-	-	126
7	B.Sc. Statistics	57	51	71	-	-	179
8	B.Sc. Economics	60	71	71	-	-	202
9	B.Sc. Computer Science	68	53	62	-	-	183
10	B.Sc. Mathematics	27	63	73	-	-	163
11	B.Sc. Microbiology	50	43	50	-	-	143
12	B.Sc. Mass Communication	56	54	66	-	-	176
13	B.A. English	76	70	79	-	-	225
14	B.A. Political Science	53	47	68	-	-	168
15	B.A. Sociology	75	63	48	-	-	186
16	B.A. Bengali	6	7	10	-	-	23
17	B.A. Bengali (Raghobpur)	16	30	24	-	-	70
18	BA - General	47	47	50	-	-	144
19	BA - General (Raghobpur)	12	13	22	-	-	47
20	B.A. History (Raghobpur)	23	21	27	-	-	71
21	B.A. Pol. Sc. (Raghobpur)	23	20	18	-	-	61
22	M. Sc. Physics	21	26	-	-	-	47
23	M. Sc. Computer Science	42	44	-	-	-	86
24	M. Sc. Microbiology	48	66	-	-	-	114
25	M. Sc. Biotechnology	45	42	44	37	37	205
26	M.Sc. Multimedia	65	52	57	53	54	281
27	M.Com.	67	65	-	-	-	132
28	M.A. English	47	61	-	-	-	108
29	M.A. Pol. Sci.	44	44	-	-	-	88
30	M.A. Sociology	27	44	-	-	-	71
31	M.A. Bengali	11	14	-	-	-	25
32	M. Sc. Economics	33	44	-	-	-	77
33	M.A. Education	17	21	-	-	-	38

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34	M.A. History	23	-	-	-	-	23
35	M.Sc. Data Science	33	31	-	-	-	64
36	B.Ed.	94	97	-	-	-	191
37	Ph.D.	17	16	17	32	26	108
38	Others (COP)	124	-	-	-	-	124
Total							8486

Table 3: Ph.D. Scholars in 2023-24

Sl. No.	Department	Number of Scholars
1	Biotechnology	15
2	Physics	5
3	Microbiology	24
4	Commerce	26
5	Computer Science	9
6	Bengali	16
7	English	8
8	Political science	5

Table 4: Faculty Strength in 2023-24

Sl. No	DEPARTMENTS	FULL TIME	PART TIME	GUEST/ VISITING	Grand Total
1	ADMINISTRATIVE	2			2
2	BENGALI	4			4
3	BENGALI [RAGHABPUR]	7	2		9
4	BIOLOGY	1			1
5	BIOTECHNOLOGY	10		1	11
6	BUSINESS ADMINISTRATION	8		1	9
7	CENTRAL LIBRARY	1			1
8	CHEMISTRY	8			8
9	COE	1			1
10	COMMERCE (EVENING)	23	5		28
11	COMMERCE (MORNING)	44	6		50
12	COMMERCE (P.G.)	3		7	10
13	COMMERCE [RAGHABPUR]	1	3		4

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14	COMMUNICATIVE ENGLISH	1	1	3	5
15	COMPUTER SCIENCE	11			11
16	COUNSELLING		5		5
17	CULTURAL ACTIVITIES	1			1
18	ECONOMICS	7			7
19	EDUCATION	13	1	1	15
20	ENGLISH	10			10
21	ENVIRONMENTAL STUDIES	1			1
22	GAMES & SPORTS	1			1
23	HINDI	1	1	1	3
24	HISTORY	2	1		3
25	HISTORY [RAGHABPUR]	2	2		4
26	INFORMATION TECHNOLOGY	1			1
27	JOURNALISM	1		1	2
28	MASS COMMUNICATION AND VIDEOGRAPHY	5		4	9
29	MATHEMATICS	7	1		8
30	MICROBIOLOGY	8	1	1	10
31	MULTIMEDIA AND ANIMATION	9		1	10
32	PHYSICS	15		1	16
33	POLITICAL SCIENCE	8	1		9
34	POLITICAL SCIENCE [RAGHABPUR]	4	1		5
35	SOCIAL WORK	2			2
36	SOCIOLOGY	8			8
37	STATISTICS	8	1		9
38	SXC GIRLS HOSTEL	2			2
39	TRESURER	1			1
	<b>Grand Total</b>				<b>296</b>

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### International MOU's

S. No.	University/Institute	Place/Country	Signed on
1	Fordham University	New York, Usa	12-09-2022
2	Astrakhan State University	Astrakhan, Russia	25-06-2021
3	Azerbaijan State Oil and Industry University	Baku, Azerbaijan	16-12-2019
4	University of Liberal Arts Bangladesh	Dhaka, Bangladesh	20-10-2019
5	Monash University	Melbourne, Australia	14-09-2018
6	Sophia University	Tokyo, Japan	13-06-2017
7	Macquarie University	Sydney, Australia	18-11-2016
8	State University of New York	Oswego, USA	17-11-2013
9	Santa Clara University	California, USA	11-07-2012
10	Media Studies and Culture	Torun, Poland	19-11-2011
11	College of St. Benedict / St. Johns University	Minnesota, USA	27-10-2011
12	University of Namur	Namur, Belgium	07-10-2011
13	Suzhou Xianghui Technology Co., Ltd, P. R.	China	19-04-2023
14	Advantere School of Management,	Madrid, Spain	25-05-2023
15	NORDIC CENTRE IN INDIA	Nordic Region	31-05-2023
16	Environmental Defence Fund,	New York	20-12-2022
17	Fu Jen Catholic University,	Taiwan, R.O.C	25-03-2025

### National MOU's

Sl. No.	University/Institute	Place/Country	Signed on
1	The Bhopal School of Social Sciences	Madhya Pradesh	10-02-2022
2	West Bengal State University	Barasat	28-06-2019
3	Holy Cross College	Agartala	20-01-2018
4	Loyola Academy Degree & PG College	Alwal, Secunderabad	12-09-2016
5	North Bengal St. Xavier's College	Rajganj	11-04-2016
6	St. Xavier's College	Ranchi	30-01-2016
	St. Xavier's College of Education	Patna	30-01-2016

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## ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24

	Loyola College of Education	Jamshedpur	30-01-2016
	Loyola College of Education	Namchi	30-01-2016
7	St. Xavier's College	Jaipur	19-05-2015
8	St. Joseph's College	Darjeeling	05-09-2014
9	Sappho for Equality,	Kolkata	21-03-2023
10	Solaire Initiative Pvt. Ltd,	Orissa	19-04-2023
11	Balurghat B.Ed. College,	Dakshin Dinajpur	25-04-2023
12	Arun Duggal Centre of Excellence for Research in Climate Change and Clean Air (CERCA)	Delhi	29-05-2023
	Indian Institute of Technology Delhi,	Delhi	29-05-2023
13	EdCIL India Limited	Delhi	10-11-2019
14	Pondicherry University	Pondicherry	24-03-2017
15	SHRM Biotechnologies Pvt, Ltd,		05-03-2024
16	Kalahrdaya - The Universal Home of Art and Culture,	Napalganj, 24 PGS (S)	28-06-2024
17	Institute of Social and Cultural Studies	Kolkata	01-07-2024
18	Human & Environment Alliance League	Kolkata	02-07-2024
19	Chowman Restaurant Chain,	Kolkata	18-08-2024
20	R.M. Clinical Laboratories Pvt. Ltd.	Kolkata	21-09-2024
21	St Xavier's College,	Simdega, Jharkhand	30-01-2025
22	Loyola College (Autonomous),	Chennai	31-01-2025
23	National Institute of Electronics & Information Technology (NIELIT)	Kolkata.	25-02-2025
24	St Paul Institute of Professional Studies,	Indore	21-03-2025
25	The Bhawanipur Education Society College,	Kolkata	04-04-2025

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

### **6. OBSERVATIONS**

#### **1. FACILITIES**

##### **SOLAR POWER GENERATION**

Highlights:

- The generated power contributes to the grid.
- The panels and the facility are well maintained.
- Solar Photovoltaic power is about 46 KWP. Carbon Credit Balance is 98,487.

Areas of Improvement:

- Considering the large usage of power, the college needs more solar panel installations.
- Additional fund may be raised from different government sources for the extension of this system using the places available on the adjoining buildings with proper permission from the Heritage Commission.
- The existing Solar Panel System should be connected to the Science Laboratory, so that in case any emergency that power may be utilized.

##### **RAIN WATER HARVESTING**

Highlights:

- The underground tank stores the rainwater, which has a large capacity of 35000 litres.
- This tank also stores the excess water in case the overhead tanks overflow, which might be otherwise wasted.
- This water is used to maintain the greenery of the campus.

Areas of Improvement:

- Quality check of the water should be done periodically preferably, once in every 3 months.
- There should be a process to collect the data of storage amount/day and utilization/day at least during the days of rainfall to estimate the effectiveness of the facility in water-reuse.
- The rainwater harvesting system should also be developed for other buildings in the campus, at the hostels and at the Ajoy nagar Campus.

##### **CANTEEN**

Highlights:

- Hygiene, Food, and Kitchen Room are alright.
- Students' satisfaction is positive.

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### **Areas of Improvement:**

- Recommended for FSSAI approval.
- More space needs to be allocated for the canteen with a larger seating area.

### **CENTRAL LIBRARY**

#### **Highlights:**

- Impressive collection of books.
- Meticulous organization, impeccable maintenance, with perfect ambience for reading.
- Successful use of state-of-the-art RFID technology for transactions/detection.
- Open access for students.
- Extensive provision of computers and tabs for users.
- Dedicated space for researchers.
- Strong system of plagiarism checks.
- High speed internet with Wi-Fi facilities is available.
- 1125 new books added during the academic year 2023-24.
- Average daily transaction of 160 books and average daily 241 footfalls are quite impressive.
- Limited facility in Braille is available for the visually-impaired students.

#### **Areas of Improvement:**

- The number of journals can be increased.
- Library facilities for the visually-impaired students are to be enhanced with a dedicated separate corner, more books in Braille, digital equipment including talking books, audio books, assistive technology etc. with the assistance from National Institute for the Empowerment of Persons with Visual Impairment (Divyangjan) (NIEPVD).
- Implementation of One Nation One Subscription (ON-OS) from Govt. of India

### **WELLNESS CENTRE**

#### **Highlights:**

- The centre contains all the sophisticated modern equipment, which is well-maintained and is in good condition.
- Boys and Girls can visit on alternate days in a week. Separate timing for teaching and non-teaching employees.

#### **Areas of Improvement:**

- A full-time trainer must be appointed.
- Boys and Girls can visit on alternate days in a week. Separate timing for teaching and non-teaching employees.
- All the equipment must be under the Annual Maintenance Contract Program.



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- If possible, incinerator machine can be installed for the girl students.

### **CENTRAL RESEARCH FACILITY**

Highlights:

- State-of-the-Art instruments.
- Well utilized by students/faculty for research as evidenced by excellent research paper output and also by students doing their practical classes.

Areas of Improvement:

- One more Air Conditioner is required in the cell culture room.
- Fume Chamber is within the CIF that hampers animal and plant cell culture rooms. Fume Chamber must be placed somewhere else.
- This centre must think for resource generation on a very limited scale.
- Proper attention should be given to e-waste management.

### **COMPUTER CENTRE & CENTRAL COMPUTING FACILITY**

Highlights:

- Excellent set-up with 342 upgraded computers with 10 G backbone.
- Agreement with Microsoft, Adobe, AutoDev, SPSS etc.
- Courses with joint certification with industry on the anvil.

Areas of Improvement:

- Should focus on revenue generation by offering Certificate/Diploma Courses in A.I., Data Science, R, Python etc.

### **GOETHALS LIBRARY**

Highlights:

- A truly remarkable archive that will be of immense value to any scholar.
- The range of the collection is impressive, comprising both textual and non-textual archives.

Areas of Improvement:

- Rare manuscripts/books should be digitized. Online access to the digital resources of the Library should be given to the researchers
- Physical access should also be given to outside researchers.

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

### **FINANCE LABORATORY**

#### Highlights:

- State-of-the-art facility with 40 computers and 2 smart televisions.
- Planning for the Bloomberg live database
- Installed with statistical software and access to databases like Prowess, Economic Outlook, Capital Line etc.

#### Areas of Improvement:

- Better capacity utilization.
- Focus on revenue generation.
- Offer Career-Oriented Certificate / Diploma Courses.

### **PLACEMENT CELL**

#### Highlights:

- Placements done for the maximum number of applicants
- Large database of employers maintained
- The largest proportion of students placed from Commerce & allied streams

#### Areas of Improvement:

- Best practices to be identified.
- To highlight alumni involvement/ help in enabling placements.

### **NCC CELL**

#### Highlights:

- Oldest NCC unit in the country documented in the *Chronicles of a Century*.
- Cadets regularly participate in the Republic Day parade in New Delhi, the Youth Exchange Program, etc.
- Citations received from the Coast Guard and the Army (Bihar regiment)
- Governor's medal

#### Areas of Improvement:

- Brochure/Flyer to be prepared for distribution, highlighting the achievements of the unit

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### **ENTREPRENEURSHIP DEVELOPMENT CELL**

#### Highlights:

- Initially set up with DST funding in 2003.
- Excellent initiatives and programs to harness and pitch start up ideas to potential venture capitalists.
- Orientation programs are undertaken to make students aware of the cell.
- Creating Entrepreneurship Development Fund.

#### Areas of Improvement

- The existing EDC is recommended to be upgraded to a full-fledged incubation centre, and a linkage with the West Bengal State DST and IISER, Kolkata (GOI Nodal Centre), Entrepreneurship Development Institute, Kolkata, various Chambers of Commerce, Commercial Banks etc. is recommended to be established for patenting and commercializing the research outcomes of the laboratories / the institution.

### **NSS DEPARTMENT**

#### Highlights:

- Cell functioning since the inception of the concept of NSS (1969)
- Doing excellent extension and outreach work.

#### Areas of Improvement:

- Different social survey's may be carried out.

### **HOSTEL**

#### Highlights:

- Well-placed norms for Hostel entry timings.
- Comfortable triple / double / single bed rooms.
- Clean and hygienic washrooms.
- Well-curated food menu.
- Access for the differently abled.

#### Areas of Improvement:

- IT-ES (information technology-enabled system) may be introduced for Hostel entry and exit.
- Girls' Common Room should not be visible through CCTV from the Boys' Hostel Control Room.
- Anti-Ragging Committee with emergency contact numbers must be displayed on the walls in both the Hostels.

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- A feedback mechanism for the boarders may be introduced
- Solar power and rain water harvesting system may be installed. Rain water stored should be used mandatorily for washing clothes.

### **CENTRAL INSTRUMENTATION FACILITY**

Highlights:

- Commendable effort by concerned faculty members in bringing extramural institutional funds for the development of CIF
- State-of-the-art sophisticated instruments

Areas of Improvement:

- AMC to be extended after 2024
- Focus on revenue generation on a limited scale.
- May initiate some form of training and/or awareness generation programmes mainly for school students.

### **OBSERVATORY**

Areas of Improvement:

- May initiate some form of training and/or awareness generation programmes mainly for school students.

## **2. ADMINISTRATIVE OFFICES**

### **OFFICE OF THE CONTROLLER OF EXAMINATIONS**

Highlights:

- Well-appointed staff strength (NEP implementation will necessitate rethinking staff structure).
- Target days for result publication-60.
- Supplementary Exams for Semesters 5 and 6 at the undergraduate level and for Semesters 3 and 4 at the postgraduate level.
- Plagiarism checks projects with a very steep threshold.
- 20% of scripts examined by an external examiner.
- Moderators change every TWO years.
- The time between the date of last examination and the date of publication of results (usually 50 to 55 days) must be shortened even in the case of intermediate semesters.

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### **Areas of Improvement:**

- To adopt the flexibility of the Academic Program under NEP, in respect of horizontal movements of the credits, the “Regulations for Credit Transfer and Exemption” are recommended to be in place at the earliest.
- Space for storage of old scripts is required.
- Student representatives in the Examination Disciplinary Committee may be avoided.
- Internal faculty involvement along with external moderators may be minimized.
- It is time to review whether the students will have the double benefit of post-publication review of results and repeating the semester examinations, besides appearing for the special supplementary examination.
- The inclusion of a peer student from the students' union in the disciplinary committee is likely to tarnish the dignity of the accused even before s/he is proven guilty.

### **Office of Vice Principal (Arts & Science)**

#### **Highlights:**

- New courses in Food Science, Medical Microbiology, Medical Physics, Wetland Management and Sports Management, Artificial Intelligence etc. are likely to be introduced soon.
- Professor of Practice appointed.
- Industry-Academia Collaboration is in full swing.
- Internship Programme for the students is being planned.
- About 30-40 percent deserving students are offered scholarships and other financial support.
- Anti-Ragging Committee and Internal Complaints Committee are formed, their composition displayed at prominent places in the college premises and active.
- Grievance Cells for Students, Teachers and Support Staff are also active.
- The entire college campus is under CCTV surveillance.
- The entire college campus including Laboratories, Central and Goethals Libraries, Central Computing Facility, Central Instrumental Facilities is equipped with Fire Fighting System.
- A new School of Social Sciences is in the pipeline.

### **Office of Vice Principal (COMMERCE MORNING)**

#### **Highlights**

- Well-functioning office.
- Vice Principal takes personal interest in academic affairs.

### **Office of Vice Principal (COMMERCE EVENING)**

#### **Highlights**

- Office functions satisfactorily.
- Vice Principal takes pro-active roles.

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

### **INTERNATIONAL STUDIES**

Highlights:

- Government Collaborations.

Areas of Improvement:

- Keeping a great pool of outstanding alumni in different international institutes and universities, this institute is recommended to establish collaboration with renowned universities like Oxford University, Cambridge University, the University of Leeds, Stanford University, Harvard University, Sheffield University, etc., for active students and faculty exchange programs.

### **IQAC CELL**

Highlights:

- Reflects concerted efforts, with a well-defined structure.
- Timely submission of AQAR.
- Very active in promoting quality of the institution by way of sensitising faculty members for doing research and publication and by organising seminars and conferences periodically.

Areas of Improvement:

- Should ensure perfect matching of information and data in both physical and virtual documents.
- Every piece of information is to be backed up by evidence as per Standard Operating Procedures.
- Requires more rigorous documentation of the review process for quality enhancement.

### **ACADEMIC COUNCIL**

Highlights

- Functioning well. Resolutions are well drafted, updated regularly and maintained meticulously.

Areas of Improvement:

- May consider a more automated system.

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

### **Ph.D. CELL**

#### **Observations:**

- Has been in operation since 2015.
- Ph.D Programme is offered in Physics, Biotechnology, Microbiology, Commerce, Computer Science, Bengali, English, Economics and Political Science.
- Number of Supervisors is 62, Number of Ph.D awarded is 42 and Number of Enrolled / Registered Scholars is 63.
- iThenticate and DrillBit are used for plagiarism checking.
- After the award of Ph.D degree, all theses are immediately forwarded to the university for their uploading to the Shodhganga portal.

#### **Areas of Improvement:**

- Need to keep track of the Calcutta University Ph.D. Regulations (2022) and make relevant additions and alternations.
- Regarding the RAC, should strictly follow the stipulated designations of the External Members (Professors and Associate Professors only).
- Credit points may be increased from 13 to 16, at least two credits to be allotted for Research Ethics in the syllabus of the course work.
- For exempting the course work for having MPhil Degree the above stipulation of credits must be checked. Deficient credits if any is required to be completed in the Institutional Framework.
- Marks may be increased from 200 to 400 marks.

### **3. ACADEMIC DEPARTMENTS**

#### **STATISTICS & DATA SCIENCE**

##### **Highlights:**

- Good Faculty Profile.
- Teachers are dedicated to teaching.
- The master's Program in Data Science is an excellent program for the department.
- The department has organized good workshops.
- Strong Alumni Profile

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

### **Areas of Improvement:**

- Industry representatives should be stronger in the Board of Studies, especially considering the Data Science Course.
- Teachers should focus on writing research papers in UGC-CARE/Scopus/SCI indexed journals.
- UG syllabus should be designed in consultation with PG department considering NEP-based syllabi.
- Collaboration with other departments except Computer Science is missing.
- International Collaboration is lacking.
- Industry Collaboration should be expedited as Data Science is the core PG course.
- Inter-department collaborative projects for external funding may be encouraged.

### **COMPUTER SCIENCE**

#### **Highlights:**

- Faculty Count is good
- Teachers are dedicated to teaching
- Courses both UG and PG is well structured
- The Ph.D. program exists.
- Has good industry connected.
- Strong Alumni Profile
- The department has organized good workshops, and there was a good representation of industry in these workshops.
- Bridge course for PG students who have a BCA background.
- Collaborating with multiple departments of the college, such as Statistics, Commerce, and Biotechnology.

#### **Areas of Improvement:**

- International Collaboration is very less.
- Teachers should focus on writing research papers in UGC-CARE/Scopus/SCI-indexed journals.
- The department should have more outreach activities in the digital transformation domain for the various societal problems.
- The department has a Ph.D. program, but the department's research profile is not well stated in the presentation. The department should come up with research domains in cutting-edge technologies and applications.
- International Collaboration is lacking.
- Industry Collaboration should be expedited as Data Science is the core PG course.
- Inter-department collaborative projects for external funding may be encouraged.



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### **CHEMISTRY**

#### Highlights:

- Good Equipment facility and its utilization by students and faculty members.
- Good publication profile of faculty members.
- UG students' publication in Scopus indexed impact factor journals.
- Syllabus oriented to expose students to instrumentation skills in applied interdisciplinary development of applications

#### Areas of Improvement:

- The overall presentation of the department, highlighting Key Features and State-of-the-Art Practices to be done.
- Outreach program on SDG goals, such as Environment, Food Quality and Security, and Human Health, needs to be planned.
- International Collaboration is lacking.
- Industry Collaboration is lacking.
- IPR generation needs to be focused.
- Short-term skill-based courses for students should be started.
- The department must take the initiative for procuring an alcohol permit.
- Lab attendant skills should be developed.
- The students' dropout after the publication of results in professional courses can be avoided if the dates of admission are scheduled later.
- The Department should approach reputed institutes through the College authorities for teachers' training so that they can disseminate whatever they learn to their colleagues and students.
- The Department should decide whether it would offer a postgraduate course, now that the duration of the course is reduced to one year. Given the faculty and the resources at its disposal, the Department may think of establishing a specialized research centre (maybe in Nanotechnology or any of its branches) and explore funding opportunities.

### **BIOTECHNOLOGY**

#### Highlights:

- Syllabus revised in 2023.
- Commendable Student's progression.
- High percentage of students qualifying in NET and equivalent examinations in Life Sciences.
- Students encouraged to read reviews/papers on teacher teacher-assigned topic related to the syllabus and then discuss the same in the class moderated by the teacher, similar to that of the class audit.
- There is more or less 100 percent placement.

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

### **Areas of Improvement:**

- Revive the Institutional Bio-Safety Committee (DBT).
- Laboratory Space Problem.
- Ph.D. Scholarships.
- Corporate tie-ups.
- Lack of Consultancy Projects.
- The Department should approach reputed institutes through the College authorities for teachers' training so that they can disseminate whatever they learn to their colleagues and students.

## **ECONOMICS**

### **Highlights:**

- External paper setters set question papers which are aligned to the syllabus coverage.
- The Department does not maintain a database of past students who have qualified in NET/SET examination.
- Faculty publication has been dipping in the last 2-3 years.
- While the students intern in industrial houses, plans must be put in place to sustain the interface, widening the opportunities of future placement.
- While the individual teachers have their publications and projects, all this may not have left many footprints of the Department as a whole.

### **Areas of Improvement:**

- Journals or volumes to be published in collaboration with renowned publishers.
- Socially relevant outreach programs may be organized.
- While the journal is a good forum for the students, the members of the faculty may be discouraged from publishing their works in this in-house journal.

## **MULTIMEDIA**

### **Highlights:**

- Robust integrated 5-year PG Program.
- Excellent Infrastructure.
- Good Faculty.
- Well-placed students.
- None of the members of the faculty holds a PhD degree, although a few of them have impressive and innovative publications. Young members of the faculty must be encouraged to enrol and register for PhD programmes.

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

### **Areas of Improvement:**

- Multimedia has the potential of training early career professionals from industry and earning revenue for the College. Students can create promotionals for the government and even other industrial houses and can earn money for the Department by selling them. The money may be spent on purchasing high end technologies and instruments. This will help meet the rising cost and keep the Department updated with time.
- The Department should work for greater interaction with other colleges. MoUs may be signed for organizing faculty exchanges and holding seminars and conferences with them. Funding opportunities may be explored from the industry.

### **BA IN SOCIAL SCIENCE AND HUMANITIES AND COMMUNICATIVE ENGLISH**

#### **Highlights:**

- Syllabus varied and multidisciplinary with impressive balance.
- Everyday orientation in pedagogy.
- Strong extracurricular activities, including sports.

#### **Areas of Improvement:**

- May explore the scope of introducing sports management as a field of study.
- This department may be upgraded in future to a 5-year integrated course on Liberal Arts Department. No decision should be taken hastily. But small steps may be taken in that direction. Very few universities and colleges in India offer this. The college may think of setting up a planning committee.
- Because the students come from challenged background, the teachers have been doing good work by improvising and experimenting with a variety of teaching methods to reach them, which go unnoticed. Some of them shared their experience with the team members. Could this work be aligned with the Department of Education so that teaching methodology for the challenged and underprivileged students could be honed and chiselled.
- The college should also facilitate inter-campus mutual exposure at the level of students so that the so-called hierarchy between them could be overcome.

### **MASS COMMUNICATION & VIDEOGRAPHY, FILM STUDIES & JOURNALISM**

#### **Highlights:**

- Reasonably good setup for Practical.
- Good classroom infrastructure.
- Commendable Student achievements.

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

- Career progression is commendable.

Areas of Improvement:

- Exact data about the alumni.
- Space crunch.
- Should Start PG Program.
- Record maintenance of meetings needs to be more organized. (Uniform College Practice Required).
- Internships to be given more effort.
- Journals in collaboration with other publishers to be brought out.
- Tie – ups and collaborations needed to bring funds.
- MDS floated by MCV may be popularized among Commerce and Science students.

### **BENGALI**

Highlights:

- Innovative course structure and pedagogy, with stress on literature-society interface and translation.
- Skill- and industry-oriented with a focus on book publishing and computer applications.

Areas of Improvement:

- Need to address the lack of publications in UGC CARE-listed/Scopus-indexed journals.
- Should look for funded research projects.
- Better documentation of academic events and activities is required.
- Intersectionality with Multimedia and Mass Communication should be encouraged for regular teaching classes.
- Original software for Bangla font, like, LIPIGHAR, may be made available.

### **SOCIOLOGY**

Highlights:

- Energetic faculty.
- Existence of one research project.
- Existence of intramural research project.
- Impressive number of academic events, including seminars and lectures.
- Having student-centric publication in the form of a magazine.
- Faculty contribution to MOOC.

Areas of Improvement:

- Need to explore more funded projects (such as from the ICSSR) from India and abroad.
- Improve documentation of academic events and activities, including virtual links.
- Faculty required to publish in UGC CARE listed/Scopus-indexed journals.
- May introduce students' blogs.

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

- May develop senior-junior interface among existing students.

### **MICROBIOLOGY**

#### Highlights:

- Student-centric research with UG students publishing in journals with impact factor.
- Paper presentation of students.
- Commendable Student achievements and progression to premier national and international institutes.
- Patent by students.
- Extramural funding, viz. DBT grants.
- Significant Consultancy inflows.

#### Areas of Improvement:

- Revive Institutional Bio-Safety Committee (DBT) with immediate effect.
- Laboratory SPACE Problem.
- Journal to be care listed.
- Collaborate Journal Publication with some publishing house.
- Corporate tie-ups.

### **PHYSICS**

#### Highlights:

- Good faculty strength and research profile of the faculty members
- Department has Astronomy Centre for research, training and outreach program.
- Virtual Laboratory has been developed.
- UG students publish in Scopus indexed journals
- Strong Alumni Profile.
- Good Outreach programs.

#### Areas of Improvement:

- National and International Collaboration needs to be enhanced.
- Ph.D. areas need to be highlighted in the presentation document. (Ph.D. areas need to be highlighted)
- Student research publications need to be highlighted in the departmental presentation
- Linux based computational facility and HPC, either cloud-based/ on on-premises, is lacking.
- IPR generation needs to be focused.
- Teachers should submit articles/courses through SWAYAM and MOOCS.
- There is a need for a special drive for extramural projects.

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

### **MATHEMATICS**

#### **Highlights:**

- Good faculty strength and research profile of the faculty members
- Good presentation document
- Strong Alumni Profile.
- UG students publish in Scopus indexed impact factor journals
- Good student progression for higher studies to reputed institutions
- UG Student Seminars encouraged

#### **Areas of Improvement:**

- National and International Collaboration needs to be enhanced.
- Programs like the Olympiad could be a good avenue for the department.
- Departmental faculty is advised to apply for both intramural and extramural grants.
- Planning for the development of AI aspects related to mathematics should be done.

### **POST GRADUATE AND RESEARCH DEPARTMENT OF COMMERCE (MORNING)**

#### **Highlights:**

- The largest and the most renowned Commerce department in the country.
- Reasonably good number of faculty members with Ph.D.
- Student-teacher collaborative publications.
- Good mentoring structure.
- Student participation in case studies.
- Faculty publication commendable.
- Good number of entrepreneurial aspirations from each batch.
- Student Appraisal process properly followed.

#### **Areas of Improvement:**

- Consultancy to be encouraged.
- The college should particularly address the problems that students from outside the state in general and from the Northeast face in particular.
- Projects of individual members of the faculty should be shown under one particular Department. Otherwise, there is the danger of double or more accounting of the same project across Departments.
- Funding opportunities should be diversified. Government funds or funds offered by the statutory bodies should be explored.
- The syllabus should incorporate aspects of the Indian Knowledge System. The college can think of designing courses across subjects at the pan-college level for the students. This will reduce – if not arrest - the repetition and wastage of human resources.
- Participation in a Refresher Course conducted by UGC approved institution may be encouraged

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## **ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24**

- Intra Mural Project Approval Board may have the ex-officio presence of the HoD/VP

### **DEPARTMENT OF EDUCATION**

#### Highlights:

- Faculty with multidisciplinary orientation.
- B.Ed Programme is offered to 100 students (two units, 50 each unit) as per NCTE requirement. M.A. in Education is also being offered.
- Matured students with varied disciplinary backgrounds.
- Research Journal with ISSN.
- Student magazine.
- A Good number of co-curricular activities.
- Collaborative Research Survey is also undertaken.

#### Areas of Improvement:

- Need to create a better database, preferably in digital form, of all activities, both curricular and extra-curricular.
- Faculty need to write articles in UGC CARE-listed/SCOPUS-indexed journals.
- May start a student's blog.
- Should look for greater inter-departmental pedagogical collaborations.
- Strong placement and counselling drives for students.

Students: Very mature and articulate. Wonderful evidence of critical thinking. Their demands include the following:

- A smart classroom for the B.Ed. department is needed as it is a professional course
- Due to the delay in the result publication of the other Universities, the admission and academic process here is affected, so necessary steps to be taken.
- The PhD thesis of the faculty members should be kept in the departmental archives.

### **POST GRADUATE AND RESEARCH DEPARTMENT OF COMMERCE (EVENING) AND BMS AND MCOM DEPARTMENT**

#### Highlights:

- Teachers are dedicated for teaching.
- Teachers should focus on writing research papers in UGC- CARE listed Journal.
- Very good infrastructure and support system.

#### Areas of Improvement:

- The practice of including unpublished works of the faculty members under 'copyright publications' should be discouraged as these copyright publications are not added up to calculate one's API score. In a larger sense, this also deprives the wider academic community of reading these works.



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- Encourage faculty members to publish in reputed journals.
- Students are in a dilemma (NEP – 3 years or 4 years), whether a 3-year or a 4-year degree course will enhance their employability. Students may be enabled to weigh each option in this regard, as they are unclear about the difference between a 3-year and a 4-year degree.
- Mentor-Mentee ratio is poor with average time available per mentor is 10 minutes in over two weeks.
- A specific placement cell for the students of this department may be opened instead of asking them to compete with students from other subjects.
- Syllabuses are very theoretically oriented. There is very little 'practical-oriented' knowledge.
- Students are thoroughly ignorant of such quasi-judicial bodies as ICC, Equal Opportunities Cell and so forth. Greater publicity should be given to these committees amongst the students and a workshop may be organized in the very first week of their entry with the purpose of gender sensitization etc.

### **ENGLISH**

#### Highlights:

- Dynamic faculty.
- Good teacher-student ratio.
- Use of films as out-of-the-box pedagogical approach.

#### Areas of Improvement:

- The PhD Programme in the Department at present seems to have reached a point of saturation in the sense that the Department will not be able to offer the Programme in the next 2-3 years, as all the supervisors have reached their quota. The continuity of the Programme must be maintained. As a step towards it, the number of PhD candidates may be reduced.
- The Department has been experimenting with different courses to enhance the employability of the students. But the funding source remains the college. Funding opportunities from outside the college may be explored – initially by organizing, maybe self-financed, collaborative workshops/seminars with publishing houses.

### **POLITICAL SCIENCE**

#### Highlights:

- Good combination of senior and young faculty members.
- Syllabus reasonably balanced with theoretical and empirical concerns.
- Holds periodic seminars, webinars and conferences on relevant themes.
- Publishes departmental journal.



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### **Areas of Improvement:**

- The department has been offering a self-financed Human Rights course. But similar courses on Psephology, Leadership Training, etc., may be offered on a self-financed basis.
- There is scope for aligning the syllabus with the Indian Knowledge System.
- The dropout rate in the rural campus is very high. There should be orientation workshops to bring the students back to the campus.

## **4. STUDENTS, SUPPORT STAFF AND ALUMNI**

### **Meeting with Students**

#### **Highlights:**

- The mentors have a bias against the 'weaker' students as much as the 'weaker' students do not feel encouraged to meet their mentors. We are not sure if there is any discrimination. But the college should take steps to nip this in the bud.
- There was some concern against the question pattern. The 5-mark questions require short answers too short to probe the students' depth of knowledge. NEP has given some direction in this regard. The college should deliberate on the question pattern and align it as much as possible with it.
- There was an overall urge for including 'practical-oriented knowledge' in lieu of overtly theoretical knowledge. While being asked, a student said that the ratio should be 60:40 in favour of theory. There was also a call for 'rationalization' of the syllabus. The syllabus of History seems scattered. It may be made more concise. Instead of spreading it thin, there should be greater emphasis on intense treatment.
- Examination dates should be carefully scheduled so that they do not clash with other professional examinations.
- Choice of DSEs for CBCS courses may be widened - in the absence of which DSE courses in one or two Departments have practically become compulsory courses.
- Department of Sports is reported to be subject of neglect in terms of lack of playground, playing instruments and tools etc. The examination dates often clash with those of sports.
- Much time is needed to complete the syllabus.
- The mentoring system is going on appropriately.
- Application-oriented teaching and practical exposure are needed.
- A larger number of library books are required to be made available.

### **Meeting with Support Staff**

#### **Highlights:**

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- Full ERP is required.
- Controller department may be segregated between confidential Section and general students Section.

### Areas of Improvement:

- Staff strength may be enhanced with greater administrative workload.
- There is space crunch particularly in the office of CoE. Old answer scripts that need to be preserved as per law may be preserved in other campuses.
- The office data are organized according to the administrative Departments. These may be brought under a centralized system.
- Sensitize the staff members with regards to the presence of various grievance cells and committees and details pertaining to them available on the college website.
- Gender sensitization workshops to be held.

## MEETING WITH HONOURARY SECRETARY, ALUMNI ASSOCIATION

- Placement needs greater push with wider visibility and sharing of information.
- Alumni Association may take a proactive role in organizing a three-day workshop on holidays on an experimental basis with distinguished alumni from industry, social sector, banking sector, mass media etc. to familiarize preferably First Semester students with alternative career options. This will help the students in making their choice of courses etc. The objective of the workshop will be – not to offer jobs so that students do not run the risk of perishing with too many options, but to connect them with the career options on an individual basis.
- Alumni network should be tapped by the college to work out MoUs with other educational institutions, both in India or abroad.

## 7. GENERAL RECOMMENDATIONS:

1. The policy of promotion / CAS as per extant UGC Regulations / State Govt. Order (as the case may be) is in place. However, the process of promotion / CAS is recommended to be conducted on time with active participation from the faculty members and the competent authorities of the institution.
2. To adopt the flexibility of the Academic Program under NEP, in respect of horizontal transfer of the credits, the “Regulations for Credit Transfer and Exemption” are recommended to be in place at the earliest.
3. A good system of intramural funding is in place. However, the Academic Departments should explore the possibility of getting more extramural funding from the different National and International Funding Agencies, like DST, DBT, MOES, DAE, etc.

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4. A good number of First-Degree Professional Courses are being offered by the institute. The institute should explore the possibility of offering those First-degree Professional Courses as an Internship-embedded program as per the recent UGC Regulations. The institute may also explore starting a new Internship Embedded Program under the same Regulation.
5. The existing Entrepreneurship Development Cell is recommended to be upgraded to a full-fledged incubation center, and a linkage with the West Bengal State DST and IISER, Kolkata (GOI Nodal Centre) is recommended to be established for patenting and commercializing the research outcomes of the laboratories / the institution.
6. A Central Inventory Management System is recommended to be maintained.
7. As the system of engagement of Professor of Practice is in place under NEP guidelines 2020, the institution may explore the possibility of engagement of professors from international universities as well for the same.
8. An ICT-enabled mentorship app may be introduced.
9. Grievance Redressal Mechanism (ICC, SGRC, EOC, IC-PWD, etc.) is in place. Students' satisfaction index is high. However, appropriate measures to make it visible in the light of the UGC Guidelines may be undertaken.
10. In view of a great pool of outstanding alumni working in different international institutes and universities of repute, this institute is recommended to establish collaboration with renowned universities like Oxford University, Cambridge University, the University of Leeds, Stanford University, Harvard University, Sheffield University, etc., for active students and faculty exchange programs.
11. Sensitization program of the activities pertaining to the research ethics committee to be made compulsory.
12. The college has very expensive high-tech equipment and instruments. Maintenance of these may strain the college resources. Limited commercial use of these resources with meticulously framed rules may be introduced to meet the running cost.
13. International and National level collaboration to introduce exchange of culture and curriculum may be visualized.
14. Students are thoroughly ignorant of such quasi-judicial bodies as Internal Complaint Committee (ICC), Student Grievance Redressal Committee (SGRC), Anti-Ragging Committee, Equal Opportunities Cell and so forth. Greater publicity should be given to these committees amongst the students and a workshop may be organized in the very first week of their entry with the purpose of gender sensitization etc.

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## ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24

### Schedule for Academic Audit 2025

Day 1 – 07.04.2025

Time	Schedule							Venue
10:00 – 10:30	Inauguration							Room 15 1 <sup>st</sup> Floor
Time	Schedule	Venue	Time	Schedule			Venue	
10:30 – 11:30	Visit to Controll ers' Office	1st Floor	10:30 – 11:30	Visit to Facilities – Solar Power Generation, Rain Water Harvesting, Canteen, etc.			College Premises	
Time	Schedule	Venue	Time	Schedule	Venue	Time	Schedule	Venue
11:30 – 12:15	Statistic s & Data Science	4th Floor Data Science Lab	11:30 – 12:00	Sports Departme nt	Room 15 1 <sup>st</sup> Floor	11:30 – 12:15	Chemistry	Chemistry Lab
12:15 – 13:00	Comput er Science	4th Floor	12:00 – 13:00	Visit to PhD Cell, IQAC Office and Academic Council Office	R. K. Hall 2 <sup>nd</sup> Floor	12:15 – 13:00	Biotechnology	4th Floor
13:00 – 14:00	Lunch							
Time	Schedule	Venue	Time	Schedule	Venue	Time	Schedule	Venue
14:00 – 14:45	Econom ics	R. K. Hall 2 <sup>nd</sup> Floor	14:00 – 15:00	Mass Communicati on, Film Studies and Journalism	4th Floor	14:00 – 15:00	Micro- Biology	4th Floor
14:45 – 15:45	Multime dia	Jubilee Buildin g	15:00 – 15:45	Bengali	R. K. Hall 2 <sup>nd</sup> Floor	15:00 – 15:45	Physics	2nd Floor R. K. Hall Lab

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15:45 – 16:30	B.A. General	R. K. Hall 2 <sup>nd</sup> Floor	15:45 – 16:30	Sociology	R. K. Hall 2 <sup>nd</sup> Floor	15:45 – 16:30	Mathematics	Room 15 1 <sup>st</sup> Floor
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### Day 2 – 08.04.2025

Time	Schedule	Venue	Time	Schedule	Venue
10:00 – 11:00	Meeting with selected faculty members of B.Com (Morning) Department	Room 15 1 <sup>st</sup> Floor	10:00 – 10:30	Meeting with VP, Arts and Science	Arts and Science Office
11:00 – 11:30	Meeting with B.A. / B.Sc. /M.Sc. Students	R. K. Hall	10:30 – 11:30	Visit to Central Library and Wellness Centre	Library Building
11:30 – 12:30	Meeting with Support Staff	R. K. Hall	11:30 – 12:30	Education Department (including meeting with VP, Faculty Members and students)	Education Building
12:30 – 13:00	Meeting with Honorary Secretary, Alumni Association	Room 15	12:30 – 13:00	Meeting with VP, B.Com. Morning	B.Com Morning Office
13:00 – 14:00	Lunch				
14:00 – 15:00	Meeting with selected faculty members of B.Com (Evening), BMS and M.Com Departments	R. K. Hall 2 <sup>nd</sup> Floor	14:00 – 14:45	Visit to Central Research Facility	Chapel Building
15:00 – 15:30	Meeting with B.Com (Evening), M.Com and BMS Students	R. K. Hall 2 <sup>nd</sup> Floor	14:45 – 15:30	Visit to Computer Centre	Chapel Building
15:30 – 16:00	Meeting with Alumni and Parents	Room 15	15:30 – 16:00	Visit to Goethals Library	Chapel Building
16:00 – 16:30	Meeting with VP, Commerce Evening and BMS	Commerce Evening Office	16:00 – 16:30	Visit to Finance Lab.	Jubilee Building

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## ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24

### Day 3 – 09.04.2025

Day 5 - 07.04.2025								
Time	Schedule	Venue	Time	Schedule	Venue	Time	Schedule	Venue
10:00 – 10:30	Meeting with selected B.Com (Morning), Students	R. K. Hall	9:30 – 10:30	Visit to College Hostel	College Hostel	10:00 – 11:00	Visit to Central Instrumentation Facility	4 <sup>th</sup> Floor
10:30 – 11:00	Meeting with Dean of International Studies	Room 15	10:30 – 14:00	Visit to Ajoy Nagar Campus	Ajoy Nagar Campus	11:00 – 11:30	Observatory	4 <sup>th</sup> Floor
11:00 – 11:45	Placement Cell and NCC Departments	Jubilee Building				11:30 – 12:15	English	R. K. Hall 2 <sup>nd</sup> Floor
11:45 – 12:15	EDC	Jubilee Building				12:15 – 13:00	Political Science	R. K. Hall 2 <sup>nd</sup> Floor
12:15 – 13:00	NSS Department	Jubilee Building						
13:00 – 14:00	Lunch							
14:00 – 15:30	Preparation of Report							Room 15A 1 <sup>st</sup> Floor
15:30 – 16:00	Exit Meeting							Room 15 1st Floor



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## ACADEMIC AND ADMINISTRATIVE AUDIT REPORT FOR THE ACADEMIC YEAR 2023-24

### SIGNATURES:

Prof. Samir Kumar Das  
Professor  
Department of Political Science  
University of Calcutta

Prof. Subir Dasgupta  
MAULANA ABUL KALAM AZAD  
PRESENT Honorary, Emeritus Professor  
Ramakrishna Mission Vidyamandir  
Belur Math, Dist.- Howrah-711202

Prof. Subir Maitra

Prof. (Dr.) Jayanti Das  
Professor  
Department of Education  
University of Calcutta

Prof. Debajyoti Konar

Prof. Sarmistha Banerjee

Rev. Dr. Dominic Savio SJ

Principal

Principal

St. Xavier's College  
(Autonomous)  
Kolkata

Date -

09 APR 2025