

ANNUAL REPORT

2004-2005



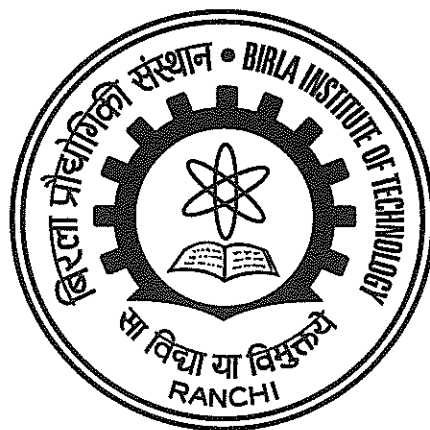
BIRLA INSTITUTE OF TECHNOLOGY
(DEEMED UNIVERSITY)
MESRA, RANCHI, JHARKHAND
INDIA



CONVOCATION 2004 - 2005

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प्रार्थना

यं शैवाः समुपासते शिव इति ब्रह्मोति वेदान्तिनो
बौद्धाः बुद्ध इति प्रमाणपटवः कर्तेति नैय्यायिकाः।
अर्हन् नित्यथ जैन शासनरताः कर्मेति मीमांसकाः
सोऽयं नो विदधातु वाञ्छित फलं त्रैलोक्यनाथो हरिः॥

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VICE-CHANCELLOR'S REPORT

The Institute during the period under reference continued its practice of expanding and at the same time consolidating its position as a leading technical institution of our country providing cost effective quality education in the technical and professional disciplines. The Institute attended international recognition by establishing formal collaborative student exchange mechanism with several leading universities abroad. The faculty members were accorded recognition through grant of research project funding from various national agencies, like UGC, CSIR, DST etc. The acceptability of the products of the Institute continued to be of the highest level administered by a high-level campus placement offers received by them. The effort for developing quality of faculty by facilitating their participation in different national and international activities continued and seven faculty members have been given opportunity to pursue Doctoral level programmes in different leading institutions of the country.

The Institute has been celebrating its 50th year of existence i.e., Golden Jubilee, through a series of programmes. The inauguration of the Golden Jubilee Celebration was held on 15th July, 2004 and graced by the Chancellor, His Excellency Shri Ved Prakash Marwah. The programme was attended by more than 300 ex-students amongst others. Subsequent programmes have been held in the cities of Delhi, Bangalore, Chennai, Kolkata and Mumbai, wherein more than 1300 ex-students participated and put forward their observations regarding the current status of the Institute and their suggestions for further improvement. Eminent alumni like, Shri Arup Roy Choudhary, CMD, NBCC, Shri Avinash P. Gandhi, Chairman, FAG Bearings India Limited have delivered lectures as a part of the Golden Jubilee Lecture series. Prof. Asis Dutta, a leading life science research personality in India and the former Vice-Chancellor of JNU, has also delivered a lecture in the same series. Dr. Pierre Coulet of the Institute Non-Lineaire de Nice and Dr. Richard Taillet of the University of Savoie, two renowned Physicists of France also delivered Golden Jubilee Lecture in the series, dealing on the concept of the 'Developments of the Science of Motion' and 'Antimatter in the Universe'.

As a part of the Golden Jubilee celebrations actions have been initiated to convert the Open Air Theater into the Golden Jubilee Auditorium with a sitting capacity of 3000. It is expected that this Auditorium would become operational during Aug./Sept. 2005. I am further glad to report that His Excellency the President of India has accepted our invitation to grace the apex Golden Jubilee function to be held at Mesra.

Keeping in line with the expansion of its academic programmes, the Institute continues its efforts of consolidating academic and support infrastructure in the form of equipment, learning research and space by spending well over Rs. 12000 lakhs during the period under reference.

The Institute continues its trend of introducing new Post-graduate programmes and during the period under reference, approval for introducing M.E./M.Tech. programmes in the area of (i) Computer Aided Analysis & Design, (ii) Polymer Engineering and (iii) Pharmacology specialization in M.Pharm. course has been obtained. The Department of Pharmaceutical Sciences has been recognized as the 'Quality Improvement Centre' for offering Post-graduate and Ph.D. programmes in the area of Pharmaceutical Science exclusively meant for teachers serving Pharmacy Colleges and Departments of Pharmaceutical Sciences/Engineering/ Technology of our country.

The Department of Electronics & Communication Engineering have been identified by the UGC under the Special Assistance Programme (SAP) of the Commission. The Department of Space Engineering & Rocketry has also been identified to receive support under the FIST programme of the Department of Science & Technology, Govt. of India. It is worthwhile to mention here that four other departments have already received similar support under FIST programme.

The Department of Production Engineering had initiated a publication of an international journal entitled "International Journal of Manufacturing Technology & Research" – the first international level journal to be published in the domain of Manufacturing Technology from India. The first issue of the journal was published in January 2005. It may be mentioned here that the department of Management already started publishing a national level journal "The Alternative".

The Institute continues its activities to strengthen its extension centers located at different parts of the country and abroad. As a part of its activities the Institute initiated construction of its building at its Chennai Centre. The Institute plans to build up a covered space of 4000 Sq.mtr. in the piece of land measuring 5 acres. The Institute has also created space of 2000 Sq.mtr. for its Kolkata Centre. The Institute also continues to develop its infrastructure at the existing centers. Additional space of 3200 Sq.mtr. and 3500 Sq.mtr. has been added to the extension centres at Noida and Jaipur respectively. The infrastructure of the Naini (Allahabad) Extension Centre is also being planned to be augmented. Computers

and other equipment costing more than Rs. 80.00 lakhs has been added to this extension centers. The Institute started offering 4-Yr. B.E. programme in Computer Science & Engg. as well as Electronics & Communication Engg. through its Jaipur Extension Centre. The course leading to the award of B.Sc. Animation Multi-media has also been introduced through its Noida Extension Centre. BBA and MBA programmes are also being planned to be added with the existing BCA and MCA programmes at Kolkata Extension Centre from the coming academic session i.e. 2005-06.

An International Research Centre for Fourth Generation of Mobile Communication Systems (IWAG-2004) has been established at our Extension Centre at Noida. This international research center will act in close cooperation with the International Centre for Wireless and Mobile Communication (ICWMC) at B.I.T., Mesra and Centre for Tele-infrastructure (CTIF), Aalborg University, Denmark. The IRC - 4G Centre was inaugurated by Mr. Helge Sander, Hon'ble Danish Minister of Science, Technology and Innovation. This Centre is likely to provide a unique platform for Indian research personnel in the area of wireless and mobile communications to act in close collaboration with the World Universities in the domain.

The 3rd International Centre of the University at Royal College of Applied Science & Technology at Ras Al Khaimah (UAE) will become operational from August/September this year. This would be in addition to the existing international centers located at Bahrain and Muscat.

The Institute attained international recognition by having all its diploma programmes accredited by the City & Guilds of London Institute, U.K. – a leading international accrediting institution in the field of technology, managerial and professional studies. The Institute has also signed MOU for academic collaboration with Purdue University of USA and Leeds University of U.K. The scope of the MOU includes cent percent credit transfer for students while opting for these Universities and also a provision of joint and or double degree provided from both the Universities in certain identified disciplines. The University of Aalborg, Denmark has also agreed to provide the opportunities to post-graduate students a specialisation in the Wireless and Mobile Communications to undertake their project work with them. Keeping in view the anticipated acceleration of mobility of students in international arena the Institute has included the studies of French language in few of its curriculum. This language programme is being organized with the assistance of 'Alliance Francaise'.

During the year under review, several academic interaction programmes in the form of Seminar/Symposium/Workshop were organized in the Institute. This year such activities started with a National Workshop on "Curriculum Development for Technical Education" was

held by the Department of Production Engineering during April 3-4, 2004 at the Institute premises. The AICTE sponsored Short-Term Training Programme on “Advances in Aerospace Engineering and Rocket Propulsion” was organized by the Department of Space Engineering & Rocketry during June 28-July 10, 2004. ISTE-AICTE sponsored Short-Term Training Programme on “Recent Advances in Optical Communication and Fiber-Optic Sensors” was held in the Institute jointly by the Departments of Electronics & Communication Engineering and Applied Physics between June 28 and July 10, 2004. A Refresher Course on “Bioinformatics” was held at our Lalpur Extension Centre by the Department of Biotechnology during Aug. 30 to Sept. 4, 2004. National Workshop on “Architecture for the Challenged – Approaching towards Normalization, Integration and Barrier-free Environment” was organized in collaboration with National Institute of Orthopaedically Handicapped, Kolkata under the Ministry of Social Justice & Empowerment, Government of India, by the Department of Architecture between Sept. 22 and 23, 2004. National Conference on “Information Resource Management in Digital Environment” was held by the Department of Information Science & Library during Oct. 1-2, 2004. National Seminar on “Role of Geoinformatics in Decentralised Planning for Better Governance” was held between October 7 - 8, 2004 by the Department of Remote Sensing. ISTE sponsored Short-Term Training Programme on “Knowledge Management – Implication in Indian Business” was held by the Department of Management during December 6 – 18, 2004. Workshop-cum-Training Programme was held on “Instrumental Methods of Chemical & Drug Analysis” by the Department of Pharmaceutical Sciences between January 27-30, 2005. International Conference on “Art & Architecture of Eastern India and Bangladesh” was organised by the Department of Architecture during Feb. 8 – 11, 2005. This International Conference was well attended by more than hundred delegates amongst which six from Europe and fifteen from SAARC countries. The Jharkhand Government also supported this conference through their Departments of Art & Culture and Tourism. National Seminar on “Green Productivity and Sustainable Development” was held between 10th and 11th March, 2005 by the Environmental Science & Engineering Group of the Institute. National Conference on “Trends and Opportunities” in the field of Bioprocess Engineering & Biotechnology was organized in the Institute by the Department of Biotechnology during 17th – 19th March, 2005. A host of well-known experts in the field of Biotechnology and Bio-processing attended the conference.

The Institute recognized the need for training and re-training for its faculty members for embarked upon a very serious faculty development exercise as a part of its exercises. During the period under reference the Institute extends financial support to 85 of its faculty

members to attend many seminars, symposia, workshops and short-term courses held within India and supported five faculty members to attend similar programmes abroad.

The XV Convocation of our Institute was held on 26th February, 2005 in which a total of 1666 students were awarded several degrees and diplomas. Out of which 26 students received Post-Matric 3-yr. Diploma, 1016 students were recipients of Under-graduate degrees, 616 Post-graduate degrees, 3 Post-graduate diplomas and 5 Doctoral degrees. It is worthwhile mentioning here that the recipients includes successful candidates from the first batch of Post-graduate Degree for the programmes in (i) New Material & Processing Technology, (ii) Environment Science & Engg. and (iii) Quality Engg. & Management. I congratulate all the recipients of degrees/diplomas and wish them a happy and prosperous professional career.

The Institute organized during this period a few Games & Sports activities. The N.E.Z. Tennis Tournament, Chetan Devraj Memorial Cricket Tournament and All India Inter Technical Athletic Meet were organized by the Institute during the period under reference. The Institute's Football Team, Cricket Team, Tennis Team and Athletics Team participated in all the above mentioned events and also in different intramural and extramural collateral activities including cultural events and competitions. They won several distinctions in many such events held at different institutions. The students of our Institute organised the Annual Cultural Event '*BITOTSAV*' in the campus from February 26 to March 1, 2005.

For the B.E. (Mech./Prod.) students of our Institute, Larsen & Toubro Limited has constituted an annual HENNING AWARD (in cash and a certificate of merit) for Technical Excellence for the best two technical papers related to the fields of L&T. Two P.G. students of the Department of Mechanical Engineering were selected by L&T to undertake their P.G. thesis at L&T Workshop.

The Institute acknowledges the great support it received from all its well wishers including Government of India, Government of Jharkhand and statutory bodies like University Grants Commission, All India Council for Technical Education, Department of Science & Technology, Government of India, Department of Information Technology, Government of India and Defence Research Establishments for their continuous support and encouragement provided to the Institute during the period under report.

INTRODUCTION

The Institute was established as an All India Institute of Technical Education by renowned philanthropist and visionary industrialist, Late Sri B. M. Birla in July 1955. Initially it was started as an affiliated college of the erstwhile Bihar University and later in 1960 upon creation of new universities in the State, its affiliation was transferred to Ranchi University. In pursuance of the recommendation of the Education Commission, Government of India (1964-1966) and on the basis of the report of a Joint Selection Committee of the UGC and AUDIT, in March 1972, the institute was granted the status of an 'Autonomous' College by making special provision in Bihar State University Act. The Chancellor of the University of Bihar made the Rules for its governance.

The achievement of the Institute both in terms of research and excellent academic programme, led to its attaining the status of a Deemed University under section 3 of the UGC Act in August 1986.

The Institute has constantly improved on its technical facilities as well as academic in order to keep pace with the fast changing technological scenario, thereby acquiring a pride of place amongst the institutions offering technical education in the country. This Institute has entered the fifteenth year of its establishment and to reassure its commitment to impart quality education, the year – long Golden Jubilee Celebrations was formally flagged off on July 15, 2004.

Administration

B.I.T. Mesra is a "Deemed University" under Sec. 3 of the U.G.C. act 1986. It functions under the overall supervision, direction and control of a high power Board of Governors, comprising representatives of the Ministry of Education, Government of India, the U.G.C., the State Government, The Chancellor, the A.I.C.T.E., The Hindustan Charity Trust and the Institute Faculty. Shri G.P. Birla is the Chairman of the Board of Governor's. The Governor of the state of Jharkhand is the chancellor of the Institute. Composition of the Board of Governors is given in Annexure.

The Technical Council decides the academic policy of the Institute. It controls and approves the curriculum, courses and the examination results. It appoints committees like Regulation Committee for Under-Graduate and Post-Graduate Courses, Semester Programme Coordination Committee, Admission Committee, Scholarship Committee, Student's Welfare Committee etc. and Departmental Board of Study to look into specific academic matters arising from time to time. The teaching, training and research activities of various departments at the Institute are constantly under review to both facilities and standards. The Vice Chancellor of the

Institute is the Chairman of the Technical Council. Members of the technical council are listed in Annexure. The composition of various departmental board of study are given in Annexure.

The Finance committee gives financial advice to the Institute. Similarly, the building and works committee advises the institute in matters relating to building works. The composition of these committees are given in Annexure.

Institute Campus

The Institute is fully residential and extends over 780 acres. The main building of the Institute covers an area of 30,000 sq. mtrs. and accommodates the various research and training laboratories, administrative offices and lecture rooms.

The Workshop annexure has covered area of 4,000 sq. mtrs. The laboratories and offices of the Department of Space Engineering & Rocketry are situated for security reasons in a sub – Campus, about half a Kilometer away from the main building. For the convenience of working Engineers to participate in Post-Graduate Programmes, a Technology centre was established in Ranchi City at Lalpur in 1976. The campus is self-contained amidst well-laid lawns, with its own protected water supply, marketing centre, dispensary, bank and schools.

Institute Building	Sq. mtrs.
• Main building & Administration block	3700
• Class room & laboratory, Drawing halls, Staff room's etc	19300
• Library block	2600
• Mini-Auditorium	450
• Space Engg. & Rocketry block including Explosive and Fuel cell	930
• Cryogenic laboratory (SER)	118
• Workshop sheds, General stores, Garage/Godown	3721
• Gymnasium	850
• Indoor Badminton Stadium	977
• Animal House	400
• R & D Building	7200
• Multi Purpose Halls	708
• Biotechnology Centre	3334
• Polymer Engineering	744
• Lecture Theater (Near completion)	1104
• Hotel Management Building (under construction)	

Residential Complex

- Staff quarters in different categories 372 Nos.
- Residential complex for supporting services:
Guards, Dairy, Shopkeepers, Washerman etc. 70
- Residential complex for supporting services (Near completion) 10

Hostel Accommodation

- Seven Boy's Hostel 1694 Rooms (single)
- Four Girl's Hostel 332 Rooms (double)
&184 Rooms (single)
- One Foreign Student's Hostel 152 Rooms (single)
- Boys Hostel (Near completion) 284 Rooms (single)
- Boys Hostel (under construction) 2 Nos. 456 Rooms (single)
- Research Scholar Hostel (under construction) 112 Rooms (single)

Guest Accommodation

The Institute maintains three Guest-houses. Two general purpose with 38 furnished rooms and one VIP Guest-Houses with 3 deluxe bedrooms to accommodate Guests appropriately.

Auditorium

To meet the growing needs of the community for public function there exist an Open Air Theatre of seating capacity 2500. This is being converted into Indoor Auditorium. The work is in the completion stage.

There is also a Mini-Auditorium with seating capacity of 450 in the administrative Block.

Games & Sports Complex

The Institute has a Gymnasium, which is spacious enough to arrange indoor games. Extensive playgrounds are provided for various sports. They are:

- Gymnasium including Multi Gym ----- 1
- Stadium for Tracks & Fields for Sports/Athletics ----- 1
- Cricket ground including net ----- 2
- Football grounds ----- 2
- Hockey grounds ----- 2
- Basket Ball courts ----- 4

• Volley Ball courts	-----	6
• Tennis courts	-----	6
• Badminton courts (three indoor & five outdoor)	-----	8
• Kho-Kho ground	-----	1
• Kabaddi ground	-----	1

Dispensary-Cum-Health Centre

1. No. of Beds : Male – 08, Female – 04.
2. Facilities Available : Ambulance, Pathological Tests, E.C.G., X-Ray, Immunization, National Programme (Pulse Polio Immunization Programme, Leprosy clinic, T.B. clinic, Immunization), Maternity & Anti-natal-check-up. Homeopathic medicinal facility, Family planning facility.
3. In case of any emergency, which is to be managed by super specialist in Intensive carecenter we refer the patient either to local Rajendra Institute of Medical Sciences, Ranchi or Apollo Hospital Erba, Ranchi. One of our Doctors accompanies the patient. We have liaison with the doctors of these two hospitals. Our doctor manages the case with Co-ordination of the those Hospitals.
4. Community Service- Treatment and supply of medicines to residence of 10 local Villages at free ofcost. One Rural Dispensary has been started for the local villagers under community health services by the Institute in a near by village. One doctor and one paramedical staff are posted there from 8 a.m. to 6 p.m. daily for the medical treatment of villagers.
5. One dispensary with two doctors and paramedical staff has been started functioning at Lalpur Extension Centre to fulfill the immediate medical requirements of staff and students of the center.
6. Specialist Facility – Services of specialist of Rajendra Institute of Medical and Sciences, Ranchi are available to the Hospital.
7. Staff - members and their dependants as well as students have been covered by Mediclaim for reimbursement of their medical expenses.
8. Hospital is open round the clock with the medical officer and two Para-medical staff on Duty shift wise.
9. Staff Position – Doctor – 4, Physiotherapist – 1, Pharmacist – 4, Dresser – 3, X-ray technician – 1, Pathological Technician – 1, Staff Nurse – 2, Computer Operator – 1, Clerk – 2, Attendants – 5.

Shopping Centre

A well-maintained Cooperative Stores provides the daily requirements of the campus of nearly 5,000 residents. Additional Shopping Complex is provided for sundry needs. The construction of a full-fledged Marketing Complex and Cooperative bookstore to meet the growing needs of the Campus has been completed. The annual commodities sold through these outlets of the campus exceeds Rs. 2 crores mark in value.

Others :

• Consumers co-operative stores	-----	375 Sq.mtrs
• NCC Block	-----	400 Sq. mtrs
Rifle Firing Range	-----	1 No.
NCC Parade ground	-----	1 No.
• Garage Cum Quarters	-----	200 Nos.

The Students Halls of Residence

The institute is completely residential and all the students are provided with a room in one of the hostels or Halls of Residence. The campus has eight hostels for boys and four separate hostels for girls. All the hostels are spacious and beautifully laid out in the serene and pleasant campus. The front portion has well maintained lawns with flowerbeds, elegant bushes and strategically planted ornamental trees. The interior of the hostel includes spacious Dining Halls, Common Rooms, Reading Rooms. Rooms located on both sides of the entrance. The rooms are constructed in a row with a wide veranda in all along the length with air gaps and balconies well set for common use.

The students are provided with a single-seated room furnished with steel cot, table and chair and a built-in almirah. The girls student avails a shared furnished room, which is quite spacious and airy. Each room has a cupboard, wardrobe and a sizeable rack. Indoor games like table tennis, carom and chess etc. are available in each hostel in common room. The reading room subscribes to a large No of magazines, periodicals and newspapers covering wide taste of reading of residents. The entertainment hall has also been provided with colour television set in each hostel.

Inter-hostel tournament in indoor and outer games, quizzes, competitions and adventure trips are very attractive feature of the hostel life.

The hostel night organised by the inmates is a memorable yearly event where students interact with the faculty members amidst cultural and music programmes, fun and frolic, in festive mood. The Halls are tastefully decorated to mark the occasion.

Each hostel has an Independent Mess, completely managed by the students through Mess committee members elected from among the residents themselves. The committee looks after the complete management including the Menu, preparation, purchases and billing under the supervision of the Superintendent/Assistant Superintendent of the hostels.

Students Intake

Courses & Degree Programmes

Currently the Institute is offering a variety of Programmes as detailed below

A. In Campus

Course	Intake Capacity	Duration of Course	Year of Introduction the Course
Bachelor Degree Courses			
1. Electrical & Electronics Engg.	50	4 years	1955
2. Mechanical Engg.	90	4 years	1955
3. Civil Engg.	60	4 years	1957
4. Electronics & Comm. Engg.	90	4 years	1964
5. Production Engg.	30	4 years	1964
6. Pharmacy	60	4 years	1972
7. Computer Science	60	4 years	1983
8. Architecture	20	5 years	1993
9. Polymer Engg.	25	4 years	1995
10. Information Technology	45	4 years	2001
11. Biotechnology	60	4 years	2002
12. Hotel Management & Catering Technology	60	4 years	2002

Master of Engg. Degree Courses:

Electrical specialization 1. Control system 2. Power system	24	2 years	1964
Mechanical specialization 1. Heat Power Engg. 2. Design of Mech. Equipment	12	2 years	1964
Civil specialization 1. Soil Mechanics 2. Structural & Foundation Engg.	24	2 years	1964
Electronics & Communication specialization 1. Instrumentation 2. Microwave	24	2 years	1965

Space Engg. & Rocketry specialization	24	2 years	1965
1. Rocket Propulsion			
2. Aerodynamics			
Quality Engineering & Mngt	25	2 years	2002
Comp. Added. Design & Drafting specialization	05	2 years	1999
1. Comp. Aided Analysis & Design			
2. Tribology			
Automated Manufacturing Process	18	2 years	
Software Engineering	15	2 years	2000
Master of Technology Programmes			
Remote Sensing	18	2 years	
Fuels & Combustion	25	2 years	2002
Computer Science	16	2 years	
Scientific Computing	16	2 years	2002
New Material & Processing	18	2 years	2002
Technology			
Environmental Science & Engg.	18	2 years	2002
Business Management specialization	120	2 years	1980
1. Marketing			
2. Finance			
3. Systems			
4. Industrial Management			
Master of Pharmacy specialization	30	2 years	1983
1. Pharm. Chemistry		2 years	1983
2. Pharmaceutics		2 years	1983
3. Pharmacology		2 years	1998
4. Pharmacognosy		2 years	1998
5. Pharm. Biotechnology		2 years	1998
Master of Computer Applications	60	3 years	1984
Master of Science Programme			
Bio-Medical Instrumentation	20	2.5 years	1992
Information Science	30	2 years	1993

Continuing Education (part time) Post-Graduate Programme

To enable working Engineers to update their technologies, the part-time Post-graduate Programme offers 3 level:

1. A certificate of Merit after Completing 6 units.
2. A diploma after completing 12 units.
3. Degree after completing 20 units.

B. Extension Centre

	Allahabad (U.P)	Jaipur (Rajasthan)	Lalpur, (Ranchi) (Jharkhand)	Kolkata (W.B.)	Noida (U.P.)	Chennai (T.N.)
Course						
B.E.	-	80	-	-	-	100
BCA	80	80	200		80	
BBA	40	40	200		80	
B. Sc.					30	100
MCA	45	45	105	40	45	
MBA			60		40	30
MBA (PT)	-	-	30		-	
MCA (PT)	-	-	30			
*M.Tech (CS), PT	-	-	30		-	
*M.E. (P.T)	-	-	*	-		
M. Sc. (I.T.)			30			

* Courses are offered subject to availability of minimum number of candidates for the programme and approval of the department.

C. Doctor of Philosophy programme

The Institute offers Research Programmes leading to Ph.D. Degree in all above disciplines.

Admission during 2004-2005

Student Enrollment.

During the academic year 2004-2005, a of total of 8094 students were registered in various courses. The branch-wise enrolled is detailed below.

A. Course	Full-Time	Part-Time
Bachelor of Engineering.	2718	-
Bachelor of Architecture	94	-
Bachelor of Pharmacy	158	-
Bachelor of Hotel Management & Cat. Tech	81	-
Bachelor of Nautical Sciences	174	-
Bachelor of Comp. Applications	1122	-
Bachelor of Business Administration	1291	31
Bachelor of Technology	-	65
BCA (Hons.)	2	
B.Sc. (M & A)	19	
Diploma in Technology	209	
Master of Business Administration	436	46
Master of Computer Applications	1063	87
Master of Pharmacy	44	-
Master of Engineering	131	5
Master of Technology	132	2
M.Sc	135	-
M.Sc (Information Technology)	49	-
Total	7858	236
Grand Total	8094	

B. Registration in Ph. D. Programme

As many as 189 students were pursuing the Ph.D. programme in the area of Engineering, Science, Pharmacy and Management during the academic session 2004-2005.

New intake in 2004-2005

In the academic year 2004-2005, 2948 fresh students were admitted in various disciplines. The branch-wise backup is given below.

A	Course	Full-Time	Part-Time
	Bachelor of Engineering	767	-
	Bachelor of Architecture	18	-
	Bachelor of Pharmacy	56	-
	Bachelor of Nautical Sciences	84	
	Bachelor of Hotel Management Tech	25	
	B. Sc. (M & A)	19	
	B. Tech. (PT)	-	64
	B.C.A.	384	-
	B.B.A.	613	25
	M.B.A.	256	19
	M.C.A	378	-
	M.E.	70	1
	M.Tech.	91	2
	M.Sc.	49	-
	M. Pharmacy	27	-
	Total	2837	111
	Grand Total	2948	

B. Enrollment in Ph.D. Programme –

Seventy-two new scholar registered for the Ph.D. Programme in the area of Engineering, Science, Pharmacy and Management during session 2004-2005. The details are given below.

SN.	Name of Scholars	Title of Thesis
1.	Mr. Raju Poddar	"Non Contact, Noninvasive Pathological Measurement Tomography"
2.	Ms. Shubha Rani Sharma	"Opatical Imaging of stratified Media using Optical Coherence Tomography"
3.	Ms. Richa Yadav	"To develop programme using appropriate techniques for knowledge management in hotel industry in metro cities of Rajasthan"

- | | | |
|-----|--------------------------------|--|
| 4. | Sri Devender Singh | "Impact of Information Technology in Competitive Business environment in Banking Sector" |
| 5. | Ms. Rachna Pratik, MBA | "Children's Preference for T.V. Commercials over main programmes - A case study of metro cities" |
| 6. | Ms. Shalini Srivastava, M.Com. | "The Role of Gramin Bank in the in the rural economy with special reference to Ballia District" |
| 7. | Mr. Abhaya Ranjan Srivastava | "Intellectual Property Rights- Issues and concerns for Indian Industries" |
| 8. | Mr. Ram Krishna Sarkar | "Study of induced non-linear optical fiber wave guides and devices" |
| 9. | Mr. Dev Ranjan Mukherjee | "Fuzzy approach to some Data Mining problems" |
| 10. | Mr. S. Vadivelan | "Computer aided screening and design of potential drugs from natural products" |
| 11. | Mr. K. Sridhar Patnaik | "Modelling & Designing Intelligent Systems for Pattern Classification" |
| 12. | Mr. Kanhaiya Lal | "Efficient Algorithms for Mining Association Rules in large Database" |
| 13. | Mr. S. Muthukumaran + | "A Study on Flow Patterns during Friction Stir Welding Process and the Heat Transfer Phenomenon" |
| 14. | Mr. Debasis Das, | "Tribological Behaviour of Infiltrated P.M. Journal Bearing" |
| 15. | Mr. Shyam Sundar Manjhi | "Non-linear pattern through Frontal Polymerization" |
| 16. | Mr. Ranvijay Kumar | "Processing and Application of Non-edible Oils as Bio-Diesel and Soap" |
| 17. | Mr. Varun Kumar Singh | "Removal of Toxic Metal Ions from Aqueous Wastes by Inorganic Particulates" |
| 18. | Dr. Gauri Shankar Tiwari | "Synthesis, Characterization and Controlled Drug Release Application of some Polymeric Biomaterials" |
| 19. | Mr. Ashish Chandra Singh | "Studies of Metal Ions Uptake Behaviour of some Newly Synthesized Chelating Materials" |
| 20. | Mr. Arun Kumar | "Fatigue Behaviour of Adhesive Joints in Composite Materials" |

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| 21. | Mr. Kiran Kumar Pattanaik | "Grid Resource Management and Application Scheduling" |
| 22. | Mr. Kuntal Mukherjee | "Software Quality Assurance in Small and Medium Sized Industries in India" |
| 23. | Mr. Sushanta Kumar Ghosh | "Expert-Based Software Quality Examination Using Unsupervised Learning" |
| 24. | Mr. Indrajit Mukherjee | "Software Testing Technology Modeling Change using Unified Language" |
| 25. | Mr. Sujit Kumar Chatterjee | "Design and Maintenance of Software Using Class Inherency Metrics" |
| 26. | Mr. Abhay Kumar | "Development of NURBS Curve for Free Form Shape Design and its Optimum Modification Using Genetic Algorithms" |
| 27. | Ms. Vijaya Laxmi | "Real Time Image Processing" |
| 28. | Mr. Avinash Kishore | "Modeling Simulation, Analysis Design of three Phase Self Excited" |
| 29. | Mr. Dilip Kumar | "Studies of higher order mode coupling in birefringent optical fiber and its application in fiber optic sensing system" |
| 30. | Ms. Sumana Kumari | "Compact Antennas for Wireless Communication" |
| 31. | Ms. Tanusree Bose | "Soft Computing Techniques in Antenna Design" |
| 32. | Mr. B.K. Prabhakar | "Impact Assessment of Bottom Ash of Patratu Thermal Power Station on Surrounding Ground Water" |
| 33. | Mr. Rajiv Kumar Gupta | "Study on Assessment of Dust Emission Potential from Haul Roads in Indian Opencast Coal Mines with special reference to KDH Opencast Project of Central Coalfields Ltd.," |
| 34. | Mr. Brahma Shankar Upadhyay | "Behaviour of trace elements during beneficiation of Indian power coal" |
| 35. | Mr. Sanjay Sen | "Clean Technology Based Environmental Management in Sponge Iron Industries" |
| 36. | Mr. Subrata Mukherjee | "Infrastructural Development for Turnkey Projects" |
| 37. | Ms. Manju Tiwari | "Thermodynamic Approach for Turnkey Projects" |
| 38. | Mr. Arun Loknath Mishra | "Interactions of Cow's Ghee with some Drugs and its significance" |

39. Mr. Shyamsundar Laddha "Development of Fused Pyrido Pyrimidines and Thienopyrimidines as possible Phosphodiesterase Inhibitors"
40. Mr. Durga Madhab Kar "Synthesis and Pharmacological studies and some Nitrogen Heterocyclic Compounds with special interest on Indole derivatives"
41. Mr. Hari Shankar Gupta "Spatio-Temporal Assessment of Forest Cover in Ranchi District and Forest Management Issues"
42. Ms. Mani Tyagi, "Quantifying Desertification Indicators and their Co-relates through Remote Sensing & GIS"
43. Mr. Yogesh Joshi "Fatigue and Damage Tolerance Evaluation of Airframe Components"
44. Mr. Manoranjan Pandey "Catalytic Influence on Thermal Degradation and Burn Rate of Composite Solid Propellant and their Ingredients"
45. Mr. Pallab Kumar Kar "Contribution of the oscillation theory of Delay-Differential Equations of arbitrary order."
46. Mr. Ranjan Chattaraj "Propagation and scattering of elastic waves."
47. Ms. Saji Menon "Morphogenetic, phytochemical & molecular studies in *Phyllanthus amarus* - a potential source of Hepatoprotective drug."
48. Ms. Sanchita Sinha "Diversity of Exopolysaccharide Producing Cyanobacteria."
49. Ms. Mili Dutta "Marketing of Fruits and Vegetables in India – A case study of Jharkhand State Agricultural Marketing Board."
50. Mr. Bimlendu Kumar "Revisiting Quality, Environment, occupational health and social Audit systems for ensuring organizational success."
51. Mr. Arun Srivastava "Development of Management Systems for Benefit Monitoring and Evaluation (BME) of Urban Infrastructure Development in the State of Rajasthan."
52. Mr. Sumer S. Yadav "To study the mode of Implementation of e-governance In India and Development of an Effective Implementation Model of e-Governance."

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| 53. Mr. Pushpendra Singh | "Regulatory Norms for Derivative Trading in India - Evaluation of Present scenario and suggestions for development." |
| 54. Mr. Shree Prakash Lal | "Sustainable Manufacturing for Improving the Productivity." |
| 55. Mr. V.S.P. Sinha | "Ajmer In 2050 : A Prospective and Projection using Remote sensing and Geographical Information System." |
| 56. Kumar Rajnish | "A Metric Validation of Object Oriented Software Design" |
| 57. Mr. Shashi Prakash Mishra | "Investigations on the Dehydration Dynamics of Selected Vegetables" |
| 58. Mr. Rakesh Dwivedi | "Propagation and scattering of elastic waves." |
| 59. Mr. Gyan Kumar Agarwal | "Impact of Environmental Tobacco Smoke on Respiratory Health of Adult in and around Ranchi District of Jharkhand State" |
| 60. Mrs. Deep Shikha | "Effect of Nitrogen Implantation in Biomaterial Alumina" |
| 61. Shri Gurule Sanjay Jagannath | "Influence of Different diets on the Bioavailability of Clarithromycin Formulation In Healthy male human subjects" |
| 62. Shri Ashok R. Chandak | "Formulation Development and Evaluation of Transdermal drug Delivery System of some Drugs" |
| 63. Shri Venkatesan J. | "Design, Synthesis and Pharmacological Screening of Mycobactin Analogues" |
| 64. Shri Subir Samanta | "Synthesis and Studies of piperidine Analogs" |
| 65. Shri Satya Prakash Vishnoi | "Phytochemical and Pharmacological Investigation on some Desert Medicinal Plants" |
| 66. Shri Bishnudeo Lal Das | "Pitfalls in Drugs & Cosmetic Act in Combating the Menace of Spurious and Adulterated Drugs & Remedial Measures In the Light of Regulatory Provision of Developed Countries" |
| 67. Shri Bhupen Chandra Behera | "Design, Development and Evaluation of An Oral Non- Insulin dependant diabetes Mellitus Drug" |
| 68. Shri Ashutosh Mishra | "Phytochemical Analysis on some selected gums And their use as potential food additive" |

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| 69. Ms. Nehi Sinha, | "Restoration by postacycline of impaired insulin induced interferon- α production in human neutrophils in human breast cancer" |
| 70. Ms. Debapriti Chakraborty | "The influence of boundaries and heterogeneity characteristics on elastic wave propagation" |
| 71. Sri Sankha Pratim Bhattacharya | "Modeling on Behaviour of Building Structure due to seismic excitation: An Architectural Foretell" |
| 72. Sri Anant Kr. Srivastava | "A Study of Investment & Application Patterns of Information Technology in Indian Business System: A Framework for Analysis of the Impact and status of Information Technology Diffusion in BusinessProcess" |

A. Ph.D. Thesis Submission

The following scholars have submitted the Ph.D. Thesis for evaluation during the year 2004-2005.

Sl.No.	Name of Scholar	Title of Thesis
1.	K. Jayaram Kumar	"A novel Method of Standardization of a traditional drug – Terminalia Chebula Retz. using Fuzzy Logic and Modern Analytical Tool Coupling"
2.	Kalyan Chatterjee	"Development of Dual Mode and Soft Computing Based Control Techniques For Load Frequency Controller of Interconnected Thermal Power Systems"
3.	Rupa Mahanti	"Simulation and Management of Environmental Pollution in Foundry Industries"
4.	Ranjan Rajesh Kumar	"Formability of Sintered Preforms"
5.	Vinay Sharma	"Waterjet System for Mining Under Indian Environment"
6.	Ritesh Kumar Singh	"Development of Strategies for Minimization of Wastes in a Manufacturing Industry Using Lean Paradigms"
7.	Sanjay Kumar Jha	"Technology Adaptation Towards Productivity Enhancement of Rural Artefacts Manufacturing – With Special Reference to Jharkhand"
8.	Arun Kumar	"Fatigue Behaviour of Adhesive Joints in Composite Materials"

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|-----|---------------------|---|
| 9. | Asha Prasad | "Electricity Sector Reforms in India and Human Resource Adjustment Issues. |
| 10. | Manjari Chakraborty | "Restructuring Undergraduate Education of Architecture in India – Realities and Reforms" |
| 11. | Rampal Singh | " Vibrations of Non- Uniform Plates" |
| 12. | Vibha Rani Gupta | "Design and Characteristics of Compact Microstrip Antennas for Wireless Communication" |
| 13. | Utpal Baul | "Mutuality of Influences between Organisational Buying Behaviour and Marketing Strategies – A Comparative Study" |
| 14. | Banshidhar Mallik | "Studies of some Characteristics of AMMC (Aluminum Metal Matrix Composites) and its applicability in Manufacturing, " |

Convocation, Results, Degree/Diploma Awarded

Upon the recommendation of the Board, the following scholars who have cleared the programme during 2004-2005 were awarded Degree/Diploma in the convocation 2004-2005 held in February 2005.

A. Ph.D. Degree

SN.	<u>Name of Scholar</u>	<u>Discipline</u>	<u>Title of the Thesis</u>
1.	Arbind Kumar	Engineering	"Investigations on the Stress induced Electromagnetic & Magnetic Effects in Metallic Materials."
2.	Somnath Chattopadhyaya	Engineering	"Transfer of Agile Manufacturing Technology to Rural, Medium and Small Scale Industries (with special reference to Indian Manufacturing Environment)."
3.	Shradha Shivani	Management	"Socio-cultural Context of Entrepreneurship : A study of Entrepreneurs at Ranchi."
4.	Papiya Mitra Mazumdar	Pharmacy	" Pharmacological and Toxicological studies of some Mycotoxins in Animals"
5.	Anjana Pradhan Ghorai	Science	"Some Problems of Seismic Waves in Layered Media."

B. Other Degrees/Diplomas :

	Branch	Division			Total
		I	II		
I. Post-Graduate					
Master of Engineering	AMS	3	-		3
	CADD	3	-		3
	Civil	3	2		5
	Electrical	10	1		11
	E.C.E.	6	1		7
	Mechanical	4	-		4
	Q.E.& M	6	-		6
	S.E. & R.	2	1		3
	Software	9	1		10
Master of Pharmacy		21	1		22
Master of Technology	Computer Science	13	24		37
	E.S.& E.	4	-		4
	Fuels & Combustion	7	-		7
	N.M. & P. Tech.	5	-		5
	Remote Sensing	14	2		16
	Scientific Computing	3	1		4
Master of Science	B. M. I.	15	15		30
	Information Science	14	5		19
	Information Tech.	21	3		24
Master of Business Admn.		48	67		115
Master of Computer Appl.		180	101		281

II. Post Graduate Diploma	Mechanical Engg.	-	1		1
	E. C. E.	1	-		1
	Computer Applications	-	1		1

III. Under Graduate Degrees					
		ID	I	II	Total
Bachelor of Engineering	Civil	3	6	-	9
	Computer Sc.	35	75	-	110
	E.E.E.	27	28	-	55
	E.C.E.	41	56	-	97
	Mechanical	34	32	-	66
	Polymer	1	5	-	6
	Production	6	3	-	9
Bachelor of Pharmacy	B. Pharm.	11	24	-	35
Bachelor of Architecture	B. Arch.	14	6	-	20
Bachelor of Technology	Civil	-	2	-	2
	Mechanical	2	3	-	5
Bachelor of Business Admn.	B.B.A.	137	97	-	234
Bachelor of Computer Appl.	B.C.A.	233	135	-	368

IV. University Diplomas	Automobile Engg.	6	5	-	11
	Electronics Engg.	7	8	-	15

Total 1666

Faculty Position (including extension center)**A. Summary of the faculty position :**

Category	Sanctioned
Professor	43
Reader	60
Senior Lecturer	18
Lecturer	208
Associate Lecturer	61
PSO, SSO, SO, JSO, ASO	8
Senior Sport Officer	1
Other R A Cum Tutor, Programmer, Univ. Teacher, Teach. Asstt., Chef. etc.	22
AMET Faculty	50
Total	471

B. Departmentwise details of faculty position :**Department of Architecture**

Sl. No.	Name	Designation	Qualification
1	Dr. Ajay Khare	Prof. & Head	Ph. D.
2	Mrs. Manjari Chakraborty	Reader	M. Tech (C.Sc.), PGDEE
3	Mr. D. J. Biswas	Reader	MCP
4	Mr. N. R. Mandal	Reader	MUP
5	Mrs. Rachna Khare	Lecturer	PGDEE
6	Mrs. Ritu Kumari	Lecturer	MURP
7	Mr. S. P. Bhattacharya	Lecturer	M. Tech (Str.)
8	Mrs. Harshit Lakra	Lecturer	PGDip.
9	Mr. Sanmarga Mitra	Lecturer	MCP
10	Mr. Satyaki Sarkar	Lecturer	MCP
11	Mrs. Jayeeta Dey	CAD Programmer	B. Arch.

Department of Applied Chemistry

Sl. No.	Name	Disignation	Qualification
1.	Dr. Usha Jha	Asso. Professor & Head	Ph.D.
2.	Dr. P.K. Srivastava	Reader	Ph.D.

3.	Dr. Bimal Verama	Lecturer	Ph.D.
4.	Dr. R.K. Dey	Lecturer	Ph.D.
5.	Dr. I.Sinha	Lecturer	Ph.D.
6.	Dr. J.P. Pandey	Lecturer	Ph.D.
7.	Mr. Gyan Kumar Agrawal	Associate Lecturer	M. Phil.
8.	Mrs. Sumit Mishra	Associate Lecturer	M. Phil.
9.	Mr. S. S. Majhi	RA cum Tutor	M. Tech.
10.	Ms. Lakshmikanta	RA cum Tutor	M. Sc.
11.	Mr. G. S. Tiwari	Research Technician	M. Sc.
12.	Mr. Satish Kumar	Research Technician	M. Sc.
13.	Mr. Ashish Chandra Singh	Research Technician	M. Sc.

Department of Applied Mathematics

Sl. No.	Name	Designation	Qualification
1.	Prof. N.C. Mahanti	Professor & Head	Ph.D.
2.	Dr. S.S. Roy	Reader	Ph.D.
3.	Dr. S.K. Jain	Reader	Ph.D.
4.	Dr. S.K. Chakraborty	Reader	Ph.D.
5.	Dr. S.K. Samal	Reader	Ph.D.
6.	Dr. Rakesh Verma	Lecturer	Ph.D.
7.	Dr. P.K. Mishra	Lecturer	Ph.D.
8.	Dr. Manish Trivedi	Lecturer	Ph.D.
9.	Dr. S. Padhi (on leave)	Lecturer	Ph.D.
10.	Dr. (Mrs.) A.P. Ghorai	Lecturer	Ph.D.
11.	Sri. P. Datta	Associate Lecturer	M.Tech.

Department of Applied Mechanics

Sl. No.	Name	Designation	Qualification
1.	Prof. A.K. Roy	Professor & Head	M.Tech. M.S.
2.	Prof. R.P. Singh	Professor	M.E.
3.	Prof. K.R. Roychowdhury	Professor	M.E.
4.	Mr. U.S. Prasad	Lecturer	M.E.
5.	Mr. R.K. Ranjan	Lecturer	M.E.
6.	Mr. Rajiv Ranjan	Lecturer	M.E.

7.	Mr. Alok Kumar	Lecturer	M.E.
8.	Mr. Kishan Kumar	Lecturer	M.E.

Department of Applied Physics

Sl. No.	Name	Designation	Qualification
1	Dr P K Barhai	Professor	M.Sc, Ph.D.
2	Dr D Jairath	Professor	M.Sc, Ph.D.
3	Dr R K Popali	Professor	M.Sc, Ph.D.
4	Dr A K Shrivastava	Professor	M.Sc, Ph.D.
5	Dr G G Sarkar	Principal Scientific Officer	M.Sc, Ph.D.
6	Dr J T Andrews	Reader	M.Sc, Ph.D.
7	Dr S Konar	Reader	M.Sc, M Phil, M.Tech, Ph.D.
8	Dr S Medhekar	Reader	M.Sc, Ph.D.
9	Dr (Mrs) S.Keshri	Senior Lecturer	M.Sc, Ph.D.
10	Dr S K Sinha-I	Senior Lecturer	M.Sc, Ph.D.
11	Dr R K Paul	Senior Lecturer	M.Sc, Ph.D.
12	Dr A K Sarma	Lecturer	M.Sc, Ph.D.
13	Dr S K Sinha-II	Lecturer	M.Sc, Ph.D.
14	Dr.A.Roy	Lecturer	M.Sc, Ph.D.

Department of Bio-Medical Instrumentation

Sl. No.	Name	Designation	Qualification
1.	Mr. Rakesh Kumar Sinha	Lecturer	M.Sc.
2.	Mr. Surendra Kumar	Lecturer	M.E.
3.	Mr. Supriya Kumar Das	Associate Lecturer	B.E.

Department of Biotechnology

Sl. No.	Name	Designation	Qualification
1.	Dr. D. Sasmal	Professor & Head	M.Pharm. Ph.D.
2.	Dr. A.S. Vidyarthi	Reader	M.Tech., Ph.D.
3.	Dr. Pratyosh Shukla	Lecturer	M.Sc., Ph.D.
4.	Dr. Kunal Mukhopadhyay	Lecturer	M.Sc., Ph.D.
5.	Dr. Sanjay Ghosh*	Lecturer	M.Sc., Ph.D.

6.	Dr. Kanchan Padwal*	Lecturer	M.Sc., Ph.D.
7.	Dr. P.K. Mishra*	Lecturer	M.Sc., Ph.D.
8.	Mr. Harmeet Singh**	Associate Lecturer	M.Sc.
9.	Ms. Supreet Kaur**	Associate Lecturer	M.Sc.

* Post Doctoral Study Leave

** Doctoral Study Leave

Department of Civil Engineering

Sl. No.	Name	Designation	Qualification
1.	Prof. S. Sengupta	Professor & Head	M.E.
2.	Prof. K.R.Roychoudhary	Professor	M.E.
3.	Prof. K.V.Krishnamurty	Professor & Registrar	Ph.D.
4.	Dr. Goal Pathak	Professor	Ph.D.
5.	Dr. Balram Singh	Reader	Ph.D.
6.	Dr. Anand Kumar Sinha	Reader	Ph.D.
7.	Dr. D.R.R. Sahay	Reader	Ph.D.
8.	Sri. Arun Kumar	Scientific Officer	M.E.
9.	Mrs. Bindu Lal	Lecturer	M.E.
10.	Sri. Birendra Kumar Singh	Lecturer	M.E.
11.	Mrs. S. Chakravarty	Lecturer	M.E.
12.	Sri. Suresh Kumar	Lecturer	M.E.
13.	Sri. U.C. Sahoo*	Lecturer	M.Tech.
14.	Dr. Siddhartha Sengupta	Lecturer	Ph.D.
15.	Sri. Jitu Kujur	Associate Lecturer	M.E.

Department of Computer Science

Sl. No.	Name	Designation	Qualification
1.	Dr. P.K. Mahanti	Professor	Ph.D.
2.	Dr. G. Sahoo	Professor	Ph.D.
3.	Mr. S. Dutta	Reader	MCA
4.	Mr. P.K. Sharma	Sr. Lecturer	M.Tech. (CS)
5.	Mr. Ravi Prakash	Sr. Lecturer	MCA
6.	Mr. K. Lal	Lecturer	M.Tech. (CS)
7.	Mr. D.K. Mallick	Lecturer	M.Tech. (CS)
8.	Mr. S.K. Chatterjee	Lecturer	MCA
9.	Mrs. Aruna Jain	Lecturer	M.Tech. (CS)
10.	Mr. B.K. Sarkar	Lecturer	MCA
11.	Mr. R.K. Jena	Lecturer	M.Tech. (CS)

12.	Mr. I. Mukherjee	Lecturer	MCA
13.	Mr. V.K. Jha	Lecturer	B.E. (ECE)
14.	Mr. P. Paul	Lecturer	M.Tech. (CS)
15.	Mr. Abhishek Srivastava	Lecturer	M.E. (SE)
16.	Mr. Pankaj Gupta	Lecturer	M.Tech. (CS)
17.	Mr. S. Vijayvargiya	Lecturer	M.Tech. (CS)
18.	Mrs. Itu Snigdh	Lecturer	M.E. (SE)
19.	Mr. K.S. Patnaik	Lecturer	M.E. (SE)
20.	Mr. Ritesh Jha	Lecturer	M.Sc. (CS)
21.	Mr. I.D. Ram	Lecturer	M.E. (CS)
22.	Mr. S. Paul	Lecturer	MCA
23.	Mr. A. Mustafi	Lecturer	MCA
24.	Mr. A.K. Keshari	Lecturer	M.Tech. (CS)
25.	Mr. M.K. Thakur	Associate Lecturer	B.E. (ECE)
26.	Mr. Anurag Joshi	Associate Lecturer	B.E. (CS)
27.	Mr. B.K. Chanda	Associate Lecturer	MCA
28.	Ms. Smitha Mishra	Research Associate	B.E. (CS)
29.	Mr. K.T. Lucas	Associate Lecturer	B.E. (ECE)

Department of Electrical & Electronics Engineering

Sl. No.	Name	Designatin	Qualification
1.	Prof. B.M.Karan	Professor & Head	Ph.D.
2.	Prof. R.C.Prasad	Professor	Ph.D.
3.	Prof. B.P.Roy	Professor	M.Sc. Engg.
4.	Prof. R.K.Narayan	Professor	M.Sc.
5.	Prof. B.N.Das	Professor	Ph.D.
6.	Prof. N.Pathak	Reader	M.Sc. Engg.
7.	Dr. T.Ghose	Reader	Ph.D.
8.	Mr. P.R.Thakura	Lecturer	M.E.
9.	Dr. N.L.Nath	Lecturer	Ph.D.
10.	Mr. R.C.Jha	Lecturer	M.E.
11.	Mr.D.K.Mohanta	Lecturer	M.E.
12.	Mr. K.Chatterjee	Lecturer	M.E.
13.	Mr. P.K. Upadhay	Lecturer	M.Sc.
14.	Ms. V.Laxmi	Lecturer	M.E.
15.	Mr. S.Ghose	Lecturer	M.E.
16.	Mr. P.Prakash	Lecturer	M.E.
17.	Mr. K.C.Jana	Lecturer	M.E.
18.	Mr. S.G.Kadwane	Lecturer	M.E.

19.	Mr. A.Kishore	Lecturer	M.E.
20.	Mr. J.B.Reddy	Lecturer	M.E.

Department of Electronics & Communication Engineering

Sl. No.	Name	Designation	Qualification
1.	Prof. S. C. Goel	Professor & Head	M.E.
2.	Mr. R. Sukesh Kumar	Professor	M.E.
3.	Mr. M. Puri	Reader	M.E.
4.	Mr. K. K. Masand	Reader	M.A.Sc.
5.	Mr. B. B. Pal	Reader	M.E.
6.	Dr. N. Gupta	Reader	Ph.D.
7.	Dr. S. K. Ghorai	Reader	Ph.D.
8.	Dr. J. S. Roy	Reader	Ph.D.
9.	Mr. N. Poddar	Reader	M.E.
10.	Dr. D. Pal	Reader	Ph.D.
11.	Mr. V. R. Gupta	Lecturer	M.E.
12.	Mr. S. S. Solanki	Lecturer	M.E.
13.	Mr. V. K. Singh	Lecturer	M.E.
14.	Dr. S. Srivastava	Lecturer	Ph.D.
15.	Mr. K. Mahto	Lecturer	M.E.
16.	Mr. P. K. Upadhyay	Lecturer	M.E.
17.	Mr. Sanajy Kumar	Lecturer	M.Tech.
18.	Mr. M. K. Jha	Asso.Lect.	B.E.
19.	Mr. N. Chattoraj	Asso.Lect.	B.E.
20.	Mr. S. K. Dash	Lecturer	M.E.
21.	Mr. Bharat Gupta	Lecturer	M.Tech.
22.	Mr. A. K. Tiwari	Asso.Lect.	B.E.

Department Hotel Management & Catering Technology

Sl. No.	Name	Designation	Qualification
1.	Mr. Ashish Dahiya	Lecturer	M.T.M, B.A. Hotel Mgmt.
2.	Mr. Moley Das (On LIEN)	Chief.	B.Sc. Hotel Mgmt.
3.	Mr. P.R. Sahoo	Lecturer	M.T.M.Hotel. Mgmt.
4.	Mr. Praveen Srivastava	Associate Lecturer	M.A. B.A., Hotel Mgmt.
5.	Mr. Roshan Prasad	Associate Lecturer	Hotel Management
6.	Mr. S.Abhinav Kumar	Associate Lecturer	M.T.M., B.Sc., Hotel Mgt.

Department of Management

Sl. No.	Name	Designation	Qualification
1.	Dr. A.M. Agrawal	Professor & Head	Ph.D.
2.	Mr. S.C. Mishra	Reader	M.E.
3.	Dr. A.N. Jha	Reader	Ph.D.
4.	Dr.S.K. Bose	Reader	Ph.D.
5.	Dr. (Mrs.) M. Bhagat	Reader	Ph.D.
6.	Dr. R.N. Bhagat	Sr. Lecturer	Ph.D.
7.	Mr. Utpal Baul	Reader	MBA
7.	Dr. S. Shivani	Lecturer	Ph.D.
8.	Mr. Anand Kumar	Lecturer	MBA
9.	Mr. Vijay Agrawal	Lecturer	MBA
10.	Ms. Ruma Tripathi	Lecturer	MBA
11.	Dr. P.C. Jha	Associate Lecturer	Ph.D.

Department of Information Science

Sl. No.	Name	Designation	Qualification
1.	Dr. Bhaskar Karn	Lecturer	Ph.D.
2.	Mr. Arindam Dutta	Associate Lecturer	M.Sc.

Department of Mechanical Engineering

Sl No.	Name	Designation	Qualification
1.	Dr. Ashok Misra	Professor & Head	D.Sc.
2.	Dr. A.N. Sinha	Professor	Ph.D.
3.	Mr. B.N. Giri	Reader	M.E.
4.	Mr. P.K. Choudhary	Reader	M.E.
5.	Dr. Arvind Kumar	Reader	Ph.D.
6.	Dr. Kumar Arvind	Reader	Ph.D.
7.	D.B. Latta	Sr. Lecturer	M.E.
8.	Dr. R.P. Sharma	Lecturer	Ph.D.
9.	Mr. Girish Pathak	Lecturer	M.Tech.
10.	Mr. S.K. Sinha	Lecturer	M.Tech., MBA
11.	Mr. A.K. Roy	Lecturer	M.E.
12.	Mr. B.S. Choudhary	Lecturer	M.Tech.
13.	Mr. Rajeev Kumar	Lecturer	M.E.
14.	Mrs. R.P. Ojha	Lecturer	M.E.

15.	Mr. J. Singh	Lecturer	M.Tech.
16.	Mr. V.S. Chauhan	Lecturer	M.Tech.
17.	Mr. Ranjeet Ranjan	Lecturer	M.E.
18.	Mr. R.K. Mishra	Lecturer	M.Tech.
19.	Mr. Vivek Gaba	Lecturer	M.E.
20.	Mr. O.P. Pandey	Lecturer	M.E.
21.	Mr. S.K. Mishra	Lecturer	M.E.
22.	Mr. P. Mishra	Lecturer	M.E.
23.	Mr. B. Srilakshmi	Lecturer	M.E.
24.	Mr. Anand Kumar	Lecturer	M.E.
25.	Mr. B.K. Prabhakar	Associate Lecturer	M.E.

Department of Pharmaceutical Sciences

Sl.No.	Name	Designation	Qualification
1.	Prof. S.P. Bhatnagar	Professor & Head	M. Pharm.
2.	Prof. D. Sasmal	Professor	Ph.D.
3.	Prof. G.M. Panpalia	Professor	Ph.D.
4.	Dr. B.N. Sinha	Reader	Ph.D.
5.	Dr. P.R.P. Verma	Reader	Ph.D.
6.	Mrs. S.G. Panpalia	Reader	M. Pharm.
7.	Mr. S. Samanta	Reader	M. Pharm.
8.	Dr. S. Jha	Reader	Ph.D.
9.	Dr. R.N. Gupta	Reader	Ph.D.
10.	Mrs. S.M. Verma	Sr. Lecturer	M.Pharm.
11.	Mr. R. Chandra	Lecturer	M.Sc., M. Tech.
12.	Dr. R. Mazumder	Lecturer	Ph.D.
13.	Dr. A. Mazumder	Lecturer	Ph.D.
14.	Dr. S. Ganguly	Lecturer	Ph.D.
15.	Mr. A. Oraon	Lecturer	M.Pharm.
16.	Mrs. P.M. Mazumder	Lecturer	M.Pharm.
17.	Mr. A. K. Patnaik	Lecturer	M.Pharm.
18.	Mr. Jayaram Kumar	Lecturer	M.Pharm.
19.	Mr. Venkatesan J.	Lecturer	M.Pharm.
20.	Mrs. Anima Pande	Asso. Lecturer	M.Pharm.
21.	Ms. Subrata Ghosh	Asso. Lecturer	M.Pharm.

Department of Polymer Engineering

Sl. No.	Name	Designation	Qualification
1.	Dr. (Mrs.) M. Mukherjee	Professor & Head	Ph.D.
2.	Mr. C. Guria	Lecturer	M.E.
3.	Mr. S. Datta	Lecturer	M.Tech.
4.	Mr. G. Sarkhel	Lecturer	M.Tech.
5.	Dr. P. Mukhopadhyay	Lecturer	Ph.D.
6.	Mr. A.K. Sen	Lecturer	M.Tech.
7.	Dr. C. Datta	Lecturer	M.Tech.
8.	Mr. Sandeep Kumar	Lecturer	M.Tech.
9.	Mr. K. Kumar	Scientific Officer	B.Tech., MBA
10.	Mr. Sandeep K. Prasad	Assit. Scientific Officer	B.E.

Department of Production Engineering

Sl. No.	Name	Designation	Qualification
1	Dr. Surender Kumar	Professor & Head	M.E., Ph.D.
2.	Prof. Atul Anand	Reader	B.E., MBA
3.	Prof. A.K. Thakur	Reader	M.Tech.
4.	Dr. Alok Varma	Reader	M.Tech., Ph.D.
5.	Dr. B.K. Singh	Reader	M.E., Ph.D.
6.	Sri. S.P. Lal	Reader	M.E.
7.	Sri. Vinay Sharma	Lecturer	M.E.
8.	Sri. Sanjay Kumar Jha	Lecturer	M.E.
9.	Sri. Saranjit Singh	Lecturer	M.E.
10.	Sri. Ritesh Kumar Singh	Lecturer	M.E.
11.	Sri. S. Mutthukumar	Lecturer	M.E.
12.	Sri. S. C. Srivastava	Lecturer	M.E.
13.	Sri Vijay Pandey	Lecturer	M.E.
14.	Sri. Rajeev Agrawal	Lecturer	M.E.
15.	Sri. A.N. Sinha	Lecturer	Ph.D.

Department of Remote Sensing

Sl. No.	Name	Designation	Qualification
1.	Dr. M.S. Nathawat	Professor & Head	Ph.D.
2.	Dr. Nilanchal Patel	Reader	Ph.D.
3.	Dr. A.K. Singh	Reader	Ph.D.

4.	Dr. R. Sivakumar	Reader	Ph.D.
5.	Dr. A.C.Pandey	Sr. Lecturer	Ph.D.
6.	Dr. Krishna A.P.	Scientific officer	Ph.D.
7.	Mr.Subhas Chelliah	Lecturer	M.Tech.

Department of Space Engineering Rocketry

Sl.No.	Name	Designation	Qualification
1.	Dr. A.K. Chatterjee	Professor & Head	Ph.D.
2.	Dr. P.C. Joshi	Professor	Ph.D.
3.	Dr. M. Varma	Professor	Ph.D.
4.	Dr. J.K. Prasad	Professor	Ph.D.
5.	Sri. Arnab Roy	Lecturer	M.E.
6.	Dr. P.K. Dash	Lecturer	Ph.D.
7.	Sri. Sudip Das	Lecturer	M.E.

Physical & Sports

Sl. No.	Name	Designation	Qualification
1.	Dr. Rama Shankar Singh	Sr. Sports Officer	Ph.D.
2.	Mr. Mahendra Kumar	Lecturer	

University Polytechnic

Sl.No.	Name	Designation	Qualification
1.	Shri P. K. Sinha	Director	M.E.
2.	Shri Abinash Prasad	Lecturer	B.Sc. Engg.
3.	Shri N. K. Singh	Lecturer	M.C.A.
4.	Shri Ramkesh	Lecturer	M.E.
5.	Shri D. K. Jain	Superintendent, Electronics Lab.	B.Sc. Engg.
6.	Shri G. M. Ansari	Jr. System Analyst	M.C.A.
7.	Shri T. K. Baug	Scientific Officer	B.Sc. Engg.
8.	Shri N. K. Mukherjee	Associate Lecturer	B.E.
9.	Shri Manish Kr. Roy	Associate Lecturer	B.E.
10.	Shri Rakesh	Associate Lecturer	B.E.
11.	Dr. B. N. Sanyal	Associate Lecturer	Ph.D.
12.	Shri Ramnish Sinha	Associate Lecturer	M.C.A.
13.	Shri Shambhu Sharan Kumar	Lecturer	M.Tech.
14.	Miss Sumana Kumari	Associate Lecturer	M.Sc.

15.	Miss Tanushree Bose	Associate Lecturer	M.Sc.
16.	Shri Rajan Kumar	Associate Lecturer	B.E.
17.	Shri Subhodh Kumar	Associate Lecturer	B.E.
18.	Shri Vikash Verma	Associate Lecturer	B.E.
19.	Shri Abhay Kumar	Associate Lecturer	M.C.A.
20.	Miss Sushila Ekka	Tutor	B.Sc. (Engg.)
21.	Shri R. K. Prasad	Jr. Superintendent	B.E.

Extension Centre Allahabad

Sl. No.	Name	Designation	Qualification
1.	Dr. L. Sahoo	Professsor & Head	M.Sc., Ph.D.
2.	Mr. S. Kanungo	Senior Lecturer	M.Sc.,PGDCA,
3.	Mr. R.S. Pandey	Senior Lecturer	M.Sc.
4.	Mr. Anita Kushwaha	Lecturer	MCA
5.	Mr. Ajit Kumar Keshri	Asso. Lecturer	B.E., M.Tech.
6.	Dr. Pramod Bubna	Asso. Lecturer	Ph.D.
7.	Dr. Adhip Kr. Mahanty	Asso. Lecturer	MBA
8.	Shri Santanu Das	Asso. Lecturer	MBA
9.	Mr. B.K. Singh	Senior Lecturer	B.E., M.E.
10.	Mr. B.N. Singh	Asso. Lecturer	B.E.
11.	Mr. Anil Kr. Singh	Lecturer	B.E., M.E.
12.	Mr. Dhaneshwar Mahto	Lecturer	B.E. M.E.
13.	Mr. Kumar Nikhil	Asso. Lecturer	B.E.

Extension Centre Chennai

BIT Faculty

Sl. No.	Name	Designation	Qualification
1.	Prof. Awadh Prasad	Professor	B.Sc. M.S.I.E. (USA)
2.	Prof. K.R.Viswanathan	Professor	M.A., Dip. In Eco. Adm.

AMET Faculty :

Sl. No.	Name of Faculty	Designation	Qualifications
1.	Capt. Jacob Abraham	Director	Master (F.G.)
2.	Mr. K. Seyadu	Training Coordinator	M. Sc.
3.	Mr. K. Venkataraman	Professor	First Class Steam and Motor) Chartered engineer
4.	Capt. Yeshwanth Raj	HOD – NS	Master (F.G.)
5.	Mr. M. Rajasekaran	HOD – ME	B.E. (Mech.), First Class (Motor)
6.	Cmde. D. Krishnamurthy	HOD – AA	MA, ND, PSC, MBA
7.	Capt. V. V. Nair	Professor	Master (F.G.)
8.	Mr. A. Venugopal	Asst. Professor	First Class (Motor)
9.	Mr. T. Mohan	Asst. Professor	B.E. (Mech.), First Class (Motor)
10.	Mr. G. Mohan Dass	Asst. Professor	B.E. (Mech.), First Class (Motor)
11.	Capt. R. Krishnamurthy Kumar	Asst. Professor	Master (F.G.)
12.	Mr. J.P. Thiagarajan	HOD – MBA	MBA, BL., CAIIB
13.	Cdr. A. S. Perumal	Asst. Professor	BE (Naval Architecture)
14.	Mr. D.P. Santhanam	O.I.C. GMDSS	C.O.P II Class
15.	Mr. A. K. K. Raju	Radio Officer	Indian Navy Leading Telegraphist Certificate
16.	Mr. Chellappan Emrose	Radio Officer	C.O.P. II Class
17.	Mr. R.N. Raju	Radio Officer	C.O.P. II Class
18.	Mr. P. Manickam	Lecturer	Five years Appre. Millwright Trade
19.	Mr. C. Mohanrangan	Lecturer	Five year Appre. Machinist & Turner

20.	Mr. A.P. Narayanan	Lecturer	Craft Instructor's Trg. In Welding Trade
21.	Mr. G. Selvaraj	Lecturer	DME/Appre. For 3 years Welding Trade
22.	Prof. K. Swami	Professor	M.Sc., M. Phil., PGDCA
23.	Prof. G. Selvarkumar	Professor	M.Sc., M. Phil.
24.	Prof. D. Balasubramanian	Professor	M.Sc., M. Phil.
25.	Dr. V. Balasubramanian	Professor	M.Sc., M. Phil., Ph.D.
26.	Prof. G.Kanagasapapathy	Professor	M.Sc., M. Phil.
27.	Prof.V.Thirugnanasambandam	Professor	M.Sc., M. Phil.
28.	Dr. T.R. Sivaramakrishnan	Professor	M.Sc., M. Phil., Ph.D.
29.	Mr. A.D. Ravishankar	Professor	M.Sc.
30.	Mr. J. Gopinath	Lecturer	B.E., M.E.
31.	Mr. D. Arivazhagan	Lecturer	B.E., MBA
32.	Ms. Sree Naaga Kumari	Lecturer	M.Sc., B. Ed.,
33.	Ms. Marion Patricia Gomes	Lecturer	M.A. (English)
34.	Mr. G. Balaganesan	Lecturer	M.E., (Mech.)
35.	Mr. M. S. Lingam	Lecturer	Marine Electrical Officer
36.	Mr. S. Muthukumaran	Lecturer	M.Sc., M. Phil.
37.	Mr. L. Karthikeyan	Lecturer	MBA, M. Phil, PGDFTM
38.	Mr. R. Sundar	Lecturer	M.E.
39.	Mr. A. Veeramani	Lecturer	M.E. (Mech.)
40.	Mr. J. Rengamani	Lecturer	M.Sc., MBA
41.	Mr. D. Srinivasan	Lecturer	M.E. (Mech.)
42.	Mr. P.R. Ayyappan	Lecturer	M.E. (Mech.)
43.	Lt. M. Sivaraj	Senior Seamanship Instructor	Ex. Indian Navy
44.	Mr. M. Shankar Raj	Seamanship Instructor	Ex. Indian Navy
45.	Mr. K. Babu	Seamanship Instructor	Ex. Indian Navy

46.	Mr. Krishna Kumar Majhi	Seamanship Instructor	Ex. Indian Navy
47.	Mr. M. John Sagayaraj	Workshop Instructor	DME/ITI (Fitter), CIT (Instructor Course)
48.	Mr. T. Swaminathan	Workshop Instructor	ITI (Turner)
49.	Mr. M.A. Kareem	Workshop Instructor	ITI (Welder), CIT (Instructor Course)
50.	Mr. K. Nagababu	Workshop Instructor	ITI (Welder), CIT (Instructor Course)

Extension Centre Jaipur

Sl.No.	Name	Designation	Qualification
1.	Brig. K.N. Pandit, VSM	Head, Electronic & Computer, Reader	M.Tech. Ph.D.
2.	Dr. Raghuvir Singh	Head, Management, Professor	MBA, Ph.D.
3.	Dr. S. K. Sharma	Associate Professor	M.Sc., Ph.D.
4.	Dr. Anuj Kr. Jhankal	Lecturer	M.Sc., Ph.D.
5.	Shri S. P. Sarkar	Sr. Scientific Officer	B.E., M. Sc. (Engg.)
6.	Mrs. Rajani Agrawal	Sr. Scientific Officer	M. Sc.
7.	Shri Gurminder Singh Malhotra	Lecturer	B.Sc., M.Sc.
8.	Shri Bimalendu Pathak	Lecturer/ Coordinator	PGDCA, MCA
9.	Shri Ashutosh Gupta	Lecturer	B.E., M. Tech
10.	Ms. Smita Agrawal	Lecturer	B.E.
11.	Ms. Archana Bhatanagar	Lecturer	PGDCA, MCA
12.	Shri Rohit Kr. Pandey	Lecturer	M.A., PGDCA, MBA
13.	Dr. Ram Prakash	Lecturer	M.Sc. Ph.D.
14.	Shri Subhash Ch. Gupta	Lecturer	B.E., M.Tech.
15.	Shri M.V.V. Coumar	Lecturer	M.Sc., Ph.D.
16.	Smt. Kiran Patni	Lecturer	M.A., B.Ed.
17.	Mrs. Pankaj Sharma	Lecturer	CIMA, AICWA
18.	Sh. Gajendra Singh Negi	Lecturer	B.E.
19.	Shri Rajeev Ranjan	Lecturer	B.E., M.E.
20.	Shri Santosh K. Sharma	Programmer	B.Sc.,

21.	Shri Vivek Gaur	System Analyst/ Lecturer	M.E.
22.	Shri Kumar Satish	Assistant Engineer	M.E. , MBA
23.	Shri Sultan Khan	Associate Lecturer	B.Com., MBA
24.	Ms. Shweta Mahlawat	Associate Lecturer	B.A., M.Sc. Science), MCA
25.	Shri Pradeep Kumar	Associate Lecturer	M.Com., MBA
26.	Shri Ashok Sharma	Asst. Admn. Officer	M.A., PGDBM
27.	Shri Rakesh Janu	Technical Assistant (Electronic)	M.A.
28.	Shri Tiju Thomas	Technical Assistant (Computer)	'O' Level, 'A' Level, (DOEACC)
29.	Shri Lalit Mohan Tiwari	Technical Assistant (Computer)	B.A.,
30.	Shri Alok Pandey	Systems Manager	B.E. MCSE,
31.	Ms. Aparajita Pandey	Systems Analyst	B.E.
32.	Mr. M. S. Micheal	Associate Lecturer	M.Sc.

Extension Centre Kolkata

Sl. No.	Name	Designation	Qualification
1.	Mr. R.T. Goswami	Lecturer	MCA
2.	Mr. Jayasri Ray	Lecturer	MCA
3.	Mr. Ambar Dutta	Lecturer	MCA
4.	Dr. Debangshu Chakraborty	Lecturer	Ph.D.

Extension Centre Lalpur

Sl. No.	Faculty Name	Designation	Qualification
1.	Dr. (Mrs.) Vandana Bhattacharjee	Reader	Ph.D.
2.	Mrs. Amrita Priyam	Lecturer	M.Sc., M.Tech.
3.	Mrs. Onima Tirkey	Lecturer	MCA. M.Tech.
4.	Mr. A.K. Choudhary	Lecturer	M.Tech.
5.	Mr. Kumar Rajnish	Lecturer	MCA
6.	Mr. Sanjay Kumar	Lecturer	MCA
7.	Mr. Amar Kumar	Lecturer	BE
8.	Mr. N.P. Tiwary	Lecturer	MCA
9.	Mr. Kuntal Mukherjee	Lecturer	MCA,PGDCA

10.	Ms. Rupa Mahanti	Lecturer	MIT
11.	Mr. P.S. Bishnu	Associate Lecturer	M.Tech.
12.	Mr. D.K. Mishra	Teaching Assistant	M.Tech.
13.	Mr. B.K. Sharma	Teaching Assistant	M.Tech.
14.	Mrs. G.S. Vijaya	Lecturer	BE, MBA
15.	Mr. T.K. Banerjee	Lecturer	M.Sc. (Maths), MBA
16.	Mr. A.K. Singh	Lecturer	BE, M.Tech (IEM)
17.	Ms. Anupma Sahai	Lecturer	MBA (HR), MIS-IT
18.	Mr. Somnath Mukherjee	Lecturer	MBA
19.	Mr. Neeraj Mishra	Associate Lecturer	MBA
20.	Mr. Sushil Kumar	Associate Lecturer	MBA
21.	Mr. J. Bhagat	Teaching Associate	M.Com
22.	Mr. S.N. Sahdeo	Teaching Associate	PGDBM, MBA

Visiting Faculty

1. Sri. Ramji Thakur
2. Sri. L.N. Suman Singh
3. Dr. R.N. Gaur
4. Ms. Swati Shalini
5. Ms. Lipika Jha
6. Mrs. Jugnu Srivastava

Extension Centre Bahrain

Sl. No.	Name	Designation	Qualification
1.	Prof. T.R. Ranganath	Profesor & Director	M.E.
2.	Prof. Surya Lal Mishra	Professor	B.Tech., MBA
3.	Dr. Mohammed Khalid	Professor	Ph.D.
4.	Dr. N. Srinivas	Reader	Ph.D.
5.	Mr. Prateek Sharma	Reader	B.Sc., MCA
6.	Mr. Niloy Bhattacharya	Reader	B.Com., MCA
7.	Mr. Pranav Nathani	Lecturer	MBA
8.	Mrs. D. Shanthi	Associate Lecturer	M.E. (CSE)
9.	Mr. Aparajit Nandi	Univ.Edu.Teacher	B.Com., M.Com., MDBA
10.	Mr. A. Rajendran	Univ.Edu.Teacher	B.Sc.
11.	Mr. A.M. Susal	Univ.Edu.Teacher	B.Ed., M.Sc.

12.	Mrs. Kaveri Mukherjee	Univ.Edu.Teacher	B.E.
13.	Mrs. Sandhya V.S.	Univ.Edu.Teacher	M.Tech.
14.	Mr. Soofi Anwar	Univ.Edu.Teacher	MBA

Extension Centre Noida

Sl. No.	Name	Designation	Qualification
1.	Mr. B.P. Joshi	Professor & Director	B.E., M.E. PGDBM
2.	Mrs. Asha Prasad	Reader	MBA
3.	Mrs. S. Mallika	Senior Lecturer	M.E.
4.	Dr. Kanhiya Singh	Senior Lecturer	Ph.D.
5.	Dr. Tarun Pandiya	Senior Lecturer	Ph.D.
6.	Mr. K.N. Mishra	Senior Lecturer	MCA
7.	Mr. S.P. Singh	Lecturer	M.Tech.
8.	Dr. Peeyush Tewari	Lecturer	Ph.D.
9.	Mrs. Mrinalioni Mehta	Lecturer	B.Tech.
10.	Mr. C.S. Suryanarayan	Lecturer	MCA
11.	Mrs. Superna Dutta	Lecturer	M.A.
12.	Mrs. Monica Aggarwal	Lecturer	B.Com., PGDBM, NET
13.	Mrs. Vibha Kaw	Lecturer	MCAM, PGDCA
14.	Mrs. Soma Sirkar	Lecturer	M.Sc.
15.	Mrs. Sanjala M. Nautiyal	Lecturer	MCA
16.	Mr. Pranab Kumar	Lecturer	MA, LLB
17.	Mr. A.R. Srivastava	Lecturer	B.E., PGDBM
18.	Ms. Rachna Pratik	Lecturer	MBA
19.	Mr. B.K. Joshi	Associate Lecturer	MCA
20.	Mrs. Illa Sahai	Associate Lecturer	M.Sc.
21.	Mrs. Vijaya Laxmi	Associate Lecturer	M.Sc.
22.	Mr. Puneet Mittal	Associate Lecturer	MBA
23.	Ms. Priyanka Trivedi	Associate Lecturer	B.E.
24.	Mr. Rupesh Pande	Associate Lecturer	MCA
25.	Mr. Neeraj Pathak	Associate Lecturer	M.Sc.
26.	Mrs. Sundus Ahmed	Jr. Programme	B.E.
27.	Mr. Rayees Ahmed	Jr. Sys. Analist	MCA, PGDCA
28.	Mr. Vijendra Bhagat	Lab. Assistant	M.Sc., PGDCA
29.	Ms. Sheetal Dhir	Lab Asst.(Trainee)	B.Sc.

Extension Centre Muscat

Sl. No.	Name	Designation	Qualification
1.	Dr. Praveen Dhyani	Professor	Ph.D.
2.	Dr. Munish Makkar	Reader	Ph.D.
3.	Dr. Neeta Baporikar	Reader	Ph.D.
4.	Dr. G. Raju	Reader	Ph.D.
5.	Dr. Krishn Awatar Goyal	Senior Lecturer	Ph.D.
6.	Mr. Vikash Sharma	Senior Lecturer	M.Tech.
7.	Dr. Gurpreet Singh	Senior Lecturer	Ph.D.
8.	Mr. Avnish Vijay	Lecturer	ME, MBA
9.	Mrs. Jyoti K. Chandel	Lecturer	MBA
10.	Mr. Mithun Shrivastava	Lecturer	MBA
11.	Mr. Sayeed Auliya	Lecturer	MBA
12.	Mr. Akhilesh K. Roy	Lecturer	M.Tech.
13.	Mr. P. Vijaya	Lecturer	M.Tech.
14.	Mr. Mohammad Mohatram	Lecturer	M.Tech.
15.	Mr. Piyush Gupta	Lecturer	MCA
16.	Mr. Sanjay Kumar	Lecturer	M.Tech., MCA
17.	Ms. Sanchita Ghosh	Lecturer	M.Tech.
18.	Mr. Satish Chander	Lecturer	MCA
19.	Mr. Shahid Ali Khan	Lecturer	M.Sc., MCA
20.	Dr. Sadaf Zahra	Lecturer	Ph.D.
21.	Ms. Atiya Tabassum	Lecturer	M.Sc.
22.	Mr. Siva Kumar	Lecturer	M.Tech.
23.	Mr. David Manohar	Lecturer	MA., PGDTE, B.Ed.
24.	Ms. Kenneth McGown	Lecturer	MA, TTC, B.Ed.
25.	Ms. Helen Daniel	Lecturer	MA, M.Ed., PGDELT
26.	Ms. Mona Saha	Lecturer	MA, B.Ed,
27.	Ms. Maruthi Kumari	Lecturer	M.Phil
28.	Ms. J. Jenila	Associate Lecturer	M.Tech.
29.	Ms. Anasuya Patil	Associate Lecturer	BE
30.	Ms. El Amin Ei Nur	Associate Lecturer	BA
31.	Ms. Indrani Basu	Associate Lecturer	BA
32.	Ms. Linus Norohna	Associate Lecturer	BA, B.Ed.

GOLDEN JUBILEE MEETS

On the occasion of 50th year of the Institute, the Golden Jubilee meets of old students of the Institute were held in all major cities the during year. In all seven such meets were held. The brief description is given below :

1. At Delhi :

The meet was organized at Gymkhana Club, New Delhi on Dec. 12, 2004. Approximately 150 Alumni members with their family participated in the meet. The occasion was graced by Dr. H.C. Pande, Vice Chancellor Emeritus and Madam Pande. Mr. & Mrs. J.B. Saxena & Mr. S. Dua Deputy Registrar, Noida Centre were participated in the meet.

After the welcome and courtesy speeches, the Alumni recalled and narrated their experiences of student-days. The BITOSA Chapter of Delhi distinctly honored the faculty and the Alumni of 1st batch of the Institute and presented Souvenirs.

The Institute distributed a 'Brochure' highlighting salient features of the Institute, and a 'Memento' embossed with Institute Logo and Golden Jubilee year 2004-2005. The meeting was followed by buffet – Lunch.

2. At Ranchi :

The meet was held on Jan, 4-5, 2005 at B.I.T. Mesra and Gymkhana Club, Ranchi. Beside Alumni from Ranchi, Alumni and their families from other nearby towns - Bokaro, Dhanbad, Jamshedpur, Patna, Gaya joined the meet. The overall participations including families and guest was over one thousand.

Dr. H.C. Pande, Vice Chancellor Emeritus, Dr. S.K. Mukherjee, Vice Chancellor, Mr. S.S. Jojodia, Honorary Treasurer, Mr. J.B. Saxena, Deans, Head of the Department, and many senior faculty members of the Institute participated in the meet.

Several distinguished Alumni addressed the meeting ; recalled their memories and paid rich tributes to faculty specially to Maj. M.C.Pandey – the founder Principal of the Institute. Mr. A.P. Gandhi, a distinguished Alumni (1957 batch), delivered Golden Jubilee lecture on 'Automobile Industry – horizons and challenges'. Lecture was highly illuminative and was well attended and appreciated.

In consultation with the Institute authorities BITOSA organized the Foundation Stone Laying Ceremony of the Alumni House – proposed multipurpose complex behind Hostel No. 2, on the land/site allocated by Institute. The Foundation Stone was laid by Dr. H.C. Pande on January 04, 2005 at 1.30 P.M. He also inaugurated a photo – exhibition depicting BIT's salient features over last 50 years at Hi Tech Centre of the Institute.

A gala entertainment function along with Dinner was organized by BITOSA at Gymkhana Club, Ranchi on the evening of Jan. 4, 2005.

3. At Bangalore :

The meet was held on February 5, 2005. about 150 Alumni and family participated in the meet. Dr. H.C. Pande, Vice Chancellor Emeritus, Dr. S.K. Mukherjee, Vice Chancellor, Mr. B.B. Pant, Deputy Registrar, BIT were also present on the occasion. The meet was followed by Lunch.

4. At Chennai :

The meet was held on February 5, 2005 at Hotel Savera, Chennai from 7.30 to 10.30 P.M. about 200 Alumni including families participated in the meet. From the Institute site Mrs. & Dr. H.C. Pande, Vice Chancellor Emeritus, Dr. S.K. Mukherjee, Vice Chancellor, Mr. S.S. Jojodia, Honorary Treasurer, Mrs. & Mr. J.B. Saxena, Mrs. & Mr. P.P. Singh, Dr. A.M. Agarwal, Mr. B.B. Pant, Mrs. M. Chakraborty, Prof. Awadh Prasad, Director of BIT's Chennai Centre participated. Also, the Chairman, Director and a few distinguished faculty from AMET, Chennai also graced the occasion. The enthusiasm of organizers was remarkable, after the usual welcome and pleasantries, Alumni from the representative – groups recalled their 'memories' of the student days and paid rich tributes to former faculty and staff for their contribution and support in shaping their lives. The meet was followed by Dinner.

Next morning, on February 6, the AMET organized a function at their Campus to felicitate and welcome the VCE, VC and other faculty from the Institute. On the same day Dr. H.C. Pande & Madam Pande and other Institute authorities perform Bhoomi Pujan on the Institute land adjacent to the AMET complex, recently acquired by the Institute. Latter in the afternoon AMET hosted the Lunch.

5. At Kolkata :

The meet was held on March 5, 2005 at Ravendra Sarovar, Kolkata. Approximately 300 Alumni and families. Dr. A.K. Chatterjee, former Director of the Institute, Dr. H.C. Pande, Vice Chancellor Emeritus, Dr. S.K. Mukherjee, Vice Chancellor, Mrs. & Mr. J.B. Saxena and Mr. B.B. Pant were present in the meet.

After exchanging the pleasantries, the BITOSA chapter of Kolkata, brought out a Souvenir including the directory of the Alumni residing in Kolkata. The meet was followed by Dinner.

6. At Kanpur :

The meet was held on April 10, 2005 at Hotel Devaki Palace, Pomila, Kanpur. About 50 Alumni and families participated in the meet. The Institute was represented by Mrs. & Mr. Saxena. In their address several senior Alumni paid rich tributes to the former Principal/s Directors – specially to Maj. M.C. Pande, Dr. A.K. Chatterjee, and Dr. H.C. Pande. The alumni resolved to prepare a Directory of all BIT'ians of Kanpur and urged the authorities to invite them at the apex Golden Jubilee function. The meet was followed by Lunch.

7. At Mumbai :

The meet was held on April 15, 2005 at Maharashtra Press Club, Churchgate, Mumbai. About 100 Alumni with families participated. Dr. H.C. Pande, Vice Chancellor Emeritus, Dr. S.K. Mukherjee, Vice Chancellor, Mr. J.B. Saxena and Mr. B.B. Pant participated from the Institute.

The organizers gave opportunity to all the Alumni (1-2 minutes) to introduce themselves, briefly narrate about their success in profession, as also their memories of the student life. Most speakers paid rich tributes to their teachers and several senior faculty and Principal/s – specially Prof. Arwika, Prof. G. Jankiram, Prof. B. Kantarao, Prof. Nayak, Principal M.C. Pande, Dr. A.K. Chatterjee and Dr. H.C. Pande. The meet was followed by Lunch.



Golden Jubilee Meet

DEPARTMENT OF ARCHITECTURE

The Department established in the year 1993 offers a 5-year degree course in Architecture. The seventh batch of students (1999 batch) graduated this year and the students have found gainful employment besides those who have opted for higher studies in India and abroad.

In 2004-2005, the Department organized one International Conference, one National Workshop and two Short Term Training Programmes (one sponsored by COA and the other by ISTE/AICTE). All faculty members took active part in these events and presented papers.

The students of the department participated in the national and zonal conventions of NASA and won many prizes. In the Zonal NASA held at IIT Kharagpur in 2004, the students won 18 prizes including 1st prizes in the prestigious competitions of CAD Design and Interior Design. The students also excelled in the Annual NASA meet held in MSIT, Gwalior in December 2004. They won the Rolling Trophy as the 'Best Participating College' along with seven individual prizes that includes four numbers of 1st prizes. The Department will be hosting the Annual Eastern Zonal Convention of NASA, 2005 in October this year.

Degree/Diploma offered : B.Arch.(5-Year degree course in Architecture).

Faculty position : Professor- 1, Reader- 3, Lecturer- 6.

Number of Students enrolled/registered with the Department : B. Arch. – 87.

Academic Innovations, Research & Development activities :

A. Ongoing Project :

Project title	Funding agency	Sanctioned amount	Date of sanction	Duration of project
Prototype architectural designs of schools for Autistic pupil	AICTE	1.50 Lacs	31.03.2003	2 Years

B. Project submitted during the year 2004-2005 :

In collaboration with Cardiff University, U.K., the Department has submitted a project to British Council in India-UK Education Link Programme. The project is titled 'Study of Temple Remains at Chhotanagpur Plateau' and will be of two years duration.

B. Seminar/conference/short term course conducted by the Department. :

The department organised the following events in the year :

1. "International Conference on Art and Architecture of Eastern India and Bangladesh" in association with the International Centre for Study of Bengal Art (ICSBA), Dhaka during 8th – 11th February, 2005. It was attended by the delegates from five countries.
2. National Workshop on "Architecture for the Challenged: Approaching Towards Integration, Normalization and Barrier Free Environment" organized in collaboration with NIOH, Kolkata during 22nd and 23rd September 2004. It was attended by 134 participants from all over the country.
3. One-Week Short-term Course on Heritage Management in March 2004. The STC was sponsored by the Council of Architecture, New Delhi and was attended by 30 participants.
4. STTP (QIP of AICTE) on "Architectural Design Pedagogy", sponsored by ISTE, New Delhi during Dec 6th-17th 2004. Number of participants were 30.

D. Publication by Faculty :**I. International journals**

1. Dr. Khare edited the September 2004 issue of the journal of DRONAH titled "Context : Built, Living and Natural" published from Gurgaon. ISBN: 81 – 902313 – 0 – 8.

II. Books/Monographs:

A book authored by Dr. Ajay Khare titled "Temple architecture of Eastern India" was published by Shubhi Publications of Gurgaon in February, 2005. The foreward of the book is written by Dr. George Michell. ISBN: 81 – 82900 – 033 – 6.

E. Consultancy Work:

Interior design for Birsa Munda Airport, Ranchi

- Campus development plan and design scheme of lecture theatre complex for BHU
- Conservation of Baidyanath Dham Temple complex at Deoghar, Jharkhand.

Kisalaya Vidyalaya for Tribal Children, Mesra, Ranchi

- Deoghar Extension Centre of B.I.T. Mesra

DEPARTMENT OF APPLIED CHEMISTRY

This is a support dept. involved in teaching Applied Chemistry courses at undergraduate and postgraduate level. The department has made significant contribution towards course formulation and development of M.Tech programme in Environmental Science and Engineering. The department has also submitted a proposal to AICTE for starting a two year M Tech programme in Analytical Science which will cater to the needs of various industries and R&D centers. The major thrust areas of research activities in the department are related to synthesis and characterization of polymeric biomaterial, water quality assessment, waste water treatment, solid waste management, dye based polymers, oscillation reactions, bio-diesel, computational sciences, solid state chemistry, non conventional energy sources and nano-chemistry. The department is in the process of introducing semi-micro & computational techniques in the environmental and fuel laboratory. The Department also interacted with the Pulmonary and Critical Care Centre at State University of New York at Buffalo, USA and Rajendra Institute of Medical Sciences (RIMS), Ranchi, Jharkhand and proposal has been made to work in collaboration for strengthening and promoting interdisciplinary environmental research, teaching and service activities within the university. In future, this will be helpful in utilizing the expertise in assisting communities to resolve their environmental problems. The Department has been actively involved in promoting environmental awareness amongst the tribal & rural population in and around Ranchi. Work is in progress in the field of Environmental Tobacco Smoke and its impact on the respiratory health of adult in this region of Jharkhand.

Degree/Diploma offered : Ph.D., Support Department involved in teaching Applied Chemistry courses in graduate & postgraduate level.

Faculty position : Associate Professor-1, Reader-1, Lecturer- 3, Asso. Lecturer-2, R.A.cum Tutor-2, Research Technician- 3

Academic Innovations, Research & Development activities

A. Project sanctioned during the year 2004-2005:-

1. "Extraction of metal ion using chemically modified silica gel, UGC project number, F12-32/2004 Budget : 0.8 Lakhs : 2 years.
2. "Testing & Validity of Faraday law and ohm law of ECM of newly Engineering Materials" UGC major research project 5.06 lakhs, 3 years.
3. "Evolution of sequential oscillations in a single organic substrate in chemical system" UGC sponsored project, Budget 2.08 lakhs, 3 years.
4. "Removal of Toxic Metal ions from Aqueous Wastes by Inorganic Particulates" UGC sponsored project Budget Rs. 2.08 lakhs. 3 years
5. "Impact of Environmental Tobacco Smoke and Its Effect on Respiratory Health in Adult". State University of New York at Buffalo, U.S.A, \$ 325,500, 3 years.

B. Project submitted during the year 2004-2005.

1. "Impact of Environmental Tobacco Smoke and Its Effect on Respiratory Health of Adult in Ranchi District" UGC, 5 Lakhs
2. "Synthesis of polyamidoamine based polymeric materials for the controlled delivery of drugs", DST, New Delhi

C. Seminar/Conference/short term course conducted by the Department :

1. Seminar held on 17th February 2005 in the Dept of Applied Chemistry, BIT Mesra. Dr. M. M Singh, Professor and Head, Dept of Applied Chemistry IT BHU delivered a lecture on the topic "Corrosion of metals".
2. Seminar held on 26th February, 2005, Dr. Indrajit Sinha, Lecturer, IT BHU delivered a lecture on "Simulation studies in glass ceramics", for the benefit of the students of M Tech Environmental Science and Engineering and research scholars.
3. Seminar held on 18th March 2005, in the Department of Applied Chemistry BIT Mesra, Dr A K Ray, Professor and Head, Center for biomedical Engineering, IIT Delhi and Professor AIIMS, Delhi, delivered a lecture on "Recent advances in Biomaterials".

D. Publications by faculty :

1. Usha Jha, "Investigating the relationship between raw coal characteristics and the effluent quality of Kedla & Rajrappa Washeries" accepted for publication in the Elsevier Journal of Environmental Management , USA, (2005).
2. Usha Jha, "Analytical Evaluation of Potential Pollution from Trace Elements in Various Fractions of Washed Coal of Kedla and Rajrappa Washery" accepted for publication in Journal of Institution of Engineers, (2005).
3. Usha Jha, "Risk Assessment of Household Hazardous Waste": accepted for publication in the proceeds of the National Seminar on Green Productivity and Sustainable Development, BIT, Mesra 10th-11th March (2005).
4. Usha Jha, "Environmental Science and its inclusion in the curriculum of technical education" published in the proceeds of a National Workshop on Curriculum Development in Technical Institutions organized at BIT Mesra, 3rd -4th April (2004).
5. P.K. Shrivastava, " An optically oscillating ephemeral intermediate in uncatalysed bromate driven oscillator," J. Indian chemical society, Vol 81, pp959-961, (2004).
6. R.K. Dey, "Studies of metal ion uptake behaviors of formaldehyde condensed resins of Phenolic Schiff bases derived from the reaction of 4,4'-diaminodiphenyl and diaminodiphenylmethane with o-hydroxybenzaldehyde", Indian Journal of Chemical Technology, Vol. 11, p.695-703, (2004).
7. R.K. Dey, "Synthesis, Characterization and blood compatibility of copolymers derived from polyamidoamines and vinyl acetate, Journal of Macromolecular Science, Pure and Applied Chemistry, A 42(3), p. 351-364, (2005).
8. Gyan Kumar Agarwal -Abstract of a paper entitled "Study of the impact of Environmental Tobacco Smoke on Respiratory health of adult" is accepted for presentation at an international conference on Environmental Exposure & Health, from 5 – 7 October 2005, Atlanta, U.S.A.
9. Mrs. Sumit Mishra "Arsenic contamination in ground water of West Bengal region", published in proceeds of National seminar on environmental engineering with special reference to mining environment" organized by Indian school of mines, Dhanbad, 19-21 March (2004).

10. G. S. Tiwary "Synthesis, Characterizations and studies of controlled drug release behaviors of some newly synthesized polymers" is accepted (Ref: OS/ISIMM-2005) for International Symposium on "Some Intelligence based Materials and Manufacturing", organized by Department of Production, BIT Mesra.
11. Ashish Chandra Singh "Studies on Metal Ions Uptake Behavior of silica immobilized Chelating agents" is accepted (Ref: OS/ISIMM-2005) for International Symposium on "Some Intelligence Based Materials and Manufacturing." Organized by Department of Production Engineering, BIT, Mesra.
12. Mr. S.S. Majhi "Frontal Polymerization on acrylic acid system" proceeds of annual conference of chemist 2004. Indian Chemical Society at Delhi university, Delhi.
13. Mr. S.S. Majhi "An Efficient Algorithm on MIMD Model for finding Binary Equivalent of a Decimal integer number" proceeds of the National Conference on computer sciences and information. February 2005. St Joseph's College Triuchirapalli.
14. Mr. S.S. Majhi "An EREW P-RAM Algorithm for finding the largest and the second largest elements." National Conference on Computer Sciences and Information. February 2005. St. Joseph's College Triuchirapalli.

E. Seminar/Symposium/short term course attended by faculty members

1. Dr.Usha Jha attended workshop on "Solid Waste Management" at IIT, Delhi, organized by the Indo French Unit for Water and Waste Management Group: 8th – 11th March (2004).
2. Dr.Usha Jha attended a workshop on "harassment of women in workplace" organized by the National Commission for Women and Indian Institute for Planning and Management 10th March (2004).
3. Dr.Usha Jha was invited to participate in a Conference on "Municipal Solid Waste Management in Jharkhand with special focus on use of Waste Polymer in Road Construction" Jointly organized by N B J K, Jharkhand and Thiagraj college of Engineering Tamil Nadu, 4th December, (2004).
4. Dr. P. K. Srivastava participated in the conference on "All India Manufacturing Technology, Design and Research" AIMTDR (2004).
5. Dr.P. K. Srivastava participated in the conference on "National conference on Non-linear systems & dynamics" NCNSD (2005).
6. Dr. R.K.Dey participated in "UGC refresher course in Modern Trends in Chemistry", Jadavpur University, Kolkata, January 2-22, (2004).
7. Dr. R.K.Dey participated in "11th International conference on Polymers and organic Chemistry", 2004, POC'04, Prague, Czech Republic, July 18-23, (2004).
8. Dr. R. K. Dey participated and acted as resource person in Conference & workshop on "Modern Instrumental Methods of drug and chemical analysis", January 2005, Department of Pharmaceutical Engineering, B I T., Mesra, Ranchi.
9. Mr. Gyan Kumar Agarwal attended a conference on "Bioprocess Engineering and Biotechnology – Trends and Opportunities" organized by the Department of Biotechnology, Birla Institute of Technology, Mesra, Ranchi from 17 – 19 March 2005.

10. Mr. Gyan Kumar Agarwal attended a Workshop cum Training Programme on "Instrumental Methods of Chemical and Drug Analysis" organized by the Department of Pharmaceutical Sciences, Birla Institute of Technology, Mesra, Ranchi from 27 – 30 January 2005.
11. Mr. Gyan Kumar Agarwal attended a National Seminar on "Access to E-resources under UGC – Infonet E-journals consortium" organized by the Information and Library Network (INFLIBNET) of the University Grants Commission, Ahmedabad, held at Jadavpur University, Kolkata.
12. Mrs. Sumit Mishra attended a workshop cum training programme on "Artificial recharge of ground water" organized by Central ground water Board, Patna, & CMRI, Dhanbad in Feb'2004.
13. Mrs. Sumit Mishra attended a Workshop cum Training Programme on "Instrumental Methods of Chemical and Drug Analysis" organized by the Department of Pharmaceutical Sciences, Birla Institute of Technology, Mesra, Ranchi from 27 – 30 January 2005.
14. Mrs. Sumit Mishra attended a conference on "Bioprocess Engineering and Biotechnology – Trends and Opportunities" organized by the Department of Biotechnology, Birla Institute of Technology, Mesra, Ranchi from 17 – 19 March 2005.
15. Mrs. Sumit Mishra attended a workshop on "Characterisation and utilization of Fly ash", organized by Deptt. of Applied Chemistry, ISM, Dhanbad on 18th Apr' 2005.
16. Mr Satish Kumar attended National Seminar on "Access to E-Resources under UGC – Infonet E – Journal Consortium" at JADAVPUR UNIVERSITY, KOLKATA on 10-11-Dec, 2004.
17. Mr Satish Kumar participated in Workshop cum Training Program on "Instrumental method of Chemical and Drug analysis," organized by Department of Pharmaceutical Science, BIT, MESRA, RANCHI on 27-30 Jan, 2005.
18. Mr. G. S. Tiwary, Mr. A. C. Singh, Mr. V. K. Singh & Ms. Lakshmikanta participated in Conference & workshop on "Modern Instrumental Methods of drug and chemical analysis", January 2005, Department of Pharmaceutical Engineering, B I T., Mesra, Ranchi.

DEPARTMENT OF APPLIED MATHEMATICS

Department of Applied Mathematics is one of the oldest departments of the Institute. The Department has been teaching all mathematics courses offered in different branches of Engineering, Management, Pharmaceutical Sciences, Architecture and University Polytechnic. The Department has launched its own AICTE approved PG course entitled "M.Tech. in Scientific Computing" from the session 2002. The faculty members of the Department are aggressively engaged in research and development activities. The areas where research is in progress include fluid mechanics, solid mechanics, parallel computing, mathematical modeling, fuzzy optimization, seismology, differential equation, vibration and finite element application in engineering problems. The Department has started an ambitious programme on R and D activities in atmospheric and oceanic sciences.

Degree/Diploma offered : M.Tech. in Scientific Computing.

Faculty Position : Professors- 1, Reader – 4, Lecturer – 5, Asso. Lecturer – 1.

Number of students enrolled/registered in Department : M.TECH.(SC) – 9.

Academic Innovations, Research & Development Activities :

A. Ongoing Project :

1. Studies of evaluation of optimum depth from immediate roof in a mine, UGC, 1.3.02, Rs. 2,75,560, 3 years, Dr. S.K. Chakraborty (PI) and Dr. S.K. Samal (Co-I).
2. Fuzzy approach to traffic and transportation management systems, UGC, 1.3.02, Rs. 2,97,560/- 3 years, Dr. R. Verma (PI) and Prof. N.C. Mahanti (Co-I).

B. Project submitted during the year 2004-2005 :

1. Complexity of VLSI using optimal DFT. Dr. P.K. Mishra (PI) and Prof. N.C. Mahanti (Co-I) submitted to the UGC.
2. Study of socio-economic condition of workers of handicraft industries in Jharkhand – Dr. M.Trivedi (PI) and Prof. N.C. Mahanti (Co-I) submitted to DST.

C. Seminar/Conference conducted:

1. National seminar on Disaster Management: Role of Meteorology and Allied Disciplines April 8-9, 2005. The prominent dignitaries participated were Prof. S.K. Dash, Centre for Atmospheric Sciences IIT, Delhi., Prof. Ordu Bhanukumar Department of Meteorology and Oceanography, Andhra University, Waltair, Dr. P.C. Joshi, Space Application Centre, Ahmedabad, K.K. Chakraborty India Meteorological Department, Calcutta. 20 delegates attended the seminar.

D. Publication by Faculty :

I. International Journal :

1. P.K. Mishra, Complexity of VLSI using optimal Discrete Fourier Transform, Journal of Mathematical Sciences, 20(2), 219-233, 2004.
2. P.K. Mishra, An efficient parallel algorithm for shortest path in planer layered diagraphs, Journal of Zhu. Univ. 5(5), 518-527, 2004. China.

3. P.K. Mishra, Optimal parallel algorithm for shortest path problems in interval graphs, Journal of Zhu, Univ., 5(9), 1135-43, 2004, China.
4. R.P. Singh and S.K. Jain, Free asymmetric transverse vibration of parabolically varying thickness polar orthotropic annular plate with flexible edge conditions, Tamkang Journal of Science and Engineering, 7,1, 2004.
5. R.Verma and Slobodan P. Simonovic, Fuzzy approach to generate optimal set for multicriteria decision making in water resources, Asia Pacific Journal of Operation Research (to appear).
6. S. Padhi, On oscillation of the third order differential equation, Memories in differential equation and math Physics, 31, 609-611, 2004.
7. S. Padhi, P.K. Kar, S.K. Nayak, Necessary and sufficient conditions for the solutions of class of second order neutral differential equations to be oscillatory or tending to zero, Fasc. Math, 34, 73-84, 2004.
8. Mishra P.K., Lower and upper bounds of shortest path in a reachability graphs, International Journal of Mathematics and mathematical sciences, 57, 3023-3036, 2004, USA.
9. R.P. Singh and S.K. Jain, Influence of Chebyshev collocation points on the convergence of results in the analysis of annular plate vibration, Tamkang Journal Science and Engineering (to appear).

II. National Journal :

1. Pradhan, S.K. Samal and N.C. Mahanti, Surface Waves in a liquid filled porous solid layer bounded by elastic half space and liquid layer, Bulletin Calcutta Mathematical Society (to appear).
2. R.P. Singh and S.K. Jain, Asymmetric vibration of non-uniform polar orthotropic annular plate with edges elastically restrained – a special case study, Vol. 84, January 2004.
3. R.P. Singh and S.K. Jain, Study of free asymmetric transverse vibrations of linearly varying thickness polar orthotropic annular plate with flexible edge conditions, Journal of structured Engineering, (to appear).
4. Mishra P.K. and Sharma C.K., An efficient implementation of scaling algorithm for the shortest path problems, News Bull. Cal. Math. Soc./, 27, 9-18, 2004.
5. Mishra P.K. and Sharma C.K. Optimal implementation of parallel divide and conquer algorithm on the Bruijn networks, Proc. Nat. Acad. Sci., India, 74, 323-328, 2004.
6. Trivedi, M, Shukla D., Dubey, J., Estimation under non-response in E-mail based market surveys in confluence, Journal of Management, 1, 33-40, 2004.
7. Trivedi, M., Shukla, D., Dubey, J, Some estimates for small area estimation using coefficient of vibration, Prof., Math. Soc., 19, 153-163, 2004.

III. Books/Monographs :

1. Prediction of Meteorological events: Mathematical Approach, Narosa Publishing House, New Delhi, 2005, Editor: N.C. Mahanti.

E. Seminar/Symposium attended by the faculty members:

1. S. Padhi, 31st Annual Conference of Orissa Mathematical Society, 7-8 February, 2004, held at Institute of Mathematics and Applications, Bhubaneswar, Orissa.
2. Dr. R. Verma, National Seminar –2005, in Mathematics, St. Xavier's College, Ranchi.
3. Sri. R. Chattoraj, National Seminar – 2005 in Mathematics, St. Xavier's College, Ranchi.
4. Ms. Debapriti Chakraborty, National Seminar-2005 in Mathematics, St. Xavier's College, Ranchi.
5. Ms. P. Kaur, National Seminar –2005, in Mathematics of St. Xavier's College, Ranchi.
6. Ms. Debapriti Chakraborty, National seminar on Disaster Management : Role of Meteorology and Allied disciplines, April 8-9, 2005, BIT, Mesra, Ranchi.
7. Ms. P.Kaur, National seminar on Disaster Management: Role of Meteorology and Allied Disciplines, April 8-9, 2005, BIT, Mesra, Ranchi.
8. Dr. R. Verma National seminar on Disaster Management: Role of Meteorology and Allied Disciplines, April 8-9, 2005.
9. Dr. R. Verma, National seminar on location theory: Perspective & Development at New Delhi, Jan. 18-20, 2005.
10. Prof. N.C. Mahanti., Group Monitoring Workshop on Weather and climate research program at BISP, Lucknow, Dec. 1-3, 2004, conducted by DST, New Delhi.

F. Award/Nomination of faculty by important organization :

1. Dr. S.K. Padhi, Lecturer of the Department has been awarded BOYSCAST fellowship by DST, Govt. of India.
3. Dr. P.K. Mishra has been invited as visiting Scientist by Tata Institute of Fundamental Research, Mumbai. He was also awarded INSA visiting fellowship for 2004-2006 to visit Indian Institute of Technology, Kharagpur.

DEPARTMENT OF APPLIED MECHANICS

The Department of Applied Mechanics was formed as a supporting department for all the BE programmes in 1995. Its activities were limited to offering some common undergraduate subjects like Engineering Mechanics, Engineering Graphics and Drawing for all the branches of engineering. It offered Ph.D. programmes in the core areas of Solid Mechanics, Materials, Bio-engineering, Dynamics & Vibration and Design.

From July 1999 the department started a full time ME programme in Computer-Aided Analysis and Design with intake capacity of 18 students per year. It is an inter-disciplinary programme, conceived and designed to meet the demand for trained manpower in the area of Design and allied disciplines for Indian industries. Basic objectives of this programme are to provide :

- In-depth understanding of analysis and computational model of engineering design problems.
- Impart knowledge to the students as to how to develop software packages for engineering analysis and design.
- Reduce training liabilities of industries for their entry-level engineers particularly for the industry involved in design and development and for the industry developing engineering software.
- Impart knowledge on appropriate technology and its identification.
- Supply manpower for R&D activities in Mechanics, Materials, Dynamics & Controls and Design.

The department has well equipped computer-Aided Design and Drafting laboratory with latest state of the art software tools and a state of the art Dynamics & Vibration laboratory to serve its ME and Ph.D. students. The students can use several other laboratories under common facilities as per their needs.

The department is active in the areas of research - Finite Element Method, Dynamics & Vibration with adaptive controls, Composite Materials, Stress Analysis in Artificial Joints, Artificial Neural Network, Nanotechnology, Powdered Preforms, Computer –Aided Design, Fluid Power & Hydraulic Controls.

Degree/Diploma offered : Two-Year full time and three-year part time programme of the Master of Engineering in Computer-Aided Analysis & Design.

Faculty Position : Professor –3, Lecturer - 4.

Number of Students Enrolled/Registered with the Department : ME (CAAD) – 6.

Academic Innovations, Research & Development Activities :

A. Invited Lectures :

Speaker	Topic	Date
Dr. Sanjay Gupta Assistant Professor, Bengal Engineering College, Howrah.	Biomechanics of Human Joints and its Artificial Replacements.	September 7, 2004.

B. Participations in National/International Seminars and Workshops :

1. Prof. A.K. Ray attended a workshop Pulse Analyser Users Meet at Pune from July 14 15, 2004 and delivered a lecturer on "Vibration Measurement and Data Analysis".
2. Prof. A.K. Ray attended a workshop ANSYS User's Meet at Kolkata on September 8, 2004.

Publications :

1. R.P. Singh and S.K. Jain, 'Study of free asymmetric transverse vibration of linearly varying thickness polar orthotropic annular plate with flexiblwe edge conditions' revised paper accepted for publication in the Journal of structural Engineering (India).
2. R.P. Singh and S.K. Jain, 'Free assymmetric transverse vibration of polar orthotropic annular sector plate with linearly varying thickness in radial direction' – revised paper accepted for publication in Sadhana – Indian Academy of Sciences, Vol 29, part 5, October, 2004.
3. R.P. Singh and S.K. Jain, 'Free asymmetric transverse vibration of polar orthotropic annular sector plate with linearly varying thickness in radial direction' – paper accepted for publication in Indian Journal of Engineering & Materials of Sciences, Vol. 12, April, 2005.
4. R.P. Singh and S.K. Jain, 'Influence of chebyshev collocation points on the convergence of results in the analysis of annular plate vibrations' paper communicated to Journal of Vibration & Acoustics (U.S.A.).
5. R.P. Singh and S.K. Jain, 'Non-uniform polar orthotropic annular plates with peripheries elastically restrained against translation and rotation – a comparative case study' paper communicated to Journal of Sound and Vibration (U.K.).
6. Ranjan R.K., "Disc Forging with Side Surface Fold over", Tamkang J. of Sci. and Engineering, Taiwan, ROC, (communicated 2005).
7. Ranjan R.K., Kumar S., "An upper bound solution for closed die sinter forging of hexagonal shapes at high speed", Indian Academy of Sciences, Sadhana, Bangalore, Vol. 29, part 3, pp 263-273, (June 2004).
8. Ranjan R.K., Kumar S., "Effect of interfacial friction during forging of solid powder discs of large slenderness ratio", Indian Academy of Science, Sadhana, Bangalore, Vol. 29, part 5, pp 535-543, (Oct. 2004).
9. Ranjan R.K., S., "High Speed Forging of Solid Powder Discs of Large Slenderness Ratio", Indian Academy of Science, Sadhana, Bangalore, Vol. 29, part 5, pp525-433, (Oct. 2004).
10. Ranjan R.K., Kumar S., "Theoretical studies of an axisymmetric compound flow problem of sintered perform", Indian J. of Engineering & Mat. Sci., (Feb. 2005).
11. A.K. Ray and Pallavi Singh, "Nanotechnology – Redefining Engineering & Technology" sent for publication in the proceedings of Indian Science Exhibition, 2004.

DEPARTMENT OF APPLIED PHYSICS

The Department of Applied Physics has been existing since the inception of the institute. The department has been offering undergraduate Physics courses to BE students from 1955 onwards. At present the department is also offering M.Tech in New Materials and Processing Technology. Besides normal teaching activities, faculty members of the Department are actively engaged in research activities in several emerging areas of cutting edge technologies like plasma assisted surface engineering, laser & plasma processing of materials, composite materials, high T_c superconductors, long haul optical communication systems, optical coherence tomography, real time holography. The department has an ambitious plan to modernize its existing R&D facilities with particular emphasis in the areas of plasma science & technologies and laser applications. It has a plan to introduce a quality improvement programme for the faculty members, procure several essential software for training and research, and add sufficient books in the library. At present 16 faculty members and 11 research scholars are working in the Department.

The main objectives of R&D efforts in the Department is to strengthen knowledge of basic science and acquire technological capability in certain frontline areas, such as, photonics, nonlinear optics and optical communication, thin film for optical and electronic application, development of sensors, thin film thermocouple, surface modification, plasma material processing, high temperature superconductor, fiber composite materials etc. At present, experimental research activities are carried out in the following laboratories: (i) Plasma Technology laboratory, (ii) Material science Laboratory, (iii) Applied Optics laboratory. (iv) Composite Materials laboratory. In addition, modeling and theoretical investigations are also going on in the above areas. Different research groups are working in close collaboration with Institute for Plasma Research (IPR, Ahmedabad), Bhabha Atomic Research Center (BARC, Mumbai), Saha Institute of Nuclear Physics (SINP, Kolkata), Center for Advanced Technology (CAT, Indore), National Physical laboratory (NPL, Delhi), RIMS Ranchi, SGSITS Indore, National Metallurgical Laboratory (NML), Jamshedpur, Tennessee State University, USA, on both theoretical and experimental programs.

Two landmarks of last year (2004-2005) which could be mentioned specially are (i) Graduation of first batch M.Tech (NMPT) students. Two of them have joined I.I.T. Kharagpur for Ph. D. One student has received invitation from Germany to pursue Ph.D, another student has joined ARCI, Hyderabad, as Research Fellow. (ii) The Department has obtained a grant of Rs. 25.00 Lacks from DST under the scheme 'FIST' for development of laboratories. Important developmental activities which have taken place during last one year are

- i. Setting up of Bio-medical imaging and image processing laboratory using optical coherence tomography. The set up has an axial resolution of $15\mu m$ and a spatial resolution of 100. It can obtain images up to a depth of 10 mm. Work is in progress towards noninvasive in-vivo measurement of blood glucose in human blood.
- ii. Development of composite Materials laboratory to fabricate and characterize different composite materials. Several equipments like Camera for Microphotography, Deep-freezer ($-60^{\circ}C$), Muffle Furnace ($1200^{\circ}C$), Microprocessor Controlled Oven ($300^{\circ}C$) etc have already been procured.

During last one year 21 research papers have been published in international journals and 3 more research papers have been published in national journals. In addition, more than 15 research papers have been presented in seminars/conference/seminar proceedings.

Degree/Diploma offered : Physics Courses offered to BE students, M.Tech (New Materials and Processing Technology).

Faculty Position : Professor – 4, Reader –3, PSO – 1, Sr. Lecturer –3, Lecturer –3, Associate Lecturer – 2.

Number of students enrolled/registered with Department : M.Tech. – 3.

Academic Innovations, Research & Development activities :

A. Ongoing Project :

SL. No.	Principal Investigator	Project Title	Funding Agency	Date of sanction	Sanctioned amount in Lacs Rs	Duration (years)
	Dr. S. Konar	Investigation of dispersion managed breathers in long-haul optical communication systems and study the effects of higher order nonlinearities in all optical switching.	DST	6/4/ 2002	13.12	3
	Dr. S. Medhekar & P.K.Barhai	Theoretical Investigation of Induced Nonlinear Optical Fiber Waveguides and Devices	UGC	1.7.2003	3.10	3
	Dr. A. K. Sarma	Some Basic Research on Experimental Dusty Plasma	DST	21.08.03	4.14	3
	Dr. J. T. Andrews, Dr.(Mrs) P.Sen & Dr.A.K.Verma	Measurement of optical properties of stratified media using optical coherence tomography.	DST	01.09.03	20.00	3
	Dr. S. Medhekar & Dr.P.K.Barhai	Investigation of the effects of higher order nonlinearities on optical pulse propagation in semiconductor doped glass fibers and wave guides.	BRNS	9.2.2004	8.879	3

	Dr. A. K. Shirivastava	Effect of low temperature on mechanical properties of composites.	ARDB	26.05.04	7.68	2
	M. K. Sinha & Dr.(Mrs) S. Kesari	Studies on thin film thermocouples for aerospace applications.	ISRO	1/5/2004	10.86	2
	Dr.P.K.Barhai	Fund for Infrastructure in Science and Technology (FIST)	DST	25.00		3

B. Project sanctioned during the year 2004-2005 :

Sl. No.	Principal Investigator/ Co Investigator	Project Title	Funding agency	Date of sanction	Sanctioned amount In Lacs Rs	Duration (years)
1.	Dr. S. Medhekar & Dr.P.K.Barhai	Investigation of the effects of higher order nonlinearities on optical pulse propagation in semiconductor doped glass fibers and wave guides.	BRNS	9.2.2004	8.879	3
2.	Dr. A. K. Shirivastava	Effect of low temperature on mechanical properties of composites.	ARDB	26.05.04	7.68	2
3.	M. K. Sinha & Dr.(Mrs) S. Kesari	Studies on thin film thermocouples for aerospace applications	ISRO	1/5/2004	10.86	2
4.	Dr.P.K.Barhai	Fund for Infrastructure in Science and Technology (FIST)	DST	25.00		3

C. Project Completed During the year 2004-2005:

S. No	Principal Investigator	Project Title	Funding agency	Date of sanction	Sanctioned amount In Lacs Rs	Duration (years)
1.	Dr. A. K. Shrivastava	Fatigue behavior of adhesively bonded fiber composite Aluminum joints	AICTE	10.3.2003	3.80	2
2.	Dr. (Mrs.) S.Keshri	High pressure investigation on oxide superconductors to obtain higher T _c .	UGC	02.03.02	3.82	3
3.	Dr.J.T.Andrews	Measurement of Optical properties of Biological Samples	TWAS (Italy)	01.06.03	US\$ 3000	1

D. Project Submitted During the year 2004-2005 :

S. No	Principal Investigator	Project Title	Funding agency	Duration (years)
1.	Dr.S.Konar	Simulation and Analytical Investigation of Nonlinear Pulse Propagation in Photorefractive Crystals	DRDO	3
2.	Dr.S.K.Sinha-II	Conversion of Coal fly ash into Geolite for Agricultural Soil Modification	Ministry of Coal	2
3.	Dr.S.K.Sinha-I	Oxidation Resistances Studies of Titanium alloys in the temperature range 500-700°C: The effect of coating and trace element addition.	AR & DB	2

E. Seminar/conference/short term course conducted by the Department :

1. Dr. S. Konar of the department jointly with Dr. S. K. Ghorai of the Department of Electronics and Electrical Engineering organised a short term course entitled "Recent Advances in Optical Communications and Fiber Optics Sensors". The course was sponsored by ISTE and AICTE.

F. Publication by the faculty :

I. International Journals :

1. R. K .Paul, J.T. Andrews, K Bose and P. K. Barhai, Errors in Abel Inversion:, Plasma Devices and Operations (in press).
2. Amitava Ray, M.S. Prasad, P. K. Barhai and S. K. Mukherjee, Metallurgical investigation of prematurely failed hot-strip mill work-rolls: some microstructural observations, Journal of Failure Analysis and Prevention, ASM International Vol. 4(3), pp. 50-57, June 2004.
3. B. Ravi Kumar, A. Sesu Kumar, G. G. Sarkar and J. S. Rao, Development and comparison of residual stress measurement on welds by various methods. Aruna Bahadur, Materials Science & Technology (USA), pp261-270, vol. 20, Feb 2004.
4. Aruna Bahadur, B. Ravi Kumar, A. Sesu Kumar, G. G. Sarkar and J. S. Rao Development and comparison of residual stress measurement on welds by various methods. Materials Science & Technology (USA), pp261-270, vol. 20, Feb 2004.
5. S. Konar, Manoj Mishra and S Jana, Dispersion Managed Optical Solitons with Higher Order Nonlinearity, Fiber and Integrated Optics (2005) In press.
6. S.Konar and Anjan Biswas; Soliton Soliton Interaction with Power Law Nonlinearity, Progress in Electromagnetic Research (in press 2005) USA.
7. S.Konar and A. Biswas, Intra-channel collision of Parabolic law optical solitons, Optical & Quantum Electronics 36, 1291-1302 (2004).
8. S. Konar and S. Jana, Nonlinear Propagation of a Mixture of TEM_{00} and TEM_{01} Modes of a Laser Beam in a Cubic Quintic Medium; Physica Scripta 71, 198-203 (2005).
9. A.Biswas and S.Konar, Intra channel collision of Kerr law optical solitons, Progress in Electromagnetic Research 53, 55-67 (2005).
10. S.Konar and Anjan Biswas, Chirped Optical Pulse Propagation in Saturating Nonlinear Media, Optical & Quantum Electronics 36, 905-918 (2004).
11. S. Konar and Manoj Mishra, Double Humped Grey and Black Solitons in Kerr Nonlinear Media, Optical & Quantum Electronics 36, 699 (2004).
12. Soumendu Jana and S. Konar, Induced Focusing of Two Laser Beams in Cubic Quintic Nonlinear Media, Physica Scripta 70, 354 (2004).
13. Manoj Mishra and S. Konar, All Optical Light Deflection and Displacement Using Nonlinear Slab Waveguide, Fiber and Integrated Optics 23, 275 (2004).
14. S. Konar and S. Jana, Linear and Nonlinear Propagation of sinh-Gaussian pulses in dispersive media possessing Kerr Nonlinearity, Optics Communication Vol. 236, No. 1-3, 7-20 (2004).
15. S. Jana and S. Konar, Stable and Quasistable Spatiotemporal Solitons in Cubic Quintic Nonlinear Media, , J. Nonlinear Optical Physics & Materials Vol 13, No. 1, 25-36 (2004).

16. J. Thomas Andrews, P. K. Mohanty and P. K. Gupta; New Design for Optical Coherence Tomography; Optic Express (2005).
S. Medhekar and Ramkrishna Sarkar, All-optical Passive Transistor, Optics Letters, (In Press) USA.
17. S. Keshri, V. Dayal, S. Ravi and P. K. Nayak, AC susceptibility study in the single phase Bi-2212 system: Czechoslovak J. of Phys. 55, 73, 2005 (Czechoslovakia).
18. C. B. Dwivedi, U. Deka and A. Sarma, Sheath Equivalent Electrical Circuit Model for equilibrium Child Sheath Description, Physica Scripta 69, 108 (2004).
19. U. Deka, A. Sarma, Ramprakash, P. K. Karmakar & C. B. Dwivedi, Electron inertial delay effect on acoustic soliton behaviour in transonic region, Physica Scripta 69, 303 (2004).
20. U. Deka, Ramprakash, A Sarma and C. B. Dwivedi Sheath Equivalent Electrical Circuit Model for transient sheath dynamics, Jpn. J. Applied Phys 43 (2004).

II. National Journals :

1. S. K. Sinha (I) and P. K. Barhai, Interface defects in GaN / Sapphire studied using RBS/C, , Pramana Journal of Physics, Vol. 62, No. 6, pp.1293-1298, 2004.
2. S. K. Sinha (I) and P. K. Barhai, Study of defects in GaN/Sapphire using Rutherford Backscattering Spectroscopy and Channeling, , Indian Journal of Physics, Vol. 78 No. 8, pp 01-04, Aug. 2004,
3. S. Keshri, Resistivity Anisotropy of High T_c Samples using Extended Hubbard Model: I. J. of Cryogenics, 29, No. 1, 2004 (India).

III. Book/Monographs :

1. J.T.Andrews, Quantum Optical Phenomena in semiconductor quantum dots ion Progress in Quantum Dot Research ed F.Frank (Nova, New York 2004).
2. I.A.Akimov, T. Flissikowski, A.Betki, F. Hennberger and J.T.Andrews, coherent Control in CdS quantum dots, SPIE, Lasers and Optics (in press).

G. Seminar/ Symposium/Short term course attended by faculty members :

1. Dr. P. K. Barhai, Head of the Department, has received appreciation from International Scientific Community for his work presented at International Symposiums organised at China and Japan respectively.
2. Dr. P.K.Barhai attended 24th International Symposium on Shock waves held at The Institute of Mechanics Chinese Academy of Sciences, Beijing, China, July 11-16, 2004..
3. Dr. P.K.Barhai attended COE(Center of Excellence) Forum On Plasma Science Technology, Plasma Nano COE, Nagoya University, Nagoya, Japan, April 5-7,2004.
4. Prof. P.K.Barhai attended " Second International Conference on The Frontiers of Plasma Physics and Technology, February 21-25, 2005, Goa, India.

5. Dr.S.Konar attended Photonics 2004, International Symposium in Photonics, Kochin University of Science and Technology, Kochin. December 2004.
6. Dr. (Mrs) S.Kesari attended International School on EPR Spectroscopy And Free Radical Research, Trombay, Mumbai, to be held on 17-20 Nov, 2004.
7. Dr. (Mrs) S.Kesari Attended National Seminar and Conference on Cryogenics And its Frontier Applications, held in Bengal Engineering College, Howrah, W. B., 25-27 March, 2004.
8. Dr.S.Medhekar attended Photonics 2004, International Symposium on Photonics, Kochin University of Science and Technology, Kochin. December 2004.
9. Dr.A.Sarma visited University of Linz, Austria to attend 54 th OPG Meeting of Austrian Physical Society, 20-30 September, 2004.
10. Dr A.Sarma attended 12 th International Congress on Plasma Science, Nice , France (25-29 October,2004) Dr (Mrs)
11. Dr. (Mrs.) B.Sarma visited University of Innsbruck, Austria to do collaborative work with Roman Schrihwieser & his group (1 st January 2005- 20 March, 2005).
12. Dr A.Sarma Visited Max Plank Institute, Greifswald, Germany for one month during November 2004 to pursue collobaroative work on plasma diagnostics.
13. Dr A.Sarma Visited Essen University, Germany to deliver an invited talk at the thin film Department on 8 th December, 2004.
14. Dr A.Sarma Visited Institute of Plasma Physics, Prague, Czech Republic to attend International Summer Training Course (SUMTRAC) 2nd to 11 June 2004.

H. Award/Nomination of faculty by important organization :

1. Dr A.Sarma Visited Essen University, Germany to deliver an invited talk at the thin film Department on 8 th December, 2004.
2. Dr.J. Thomas Andrewes received prestigious BOYSCAST fellowship for carrying out postdoctoral work at Institue of Physics der Humboldt Univertsity of Berlin, Germany.)
3. Dr. Arun Sarma received prestigious BOYSCAST fellowship for carrying out postdoctoral work at university of Innsburck, Austria with Innsburck Exprimental Plasma Physics Grroup (IEPPG).
4. Dr. (Mrs.) Bornali Sarma, on invitation, has gone to University of Innsburck, Austria to work with Innsburck Experimental Physics group (IEEPG) for 3 months.
5. Dr. S. Konar has been selected as reviewer of "Optics Communication".

DEPARTMENT OF BIOMEDICAL INSTRUMENTATION

Current day technology is quite extensive in electronic equipment with processor control in all life saving equipment. Thus, a definite need of the trained workforce was felt in this area by the clinicians and technologists. To fulfill the gap in this area, the institute has started a postgraduate programme in Biomedical Instrumentation aims at imparting in-depth knowledge to students with live exposure to the use of sophisticated medical equipment. This programme is conducted in collaboration with the B.M.Birla heart Research Centre, Kolkata, and with assistance from Advanced Diagnostic Centre, Ranchi and Rajendra Institute of Medical Sciences, Ranchi. The major objective of the programme is to impart knowledge of all possible applications of Biomedical Instruments, its technology, its use and intelligent operation to assist physicians and surgeons. Apart from the above mentions medical institutions, the department has also continued interaction with different other hospitals such as Apollo Hospital at Ranchi as well as with Calcutta Medical and Research Institute at Kolkata to develop the technical skill and know how about the modern advanced medical equipment among the students.

The Department of Biomedical Instrumentation has also a strong collaboration with G.E. Medical Systems (India). Two G.E. fund scholarship amounting over Rs. 2.00 lacs, each are being currently awarded to eligible candidates from the admitted students of M.Sc. Biomedical Instrumentation, to meet total expenses for five semesters. The department is trying to continue the collaborative works with different other organizations in the area of Biomedical Instruments.

The department has completed one research project during the session 2004-2005. During this session, a moderate number of research papers have been published as well as communicated in international and national journals. Faculty members of this department have also started collaborative research works in different areas of Biomedical Engineering with the School of Biomedical Engineering and Department of Electronics Engineering, Banaras Hindu University, Varanasi (India). Faculties of the department of Biomedical Instrumentation are enthusiastically involved to continue the ongoing research in the area of Biomedical signal Processing, Biomedical Instrumentation, Biomechanics, Systems Biology and several other related areas. Emphasis has also been laid on the application of soft computing such as artificial neural network, fuzzy logic, genetic algorithm etc. for the processing and expert computerized classification of different Biosignals.

Degree/Diploma offered : M.Sc. in Biomedical Instrumentation.

Faculty Position : Lecturer -2, Associate Lecturer -1

Number of Students enrolled/registered with department : - 43

Academic Innovations/Research and Development activities:**A. Ongoing Project :**

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of Project
1.	Control of multifunctional prosthesis through simulation of myoelectric signals.	UGC	March 2001	Rs.2,77,500.00	3 years

B. Project submitted during the year 2004-2005 :

Sl. No.	Project Title	Funding Agency
1.	Design of a computer based thermoregulatory mechanism and automatic detection system for changes in sleep-EEG in an animal model of heat stress.	UGC

C. Seminar/Conference/Short term course conducted by the department:

1. The department of Biomedical Instrumentation is organizing BIOMED-2005, A National Conference on "Emerging Trends in Biomedical Instrumentation on 29-30 April, 2005.

D. Publication by faculty :**I. International Journals :**

1. Sinha, R.K. (Communicated) Estimation of electro-encephalogram power spectrum as an index of heat stress by artificial neural network, Australian Physical & Engineering Science in Medicine.
2. Sinha, R.K. (Communicated) Serotonin inhibition by p-CPA pretreatment alters the changes in sleep behavior in an animal model of acute immobilization stress, Iranian Biomedical Journal.
3. Sinha, R.K. & Ray, A.K. (2004) An assessment of changes in open-field and elevated plus-maze behavior following heat stress in rats, Iranian Biomedical Journal, 8: 127-133.
4. Sinha, R.K. & Ray, A.K. (2004) Effect of acute and chronic heat exposure on frequency of EEG components in different sleep-wake state in young rats, Iranian Biomedical Journal, 8: 69-75.
5. Sinha, R.K. (2004) Electroencephalogram disturbances in different sleep-wake states following exposure to high environmental heat, Medical and Biological Engineering and Computing (IEE), 42:282-287.

II. National Journals :

1. Sinha, R.K, Ray, A.K. & Agrawal, N.K. (2004) An artificial neural network to detect EEG seizures, Neurology India, 52: 399-400.

III. International Conference :

1. Pal, B.B., Pal, D. & Das, B.N. (2004) Optimum configuration for electro-surgery filter, Asia Pacific Conference (APMC' 04), Dec. 15-18, 2004, University of Delhi.

IV. National Conference

1. Khan, M.A. & Sinha, R.K. (2004) Electronic assistance to voluntary control of micturition reflex, National Conference on Biomedical Engineering, NCBME-2004, GITAM, Visakhapatnam.
2. Shivangi, S., Kandpal, K. & Sinha, R.K. (2004) Telemedicine: Beginning of a new era in health care, National Conference on Revolutionizing ICTs (Information and Communication Technologies) to attain progress, parity and peace for all, Institution of Engineers, Ranchi.
3. Gopal, D., Badhera, S. & Sinha, R.K. (2004) Bioinformatics: concept and goals, National Conference on Revolutionizing ICTs (Information and Communication Technologies) to attain progress, parity and peace for all, Institution of Engineers, Ranchi.
4. Khan, M.A. & Sinha, R.K. (2004) Voluntary control of micturition reflex with the help of RF transmission, National Conference on Revolutionizing ICTs (Information and communication Technologies) to attain progress, parity and peace for all, Institution of Engineers, Ranchi.
5. Ranjan, R., Ranjan, A. & Sinha, R.K. (2004) Design of electronic heart beat monitoring system, National Conference on Revolutionizing ICTs (Information and Communication Technologies) to attain progress, parity and peace for all, Institution of Engineers, Ranchi.
6. Shivangi, S. Sinha, R.K. (2004) Design of a computerized human resource information system for hospitals, National Conference on Information Resource Management in digital environment, BIT, Mesra, Ranchi.
7. Pal, B.B., Pal, D. & Das, B.N. (2004) An analog system for phonocardiography, National Symposium on Mathematical Methods and Applications (NSMMA 2004), Dec. 22, 2004, IIT Madras.

E. Seminar/Symposium/Short term course attended by faculty members :

1. Rakesh Kumar Sinha attended Soft Computing: Concept and Application organized by Department of Computer Science and Engineering, Birla Institute of Technology, Mesra, Ranchi on 18-20 December, 2004.
2. Faculty members and students of Department of Biomedical Instrumentation attended one-day workshop on "Modern Medical Equipment" arranged specially for them by Advanced Diagnostic Center, Ranchi on 25th November 2004.
3. B.N. Das & Rakesh Kumar Sinha Participated in Revolutionizing ICTs (Information and Communication Technologies) to attain Progress, Parity and Peace for all, All India Seminar at Institution of Engineers, Ranchi on 8-9 November, 2004.
4. Rakesh Kumar Sinha attended Recent Advances in Optical Communication and Fiber Optic Sensors organized by Department of Electronics and Communication Engineering, Birla Institute of Technology, Mesra, Ranchi on 28 June to 10 July, 2004.

F. Awards/Nomination of faculty by important organization :

1. B.N. Das attended a meeting of examiners arranged by UPSE on 13-14 July 2004 at New Delhi.
2. B.N. Das nominated as a member of AICTE expert committee to assess Engineering Colleges on 09-10 February at Pune.
3. B.N. Das attended different meetings of the Managing committee of the University Institute of Technology, University of Burdwan, Burdwan as a AICTE member on the Committee.

G. Students Activity :

1. Kanika Khandpal & Dipti Ray were selected for G.E. Fund Scholarship for the session 2004-2006.
2. Avinash Gupta, received award for his outstanding performance during his internship training at GE Medical System.

DEPARTMENT OF BIOTECHNOLOGY

The Department of Biotechnology was established in 2002 with financial support from the Department of Agriculture, Government of Jharkhand, with objectives like providing education and training facilities to carry out application oriented research, to develop in house technologies, and to promote consultancy services in various areas of biotechnology. The department is planning to introduce postgraduate courses in Biotechnology and Biomedical Engineering. The department has a well-defined independent building of about 35000 sq. ft. with the state –of-the-art laboratories of - Molecular Biology, Genetic Engineering and Cell Biology, Plant and Animal Biotechnology, Microbiology, Food Biotechnology, Proteomics, Bioinformatics, Bioprocess Engineering, Chemical Engineering and, Environmental Biotechnology.

The department has a vision to develop a “Centre for Excellence” in Biotechnology for carrying out basic research on Biofuels, Biodiversity conservation, Cultivation of endangered medicinal plants of Jharkhand, to create a Biotech Information Hub and Entrepreneur Park. Moreover some new areas like Proteomics and Genomics, Drug Discovery and Vaccine Development, IPR and Patenting in Biotechnology are of special interest to this department. The department has expertise in all areas of Biotechnology involved in research and teaching.

The new ‘state-of-the-art’ instrumentation facilities available in the department are MegaBACE Automated DNA sequencer, GC-Mass Spectrophotometer, Gas Chromatograph, Auto Sampler, HPLC, Real Time PCR, Typhoon 9410 Multimode Image Analyser, Gel Documentation System, 2D Gel Electrophoresis systems, BOD and CO₂ Incubators, Orbital Shakers, Ultra Sonic Bath, Sonicator, Lab and Pilot scale Bioreactors, Fluorescent Microscope, Automated Colony Counter, Cross-flow Filtration Systems, Spray Dryer, Lyophiliser, High Speed Refrigerated Centrifuge and Milli Q water Purification System.

The Department of Biotechnology at BIT, Mesra has been actively engaged in teaching and development of research facilities with a vision to develop it as a center of excellence. Apart from taking the classes for B.E. Biotechnology courses, the faculty of this department has also been involved in taking undergraduate classes and postgraduate courses in the Departments of Hotel Management & Catering Technology and Department of Pharmaceutical Sciences of this Institute. Further, students of the Department of Applied Physics have been enrolled for Ph.D. with the faculty of this Department to conduct research in the area of Biophysics and Medical Instrumentation.

Taking into account the diverse specializations of the faculty of this Department, research projects have been undertaken addressing both basic and applied areas in Biotechnology. Special emphasis has been laid on Agricultural Biotechnology, Mining Biotechnology, Medical Biotechnology and Process Biotechnology. Towards this end, the faculty has already submitted research projects for funding to various government agencies. The department is also actively initiated the research work on thrust area.

Degree/Diploma offered : B.E. (Biotechnology), Proposed-M.E. (Biotechnology), Ph.D.

Faculty Position : Reader –1, Lecturer –5, Associate Lecturer-2.

Number of Students Enrolled/registered with Department : BE (Biotechnology) –131,
Ph.D. – 6.

Academic Innovation, Research & Development Activities :

A. Ongoing Projects :

1. Study of biodiversity and molecular documentation of Different Biotypes of Medicinally Important Plants (*Commiphora wightii*) biotypes using plant biotechnological approaches.
2. Development of PCR based identification kit for dermatophytosis.
3. Development of probes for early detection of microorganisms responsible for food spoilage during food processing and preservation.
6. Phylogenetic and sequence homology studies of various organisms at BTIS Sub DIC at BIT.
7. Analysis of differential gene expression in wheat plants induced by the leaf rust fungus: A Transcriptomic Approach.
6. Analysis of differentially expressed proteins induced by the drought in rice plants: A Proteomic Approach.
7. Value Addition of feed Stocks.
8. Development & Evaluation of Herbal Medicines against Mycoses.
9. Development of Filarial DNA Vaccine.
10. Production of Industrial Enzymes.
11. Analysis and production of bioactive compounds.
12. Bioleaching of Uranium and other ores.
13. Biotechnology aspects of Mining.
14. Value addition to waste materials.
15. Production of bio-diesel from *Jatropha* plant.

B. Project Sanctioned during the Year 2004-2005 :

Sl. No.	Project Title	Funding Agency	Date of Sanction and Sanction Letter No.	Sanctioned Amount in INR, Lakhs	Duration
1.	Study of biodiversity and molecular documentation of Different Biotypes of Medicinally Important Plants (<i>Commiphora wightii</i>) biotypes using plant biotechnological approaches.	DBT, GOI, New Delhi	22,09-2004 102/IFD/SAN/ 1192/2004-05	16.95	3 Years

2.	Establishment of Sub-Distributed Information Centre at BIT	DBT, GOI, New Delhi	18.01.2005 102/IFD/SAN/ 2289/2004-05	43.60	3 Years
3.	Development of probes for early detection of microorganisms responsible for food spoilage during food processing and preservation	Ministry of Food Processing Industries, GOI, New Delhi	29.03.2005 45/MFPI/R&D/ 2000/254	80.00	2 Years

C. Project Submitted during the Year 2004-2005 :

Sl. No.	Project Title	Funding Agency	Date of Submission	Proposed Amount in INR	Duration
1.	Development and evaluation of PCR fingerprinting for species identification and strain differentiation of dermatophytes in Jharkhand	DBT, GOI, New Delhi	Aug. 2004	19.89 Lakhs	3 Years
2.	Analysis of differential gene expression in wheat plants induced by the leaf rust fungus: A Transcriptomic Approach	DBT, GOI, New Delhi	March 2005	43.60 Lakhs	3 Years

D. Seminar/Conference/Short-term course conducted by the department :

Sl. No.	Theme of seminar/Short-term course	Number of delegates	Name of dignitaries
1.	"Advances and Scope in Biotechnology Education", sponsored by Indian Society for Technical Education (ISTE), March 2004	102	Vice Chancellor, Chief guest, HOD, Biotechnology, Convener, Organizing Secretary
2.	A Refresher course on Bioinformatics August-September 2004	47	Vice Chancellor, Chief Secy. (Govt. of Jharkhand), HOD, Biotechnology, Convener, Organizing Secretary
3.	A workshop on current trends of analytical tools for analysis of biological samples using GC-MS	25	HOD, Biotechnology, Convener, Organizing Secretary

4.	Short-term Training Course on Current approaches in DNA Sequence Analysis	24	HOD, Biotechnology, Convener, Organizing Secretary, Experts from Amersham Bio Sciences Inc.
5.	Conference on Bioprocess Engineering & Biotechnology: Trends & Opportunities, March 2005	125	Vice Chancellor, Co-Chairman Planning Secy. (Govt. Of Jhar), Dr. T. K. Ghose, HOD, Biotechnology (Convener), Organizing Secretary

E. Publications by Faculty :

I. Journal Paper :

1. Pratyosh Shukla et.al (2004) "Transfer of Drug Resistance plasmid with Km^r gene in Vibrio Cholerae KB 207" In Microbiology and Biotechnology for Sustainable Development, CBS Publisher, pp-277-282.
2. Kunal Mukhopadhyay et.al (2004) "Plant MADS-Box genes: Inflorescence development on Ricinus communis". Recent Advances in Life Science. Research SignPost. pp-25-43.
3. Kanchan Phadwal et.al. (2004) "Carotenoid Biosynthetic Pathway: molecular phylogenies and evolutionary behaviour of crt genes in Eubacteria. Gene 345: 35-43.

II. Presentation in Seminar/Conferences by Faculty Members :

1. A.S. Vidyarthi. Journey from Waste to Wealth: A Biotechnological Road Map. A Conference on Bioprocess Engineering and Biotechnology: Trends and Opportunities organized by Department of Biotechnology, BIT, Ranchi, March. 17-19, 2005.
2. R.Poddar, S.R. Sharma, A.S. Vidyarthi and J.T. Andrews. An Approach to Noninvasive Measurement of Blood Glucose level By Optical Coherence Tomography (OCT). A Conference on Bioprocess Engineering and Biotechnology : Trends and Opportunities organized by Department of Biotechnology, BIT, Ranchi, March. 17-19, 2005.
3. Pratyosh Shukla, 'Application of Environmental Biotechnological tools for effective pollution control in mining prone areas'. International Conference, INNOBP-Urban, Ipoh, Malaysia. March 2005.
4. Pratyosh Shukla, 'Microbial community analysis: The future of Bioprospecting' A Conference on Bioprocess Engineering and Biotechnology: Trends and Opportunities organized by Department of Biotechnology, BIT, Ranchi, March. 17-19, 2005.
5. Kunal Mukhopadhyay, 'Application of Functional Genomics to study host-pathogen interaction in leaf rust infection of wheat' A Conference on Bioprocess Engineering and Biotechnology: Trends and Opportunities organized by Department of Biotechnology, BIT, Ranchi, March. 17-19, 2005.
6. Pratyosh Shukla, 'Addressing comparative antimicrobial spectrum of Tinidazoles'. Annual Proceedings at Bioconvergence, 2004, TIET Patiala, December 2004.

7. A.S. Vidyarthi, Biotechnology perspectives of food processing and preservation. National seminar on Potential of food processing in Jharkhand organized jointly by SHRMS, Palamu, and MFPI, GOI, Ranchi, July. 16-17, 2004.
8. A.S. Vidyarthi, and D. Sasmal, Biotechnology at Birla Institute of Technology: An Overview. A seminar on Development of Jharkhand organized by Intellectuals of Ranchi, June 29, 2004.
9. A.S. Vidyarthi, Biotechnological approach of food processing. A seminar on Development of Jharkhand organized by Intellectuals of Ranchi, Ranchi, June 29, 2004.
10. A.S. Vidyarthi, and D. Sasmal, Curriculum development for technical education in Biotechnology. National Workshop on Curriculum Development organized by BIT, Mesra, Ranchi, April. 4-5, 2004.
11. A.S. Vidyarthi, Process Biotechnology: An Overview. An Interactive Workshop & Awareness Programme on Advances and scope in biotechnology education organized jointly by ISTE (Ranchi Chapter) and Department of Biotechnology, BIT, Mesra, Ranchi, March. 29, 2004.
12. Pratyosh Shukla, "Medical Biotechnology: Advances & Opportunities' at An Interactive Workshop & Awareness Programme on Advances and scope in biotechnology education organized jointly by ISTE (Ranchi Chapter) and Department of Biotechnology, BIT, Mesra, Ranchi, March. 29, 2004.
13. Dr. Kunal Mukhopadhyay, 'Plant Biotechnology" An Interactive Workshop & Awareness Programme on Advances and scope in biotechnology education organized jointly by ISTE (Ranchi Chapter) and Department of Biotechnology, BIT, Mesra, Ranchi, March. 29, 2004.

F. Seminar/Symposium/Short-term course attended by faculty members:

1. A.S. Vidyarthi, and D.Sasmal attended a National Workshop on Curriculum Development organized by BIT, Mesra, Ranchi, April. 4-5, 2004.
2. Dr. D.Sasmal and Dr. A.S. Vidyarthi attended a seminar on Development of Jharkhand organized by Intellectuals of Ranchi on June 29, 2004.
3. Dr. A.S. Vidyarthi attended a workshop on Patenting in Pharmaceuticals organized jointly by WBSCST, TIFAC and ICMA, held at Science City, Kolkata on July 2, 2004.
4. Dr. A.S. Vidyarthi and Dr. Kunal Mukhopadhyay attended a national seminar on potential of food processing in Jharkhand organized jointly by SHRMS, Palamu, and MFPI, GOI, Ranchi, July. 16-17, 2004.
5. Dr. A.S. Vidyarthi and Dr. Kunal Mukhopadhyay attended two days training program on Sequence Detection System organized by Lab India (Pvt) Ltd., Gurgaon on Nov. 8-9, 2004.
6. Dr. Pratyosh Shukla attended an International Conference 'Bioconvergence, 2004' at TIET Patiala during December, 2004.
7. Dr. Pratyosh Shukla attended International Conference 'INNOBP-Urban' at Ipoh City, Malaysia during March 2005.
8. Dr. Kunal Mukhopadhyay attended National Seminar on 'Emerging scenario of Patent Protection, Valuation and Commercialization' at Kolkata March 24, 2005.

G. Awards/Nomination of Faculty by Important Organization :

1. Dr. P.K. Mishra has been awarded the Post Doctoral Fellowship at Medical College, Ohio (USA).
2. Dr. Sanjay Ghosh has been awarded the Post Doctoral Fellowship at European Molecular Biology Laboratory, Germany.
3. Dr. Kanchan Phadwal has been awarded the Post Doctoral Fellowship at University of Tirku, Finland.
4. Dr. Pratyosh Shukla has been nominated by Govt. of Perak State, Malaysia of the partnership matching in the area of Mining Biotechnology.
5. Dr. Pratyosh Shukla nominated by ECLIMA (Basque country Association of Industries), SPAIN for developing a joint taskforce for European Union funded project under Pro Eco Programme.
6. Dr. A.S. Vidyarthi and Dr. Kunal Mukhopadhyay have been nominated by Applied Biosystems Inc, USA for participating in the advanced training & interactive sessions on Genomic Analysis.

H. Students Activities :

1. Ms. Tanim Dubey, BE Biotechnology Sem-V got a summer internship at University of Utah, USA.

DEPARTMENT OF CIVIL ENGINEERING

The department offers undergraduate degree course, postgraduate degree course with soil mechanics as specialization for full time scholars, and a postgraduate degree course with structural engineering as specialization as continuing education for working engineers. The department has extended its postgraduate course for Field Engineers engaged in road project in Jharkhand since monsoon session 2002 to support the quality development in the state. The department offers the quality development in the state. The department also offers adequate facilities for research work, the faculty members are actively engaged in research and consultancy work and all students of the department also have ample opportunity of active involvement. Both undergraduate and post graduate students are trained in computer applications in Civil Engineering problems and the latest software and made available to them. Major areas of current research in the department include composite materials, soil structure interactions, deep foundation system and magneto hydrodynamics.

The department possesses well equipped laboratories, worth mentioning here are: The materials testing laboratories including concrete laboratories; road materials laboratories; Rock mechanics laboratories; Soil mechanics laboratories; Environmental Engineering laboratories. They are all well equipped for all sorts of testing satisfying requirements of Indian Standard Codes Hydraulic laboratory and Structural Engineering laboratory are well equipped for conducting experimental research work. Survey laboratory contains total station equipment suitable for advanced geodetic survey work. These laboratories are upgraded by the addition of equipments such as Tar Viscometer, Float Test Apparatus. Abel Flash point Apparatus, Cloud & Pour point Apparatus, Universal penetrometer, Profilograph. Benkelam Beam, Contrifuge Extrator, Hubbard Field Test Apparatus, Dynamic Con. Penetrometer and Ductility Test Apparatus.

Degree/Diploma offered : BE in Civil Engineering, ME in Soil Mechanics and Foundation Engineering, ME in Structural Engineering.

Faculty Position : Professor – 4, Readers – 3, Lecturers –6, Associate Lecturer –1, S.O. – 1.

Number of Student enrolled/registered with Department : 72.

Academic Innovation, Research & Development Activities :

A. On going project :

1. The department has taken up and is continuing work on two major research project of total cost of about Rs. 30.00 lakhs in collaboration with Coal India Ltd. And CMPDIL Ranchi.
2. The Department received the financial assistance ship for infrastructure Development.
3. AICTE project sanctioned on MODOROBs scheme in the financial year 2002-2003 for Rs. 7.00 lakhs vide letter No. 8021/RD/NPROJ/MOD-57/2003-2003 dated 10.3.2003.

B. Publication by faculty :

1. Mr. Siddhartha Sengupta and Aniruddha Sengupta (2004) "Investigation into Shear Band Formation in Clay." Indian Geotechnical Journal, Vol. 34, No.2, 141-163.
2. Mr. Siddhartha Sengupta, and Sengupta, A. "Simulation of Propagation of Shear Bands in Clay by Modified Von Mises Model." Communicated to International Journal of Fractures.
3. Mr. Siddhartha Sengupta and S. Sengupta, A. "Effects of Mesh Size on Numerical Simulation of Strain Location." Communicated to Indian Geotechnical Journal.

C. Seminar/Workshop organized :

1. Department organized a 3 day training programme on "Construction and Maintenance of Rural Roads under PMGSY" for REO engineers of Jharkhand.

D. Seminar/Symposium/Short term course attended by the faculty members:

1. Prof. S. Sengupta, Civil Engineering Department is very much attached in the infrastructure development of the state, Jharkhand. The department represents the Ministry of Rural Development, Govt. of India as State Technical Agent on Pradhan Mantri Gram Sadak Yojana.
2. Prof. S. Sengupta, is actively involved as resource person of Jharkhand Education project for infrastructure development of Primary Education. Prof. S. Sengupta is one of the Technical advisor of Ed. CIL Ministry of Resource Development, Govt. of India.
3. Dr. Gopal Pathak participated and co-chaired a session in the International workshop on Risk assessment in site characterization and Geotechnical Design" during November 26-27, 2004 in Indian Institute of Science, Bangalore.
4. Dr. Gopal Pathak appointed as a member of Scientific Advisory Board for "the 20th Annual International Conference on Contaminated Soils, Sediments and water" held at University of Massachusetts, AMHERST, USA during October, 2004.
5. Dr. Gopal Pathak participated and presented a paper in the "Workshop on Environmental Statement including waste minimization, Environmental auditing and Management System for iron and steel industry" during January, 12-14, 2005 in MECON, Ranchi.
6. Dr. Gopal Pathak participated in the "Delhi Sustainable Development summit 2005" during 3-5 February, 2005 in the Energy Research Institute Delhi (TERI).
7. Dr. Gopal Pathak appointed as a member of Scientific Advisory Board for the 21st Annual International Conference on Contaminated Soils, Sediments and Water," going to be held at University of Massachusetts, AMHERST, USA during Oct., 2005.
8. Dr. A.K. Sinha participated in Geo-informatics in Quality Water Supply Status and its futuristic Demand in and around Ranchi City, National Seminar on Role of Geo-informatics in Decentralised Planning for Better Governance at Birla Institute of Technology Mesra, 7-8 October, 2004.

9. Dr. A.K. Sinha participated in Water Resource Development in Hard Rock Terrain – A Geo-informatics Approach, National Seminar on “Role of Geo-informatics in Decentralised Planning for Better Governance at Birla Institute of Technology, Mesra, 7-8 October, 2004.
10. Dr. R.R. Sahay participated in Training of Soft Computing sponsored by ISTE & AICTE (18.12.2004 TO 28.12.2004) – organized by Department of Computer Science, BIT Mesra, Ranchi.
11. Mr. S. Sengupta attended Short-term course on Soil dynamics & Earthquake Engineering, July 6-11, 2004, IIT Kharagpur.
12. Mr. S.Sengupta attended National Conference on Information Resource Management in Digital Environment, October 1-2, 2004, BIT Mesra, Ranchi.
13. Mr. S.Sengupta attended National Seminar on Role of Geoinformatics in Decentralised Planning for Better Governance, October 7-8, 2004 Department of Remote Sensing, BIT Mesra, Ranchi. .
14. Mr. S.Sengupta nominated by Govt. of India to represent the State of Jharkhand in the National Programme for Capacity Building of Engineers in Earthquake Risk Management to be held in IIT-Kharagpur from 7th March to 15th April, 2005.
15. Mr. Jitu Kujur attended ISTE Short term course course on ‘Heritage Management’ Emerging Trends and need of indigenous Approachs’. From 15th to 19th March, 2004 organized by department of Architecture, BIT Mesra, Ranchi.

Educational Tour :

The department organized the educational tour for Civil Engineering students of 4th semester to 8th semester students and ME students. Few faculties also participated. Dr. C.K. Singh, Ex-Engineers -in -chief-cum Spl. Secretary cum-Addl. Commissioner and Visiting professor of this department arranged the expert lectures at the site related to road, bridges and hot-mixed plant in Ranchi districts.

Pradhan Matri Gram Sadak Yojana

The department is deeply involved in infrastructure development in the state of Jharkhand in the capacity of state technical adviser. The department, represents the ministry of rural development, New Delhi for technology transfer, training of engineers and scrutiny of all the details projects report of each and every road projects under PMGSY. Central Govt. release funds for the projects accordingly to the State Govt.

The Department offered technical supports to various constructive activities of Airport authority of India and various department of Govt. of Jharkhand. Department also supports disaster management team of the state.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

The Department of Computer Science in B.I.T. started functioning in 1983 for Bachelor's degree programme with sanctioned strength of thirty students. Within a span of 22 years, the Department has grown rapidly to become one of the largest department in the Institute. The faculty of the department involved in research work primarily in the areas of Parallel and Distributed Computing, Software Engineering, Artificial Intelligence & Expert Systems, Soft Computing, Computer Graphics, Image Processing and Modeling & Simulation.

COMPUTER CENTRE

The Computer Laboratory is equipped with nine High End with latest S/W known to be qualified under the Super Mini-Computer category and Super Computer PARAM 10000. The detail of each one is described below:

* PARAM-10000 Super Computer, 8 CPU (Ultra SPARC II @ 400 MHz), 2 CPU per node, 2.5 G.B. Memory, 10 x 9.1 GB Ultra SCSI HDD, 32X CD ROM Drive per node, 1.44 MB FDD per node, 2 x 360 W Power Supply per node, PGX 32 Graphics Card per node, 10/100 Fast Ethernet Card in each node, 8 Port PARAM NET Switch, 4 nos. PARAM NET CCP2 Cards, 12 Port per node, Fast Ethernet Switch, Console 21", 4 MM 12/24 GB DAT Drive, Solaris 7 Server unlimited user license per node, University Workshop Softwares, C, C++, F-7, F-90, Pascal, Java.

RS/6000 P Series P610 with 64 bit RISC based Server

Dual Processor

375 MHz Processor

Integrated SCSI-3 F/W Adapter

Power GXT 135 P Graphics Accelerator (PCI) and

36.4 GB Ultra 3 SCSI Hot & Cold Plug HDD x 2

* DEC -Alpha-600 has Alpha@175 MHz with 2.5 GB Hard Disk, 600 MB CDROM, 525 MB CTD and 96 MB RAM. It runs on VMS Operating System and has FORTRAN, PASCAL, C, C++ and COBOL Compilers, GKS and PHIGS package installed as RDBMS. It is linked with two 8-port Terminal Server over DECNET.

* SILICON GRAPHICS INDY R-4600 System for Image Processing and Multimedia Presentation having Processor MIPS R4600, 100 MHz, 32 MB RAM, 16 KB Data & Instruction Cache, Indy Video Camera, Microphone, Speakers, Mouse, 540 MB HDD, IRIX Operating System Version 5.2 with C, C++, PASCAL, COBOL Compilers, Multimedia Showcase.

* SUN ULTRA IS BUS workstation/64 MB RAM/2 GB HDD/17" Color Monitor/CDROM Drive/Microphone/Built in Ethernet/Solaris 2.5 Operating System/Java Workshop/C/C++/FORTRAN 77 Compiler.

* One High End IBM Netfinity Server Pentium -II having Clock Speed 450 MHz/256 MB SDRAM/9.00 GB HDD/32X CD ROM/Floppy Drive/IBM Mouse and 17" SVGA Color Monitor with Window NT Operating System and is networked with 100 Nos. IBM Thin Client.

* 1 No. Server of HCL Infinity PII, 333 MHz/192 MB SDRAM/4.3 GB HDD/1.44 MB FDD/17" SVGA Color Monitor Digital 32X CD Drive/Keyboard/Mouse.

- * Compaq Proliant 400, 550 MHz Clock Speed, 20 GB HDD/576 MB SDRAM/512 KB Cache/1.44 MB FDD/15" Color Monitor.
- * Digital Deil 5100/RISC Processor/2.1 GB HDD/96 MB RAM/133 MHz Clock Speed.
- * Total No. of PCs (P-IV, 256/512 MB SD RAM 40/80 GB HDD, 15"/17" Color Monitors) and Thin Clients available in the department is 400.

Degree/Diploma Offered : B.E. (Computer Science), B.E. (Information Technology), M.Tech. (Computer Science), M.E. (Software Engineering & MCA).

Faculty Position : Professor –2, Reader –1, Sr. Lecturer –2, Lecturer –19, Associate

Lecturer –4 & Research Associate –1.

Number of Students enrolled/registered with Department : Undergraduate –385,

Postgraduate –246.

Academic Innovation, Research & Development activities :

1. K. Sridhar Patnaik, A. Srivastava, S. Paul attended the Faculty Development Programme (FDP) Conducted by TCS – Kolkata on Software Engineering Principles and Practices at Kolkata, Dec. 13-17, 2004.

A. Ongoing Project :

Sl. No.	Project	Funding Agency	Amount (Rs.)	Duration years
1.	COILNET "Content Development for IT Localization Network for Socio-Economic Development" of Jharkhand.	Ministry of Information Technology	1. Cr.	3 years
2.	To Set-up Incubation Center	SIDBI	2.25 Cr.	

B. Project submitted during the year 2004-2005 :

1. Dr. G. Sahoo – DNA Based Computing for solving N.P. Complete Problems Submitted to UGC.

C. Seminar/Conference/Short term course conducted by the Department :

1. An AICTE-ISTE Sponsored Short term Training Program on SOFT COMPUTING CONCEPTS AND APPLICATIONS was conducted from Dec. 18-30, 2004 (Coordinator – Dr. G. Sahoo).
2. The COIL-NET Team has organized various Training Programs for Teachers, Students and officers of different disciplines to spread the awareness of computer usage in Hindi at

- i. Zila School during May 5-8, 2004.
- ii. Kanke School during July, 2004.
- iii. B.I.T. University Polytechnic, Mesra during July 31-1 Aug, 2004.
- iv. District Education Office during Feb. 1-4 2005.

In all the Training Programmes, the Trainees were trained in Basic Computer usage, Microsoft Office, Basic networking techniques –Internet etc. using Hindi software ISM 2000.

D. Publication by Faculty :

1. Sounak Paul, "Role of ICTs in Rural Development", National Seminar on ICT, Institute of Engineers, Jharkhand, India, 2004.
2. G. Sahoo & Sounak Paul, "Biometric Based Authentication System", National Conference on current Advancement of Information Protection and Security (CAIPS0), 2005.
3. Sounak Paul, "Dark Side of IPR", International Conference on IPR on Music and Software Industry, IIT, Allahabad, 2005.
4. B.K. Sarkar "Two new efficient EREW P-RAM Algorithms for Square Matrix Transposition", Proceedings of the International Conference on Human Machine Interfaces (IEEE) – 2004, Bangalore, December 23-23, 2004.
5. B.K. Sarkar "An P-RAM Algorithm for Finding the Largest and the second largest elements from a list of element", Proceeding of the National Conference on Computer Science & Information (NCCSI-2005), St. Joseph's College, Tirupchirappalli, Tamilnadu, Feb. 18-19, 2005.
6. B.K. Sarkar "An Efficient Algorithm on Mind Model for Finding Binary Equivalent of a Decimal Number", Proceeding of the National Conference on Computer Science & Information (NCCSI-2005), held at St. Joseph's College, Tiruchirappalli, Tamilnadu, Feb. 18-19, 2005.
7. B.K. Sarkar "A Space and Time Optimal EREW P-RAM Algorithm for Square Matrix Transposition", Proceedings of National Conference on Information and Communication Technology (NCICT-2005), Ahemadabad, Gujrat, March 27, 2005.
8. P.K. Srivastava & B.K. Sarkar "Frontal Polymerization in Acrylic Acid System", Proceedings of the 41st Annual Convention of Chemists, held at IIT, Delhi, Dec. 21, 2004.
9. B.K. Sarkar "A Cost Optimal EREW P-RAM Algorithm of an Improved Sequential Approach for Finding the largest and the second largest elements from a list of $3n$ elements where $n \geq 1$ ", Submitted in the Journal of Indian Institute of Science".
10. Diptendu Sinha Roy & G. Sahoo, " A Routing approach towards Mobile Adhoc Networks with fading Channels", Accepted for Publication in "International Symposium on Wireless Systems and Networks Sponsored by IEEE Communication Society, to be held in September, 2005 at Bahrain.

11. Diptendu Sinha Roy & G. Sahoo, "A Comparative Study of Adhoc Routing protocols" presented and published in National Seminar on ICTs for gaining Parity, Peace and prosperity for all" conducted by Institution of Engineers, Jharkhand State Centre, November 8-9, 2004.
12. K. Sridhar Patnaik, S. Mahlotra & G. Sahoo, "Genetic Programming Approach to Software Development Effort Estimation", Proceedings of 39th Annual National Convention of CSI (CSI – 2004) Dec. 1-4, 2004 Mumbai, pp 221-228, CSI – Mumbai Chapter.
13. K. Sridhar Patnaik, N. Aggarwal & G. Sahoo, "Rough Sets: The Concepts of Vagueness and uncertainty – A Review", Proceedings of National Conference on Recent Advances and Future Trends in IT, RAFIT – 2005, 2-3 March, 2005. Department of Computer Science & Engineering, Punjab University, Patiala, pp-167-169.
14. K. Lal "Knowledge Mgt in Digital Library Presented in National Seminar on B.I.T., Mesra, Oct. 1-2, 2004.
15. KK.Patnaik & G. Sahoo "Resource Discovery in computational Grids", National Conference on Recent Advances and Future in Information Communication Technologies (RAFIT-2004), IE (I), Ranchi, India.
16. Kaviraju R.D. & K.K. Patnaik "Transaction Oriented Computing (Hive computing) using GrAM-soft", International Conference on Computational Sciences (ICCS 05), Atlanta, US, May 2005, Proceedings in Springer-Verlay LNCS series.
17. Kaviraju R.D. & K.K. Patnaik "Hive Computing through GRAM-soft", National Conference on Recent Advances and Futute Trends in IT (RAFIT 2005), Punjab University, Patiala, 2-3 March, 2005.
18. Kaviraju R.D. & K.K. Patnaik "Decentralized Hive (Transaction Oriented) Computing using GRAM –soft", National Conference on Bio-informatics computing 2005, Thapar Institute of Engineering and Technology, Patiala, India, 13-14 March, 2005.

E. Seminar/Symposium/Short term Course attended by faculty members :

1. Sounak Paul attended the STC on "TCP/IP Based Network" at NITTTR Chandigarh January 2005.
2. K. Lal, Smita Misra, Anup Keshri, K.K. Patnaik attended the STTP on Soft Computing : Concepts & Applications CSE Dept. B.I.T., Mesra, Ranchi Dec. 18-30, 2004.
3. K. Lal attended the STC on A.I. at NIIIT Chandigarh, March 2005.
4. A. Srivastava attended the STTP Mat Lab. Oriented Real Time Programming and Control, EEE Dept. B.I.T., Mesra, Ranchi.

F. Award :

1. Sounak Paul was awarded in "KHOJI" a nationwide software contest by SIDBI INNOVATION and INCUBITION CENTER, B.I.T., Mesra, 2005.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

The scientific and technical activities of the department of electrical and electronics engineering covers all the major fields in electrical machines, power system, control systems and power electronics. The department offers excellent resources for education and research with well equipped laboratories and computation facilities.

The aim of research activities has been to develop tools and models to be used in the analysis of planning and operation of power systems in deregulated environment with the help of advanced soft computing methods. The thrust is also on signal classification and image processing using neuro-wavelet techniques. Work is also going on the digital control of power devices through DSP processors and power system reliability. The department has always been in the fore front in adopting new technologies. At present the department enjoys the status of being one of the very few places in the country where systems biology has been identified as a major research area. Through systems biology the department hopes to bring about a paradigm in the conventional methods of dealing biological systems with the help of existing tools in electrical engineering.

Last year several state-of-art equipments like DSP based mechatronic kit, Fuzzy logic based coupled tank control apparatus, PLC based induction motor control have been set up. The incorporation of new experiments through the use of this equipments would add a new dimension to the existing curriculum at both U.G and P.G level.

As a part of the research activities, the department plays an important role to impart knowledge gained by our faculty members on intelligent control techniques by organizing short term courses for faculties and professional engineers.

During 6-18 December the department has organized a short term training program on MATLAB based electrical system modeling and real time control. The program was funded by AICTE .Thirty four participants from different parts of the country attended the course.

The department strongly holds the view that industry interaction is a major factor for the development of any technical institute. This should be brought about through consultancy assignments and regular conduction of seminars and workshops. The department has an excellent track record of successfully completing consultancy assignments of reputed organizations like SAIL,ECIL,Mecon, TATA steel etc.A MOU (memorandum of understanding) has been signed in this regard with RDCIS (research and development for iron and steel) SAIL.

Degree/ Diploma offered : B.E. (EEE), M.E. (Electrical) with specialization in Power System & Control System.

Faculty Position : Professor – 5, Reader –2, Lecturer –13.

Number of Student Enrolled/Registered with Department : Undergraduate – 233,
Postgraduate –28.

Academic Innovations , Research & Development activities :**A. Ongoing Project :**

Title of the project	Funding Agency	Amount Sanctioned	Duration
Development of Programmable Logic Controller Based Automatic Generation Control	UGC	4.92 lacs	3 years
Analysis Of Intelligent controller For Automatic Generation Control	AICTE under R &D project scheme	3.00lacs	2 years
Up gradation of electrical control laboratory	AICTE under MODROB project scheme	10.00 lacs	2 years
Developing Advanced Laboratories	FIST Scheme under DST	27.00 lacs	
Establishment of Instrumentation Maintenance Facility (IMF) during Xth Plan Period	U.G.C.	2.50 lacs	

B. Project submitted during the year 2004-2005 :

Title of the project	Funding Agency	Amount Sanctioned	Duration
Real time Implementation of Intelligent Controller for Load Frequency Control	UGC for major research project	10 lacs	3 years

C. Short Term Course Organised by the Department :

Sl. No.	Title of Course	Funding Agency	Duration	Coordinators
1	Matlab based electrical system modelling and real time control.	AICTE & ISTE.	6 th -18 th Dec., 2004	Dr. T.Ghose & Mr. K. Chatterjee
2.	"Matlab in engineering application" .	RDCIS ,SAIL, Doranda	14 th to 26 th June, 2004	Dr B. M Karan
3.	International UNNAYAN 2005		2nd-5 th Feb.,2005	

D. Publications :

I. International Journals :

1. D.K.Mohanta "Fuzzy Reliability Evaluation of Captive Power Plant Maintenance Scheduling Incorporating Uncertain Forced Outage Rate and Load Representation", Electric Power System Research, Vol.72, issue 1,pp. 73-84,15 Nov. 2004.
2. D.K.Mohanta ,“Safety and Reliability Optimization of Captive Power Plant Using Intelligent Maintenance Scheduling”, International Journal on Reliability and Safety (UK), Accepted for Publication.
3. B.M.Karan,M.Jayabharata Reddy D.K.Mohanta, “Power system disturbance recognition Using Wavelet and S-transform techniques” International Journal of Emerging Electrical Power Systems, Vol.1, issue 2, Article 1007, PP.1-16,Dec 2004.
4. D.K.Mohanta ,“ Fuzzy Markov Model for Determination of Fuzzy State Probabilities of Generating Units Including the Effect of Maintenance Scheduling”, IEEE Transaction on Power Systems ,Accepted for Publication
5. K Chatterjee ,Raj Kumar Grandhi, Dr B M Karan, “Automation in galvanizing lines using intelligent controllers”, STEEL TIMES INTERNATIONAL, Accepted for Publication.
6. K.Chatterjee, T.Ghosh and B.M.Karan, “PI like Fuzzy Logic Control Strategy to Load Frequency Control of Interconnected Reheat Thermal System ”, Accepted to the International Journal of Power and Energy Systems, Canada
7. T.Ghose, R.C.Jha, “ Fuzzy Reliability Analysis of Unit commitment considering the effect of unit outage uncertainty”,International Journal of Power and Energy Systems, U.K, Accepted for Publication

II. International Conference :

1. K.Chatterjee, T.Ghosh and B.M.Karan, “Fuzzy Logic Based Controller for Automatic Generation Control considering Generation Rate Constraints”, Published in the International conference on Power System –Challenges to Electric Utilities in the New Millennium, pp. 352-358, Nov. 3-5th ,2004.
2. K.Chatterjee, T.Ghosh and C.Srinivasea Rao , “Design of Integral Controller For automatic Generation Control”, to be Published in the International conference PEITSICON 2005,IEE (uk), calcutta branch, during Jan. 28th -30th,2005.
3. T.Ghose, “ Solution of Price Based Unit-Commitment by modified GA Published in the International conference PEITSICON_2005,IEE (uk), calcutta branch during Jan. 28th -30th,2005.
4. B.M.Karan,M.Jayabharata Reddy “Power system disturbance recognition Using Std_MRA techniques”, published in the proceeding of International Conference on Intelligent Signal Processing and Robotics, IIIT, Allhabad, 20-23 February 2004.
5. B.M.Karan,M.Jayabharata Reddy “Power system disturbance recognition using wavelet and S-transform techniques ”, published in the proceeding of International Conference on Soft Computing, Bharat Institute of Higher Education and Research, Chennai, 27-28 May 2004.

III. National Conference :

1. K.Chatterjee, T.Ghosh, B.M.Karan, "Design of Dual Mode and fuzzy logic controller for load Frequency control", Publised in the 13th National Power System Conference of NPSC-2004, to be held at I.I.T., Madras during Dec. 20-22th, 2004.
2. T.Ghosh, R.C.Jha, "Fuzzy Reliability Evalution of Ga Based Solution of Unit commitment Problem", Publised in the 13th National Power System Conference of NPSC-2004, to be held at I.I.T., Madras during Dec. 20-22th, 2004.
3. K. Chatterjee, S.K.Ghosh, B.M. Karan "Intelligent Controller for AGC", Published in the 28th National System Conferense -2004 , held at V.I.T, Dec.16-18th, 2004, pp. 26-31.
4. S.Ghosh, V.K.Bhogi, B.M. Karan "Synthetic Control Chart Time Series Classification and Predication Using Fuzzy Artmap", Published in the 28th National System Conferense -2004 , held at V.I.T, Dec.16-18th, 2004, pp. 11-15.
5. Pawan Kumar, B.M. Karan "Design of an Intelligent Controller for D.C Motor using Fuzy Logic Approach", Published in the 28th National System Conferense -2004 , held at V.I.T, Dec.16-18th, 2004, pp. 62-66.
6. B.M.Karan, V. Karan, " Introduction of multiple Networks Access Point for internet based Services", published in the proceeding of National Conference on Revolutionizing ICTS, held at IE (India) Ranchi , Nov. 8-9, 2004.

E. Consultancy work done/Patents:

1. Prof.D.K.Mohanta , Member of High Level Technical Committee for enquiry of system failure at Hatia Grid sub-station on 29th January 2005 (vide office order no 123, dated 2/02/05 of Jharkhand state Electricity Board, Ranchi)

F. Awards :

1. Mrs. N.L. Nath was awarded Ph.D. degree from Jadavpur University.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

The Department has modern laboratories and support facilities in all major areas of Electronics and Communication. These include - Electronic Measurements, Analog and Digital Communication, Digital Electronics and Integrated Circuits, Microwave, Microprocessor, Fiber Optics Communication, Advanced Communication, Industrial Electronics, VLSI Design, Intelligent Instrumentation etc.

The Fiber optics Communication laboratory is equipped with LED and laser diode sources, O/E and E/O converters, power-meters, optical couplers and attenuators, optical video and data links, WDM, monochromometer, SM / MM tapered Erbium doped/fibers. This year a Laser Diode Modulator with the following specifications was procured : 650 nm output power : 20 mW, Beam size: 7mm, Beam divergence: <0.2 mrad, 56 DOL 537. Current range : 5-100mA Resolution : 100 μ m analog modulation dc-1.0MHz, 06 DLD 203A/IEEE. Also Birefringence Fiber with LB 600-700 and HB 600-125P was procured. . The Digital communication laboratory is well equipped with PCM, DM, signal sampling and reconstruction, carrier modulation and demodulation, pulse amplitude modulation, AM and FM working modules.

A scalar network analyser with plotter (22GHz), Spectrum analyser spanning 9 KHz to 22GHz range, Sweep Oscillators for 5.9 to 12.4 GHz, 22GHz microwave frequency counter, milliwatt and power-meter support R&D work in the Microwave lab. An Antenna test set up in the range of 100 – 900 MHz is also available . Additionally this year IE3D simulation software has been installed in the Antenna lab. The software is available for use to PG students and Ph.D. scholars. The wireless Networking lab has been set up with Wireless Access Points.

In this year, the department added the following instruments like Advanced Pneumatic Trainer , PC interfaced closed loop control trainer (using Pressure loop which includes CV, PTD, E / P etc.), Vibration measurements trainer, and Data Acquisition System to the Instrumentation lab. Also to provide the virtual lab facility, LAB –VIEW software has been procured and installed. Presently with this additions, Instrumentation lab has become well equipped.

The MULTISIM and ULTIBOARD software installed earlier has been upgraded. The virtual lab facility for simulation of various experiments using MULTISIM, which was introduced for Circuits and Device lab last year , has been extended to all Basic Electronic laboratories from this year. Now students are using these facilities from 3rd semester onwards. Practical test performance during LAB END –SEM has been made compulsory for all the laboratories from this academic year onwards.

Teamboard and Digital Class teaching aid facility have been procured for the teaching of students in PG level.

On 25 Oct. 2004, an international Research Centre for Fourth Generation of Mobile Communication System (IRC – 4G) has been setup at Birla Institute of Technology Extension centre , Noida in close cooperation with International Centre for Wireless and Mobile Communication (ICWMC), BIT, Mesra and Centre for Teleinfrastructure (CTIF), Aalborg University , Denmark. The Centre was Inaugurated by Danish Minister of Science, Technology and Innovation, Mr. Helge Sander. IRC-4G will carry out high level research in

the area of next generation mobile communication systems, where European and Indian Scientists and Researchers will work together for the technology development.

The Department has been selected under Special Assistance Programme (SAP) at the level of Department Research Support (DRS) for a period of 5 years (2004 - 2009). A UGC grant of Rs. 31.50 lakhs has been approved.

The International Center for Wireless & Mobile Communication, inaugurated on March 28, 2004 under the Department of Electronics & Communication Engineering is continuing with its activities. In this connection Prof. S. C. Goel & Dr. J. S. Roy have participated in EAGER NetWIC meeting and in the International Workshop on Wireless Communications Technology, held in the Department of Electrical Engineering, Institut Teknologi Bandung (ITB), Indonesia. Prof. Goel and Dr. Roy delivered two Invited Lectures in the Workshop. Prof. S. C. Goel, Dr. N. Gupta and Dr. J. S. Roy have visited University of Roma, TV, Roma, Italy. They have participated in EAGER NetWIC meeting in Padova and in the International Conference on Wireless Personal Multimedia Communication (IPMC-2004), Padova, Italy. Prof. Goel, chaired a session on Satellite Communication in WPMC. Dr. N. Gupta and Dr. J. S. Roy have presented papers in the Conference.

ASIA-LINK Programme:

An Euro-Asian Network for strengthening Graduate Education and Research in Wireless Communication (EAGER-NETWIC) between BIT and Aalborg University, Denmark. The partner of the programme are :Aalborg University, Denmark, Delft University of Technology, Netherland, Università di Roma Tor Vergata, Italy, Birla Institute of Technology, India, Institut Teknologi Bandung, Indonesia,

Degree / Diploma Offered : B.E. (ECE), M.E. (ECE) with specialization in Instrumentation & Microwave Engineering.

Faculty Position : Professor –2, Reader –8, Lecturer – 9, Associate Lecturer-3.

Number of students enrolled / registered with Department : Undergraduate –316, Postgraduate –27.

Academic Innovations, Research & Development activities:

A. Ongoing Projects :

1. “MODROBS” sanctioned by AICTE, New Delhi on July 2002. Sanctioned amount of Rs. 8 Lacs, Duration - 2 years, Principal Investigator : Prof. S. C. Goel.
2. “ Use of Fiber Optics Sensors for Strain Displacement and Load measurement data Acquisition Transmission through FO Glass” sanctioned by I.S.R.O. on 26th March 2002. Sanctioned amount of Rs. 11.243 Lacs, Duration - 3 years, Principal Investigator : Dr. S. K. Ghorai.
3. “ Analog Active Filters & Oscillator to Operate at low frequency” sanctioned by I.S.R.O. on 17th April 2002. Sanctioned amount of Rs. 4.5 Lacs, Duration - 2 years, Principal Investigator : Prof. B. B. Pal
4. “ Intelligent Transport System Using Millimeter wave Technology for the Prevention of Road Accidents” sanctioned by AICTE, New Delhi on April, 2002. Sanctioned amount of Rs. 3.5 Lacs, Duration - Ongoing, Principal Investigator : Dr. Jibendu Sekhar Roy.

B. Project completed during the year 2004-2005 :

1. "Use of Nonlinear Photorefractive Materials in Fiber Interconnections" sanctioned by U.G.C., New Delhi on 12 Oct. 2000. Sanctioned amount of Rs. 4.19 Lacs, Duration - 3 years, Principal Investigator : Dr. S. K. Ghorai.

C. Seminar/conference/short term course conducted by the Department :

I. International Conference :

IW4G : International Workshop on 4G Mobile Communication Systems at BIT Extension Centre, Noida, organized by IRC-4G(International Research Center for 4G) during 24 – 25 Nov,2004. Members present on the occasion were Dr. Om Vikash, Min. of Comm., Govt of India, Dr. H. C. Pande, VCE, BIT ,Mesra., Dr. S. K. Mukherjee, VC, BIT, Mesra., Prof. S. C. Goel Co-ordinator IRC-4G, BIT Mesra., Dr. Ramjee Prasad, Aalborg University, Denmark., Dr. Leif Heinzle, Aalborg University, Denmark., Dr. Leif Heinzle, Aalborg University, Denmark., Dr. Ignas Niemegeers, Netherlands., Dr. Tero Ozanpera, Nokia, Finland., Dr. Watter Konhanser, Siemens, Germany., Mr. Sunil Godse, Hughes, Gurgaon., Dr. Vinod Kumar, Alcatel, France., Dr. Rahim Tafazolli, UK., Mr. Ravi Kumar, Singapore., Mr. P. Arun Kumar, Telepoint, Mumbai., Dr. Liljana Goverilovaska, Macedonia., Dr. Jorge Pereira, EC, Belgium., Mr. Mahbob Alam, CISCO, Netherland., Mr. Knud Eric Skouby, Denmark., Mr. B. B. Bhatia, Motorola, India., Dr. Vishwanath Sinha, IIT, Kanpur., Mr. Abheek Saha, Huges, Gurgauon., Dr. S. S. Jamuar, Malasia., Mr. Sanjay Kumar, BIT, Mesra., Dr. B. P. Joshi, BIT Ext. Centre, Noida., Mr. Dua , Bharti Tele Com. New Delhi & Dr. S. Inamdar, BVCE, Delhi.

More than fifty faculty members & practicing engineers working in the area of Wireless and Mobile Communications were present, during this event.

II. National :

- (a) A series Lecture by Dr. Neeli, R. Prasad, Associate professor, CTIF, Aalborg University, Denmark on the topic of Wireless security at Hi-Tech Building, BIT, Mesra Ranchi, was held on 31-03-2005 & 01-04-2005 :
- (b) Lecture by Dr. Ramjee Prasad , Director, CTIF, Aalborg university, Denmark on the topic of " 4G Mobile Communication Systems & Access Technology" at Hi-Tech Building BIT, Mesra, Ranchi, was held on 05-04-2005 .
- (c) One day seminar by Agilent Technology Ltd. was held on 11 /02/ 2005.

III. Short Term Courses :

Short term training course conducted on "Research advances in Fiber Communication and fiber optics sensor" as a coordinator during 28th June – 10th July, 2004. Number of delegates 30, Co-ordinator Dr. S. K. Ghorai. Resources persons of the programme were Prof. S. N. Sarkar, Dept. of Electronics Science 92, A.P.C. Road, Kolkata University, Kolkata-700009., Prof. P.K.basu, Dept. of Radio Physics and Electronics, 92, A.P.C.Road, Kolkata University, Kolkata –700009., Dr.Vishnu Priya, Dept. of Electronics and Instrumentation, Indian School of Mines, Dhanbad – 826004., Prof. D. Dhar, Dept. of Electronics Science, 92, A.P.C. Road, Kolkata University Kolkata-700009., Mr. B.Chakraborti, Sr. Manager (R & D) MECON, Ranchi.

D. Publications by faculty : International/National/Books/Monographs.

I. International Journal :

1. S. K. Ghorai "Data –dependent System approach for Starin measurement in Interferometric fiber Optics system, Optics and Laser Technology , Vol, 36, pp 571-574, (2004) and
2. S. K. Ghorai " Strain measurement in a Mach-Zehnder fiber Interferometer Using Genetic Algorithm, Sensor and Actuators (Communicated)".
3. V. R. Gupta and Nisha Gupta "A compact Circularly Polarized Microstrip Antenna",Scientific Journal of Electronics and Electrical Engineering – Kaunas, Vol. 52, No. 3, pp. 10-12,2004
4. D. K. Gupta and Nisha Gupta " A New Approach to partial Constraint Satisfaction Problem" International Journal of Computer Mathematics, Vol. 81, Nop. 12, pp 1465-1476, Dec. 2004
5. Nisha Gupta And D. K. Gupta " Analysis of Microstrip Lines using Dyadic Green's Function" Scientific Journal of Elcetronics and Electrical Engineering – Kaunas, Vol. 55, No.6, 2004.
6. J. S. Roy and J. Ghosh " A Multifrequency Microstrip Antenna", Accepted in Microwave and Optical Technology Letters.

II. International Conference :

1. Nisha Gupta and V. R. Gupta , Amit Agarwal , Arnab Kr. Das and Uttam Minz, " Satellite Tracking Antenna with Fuzzy Logic Control," in Proc. Of 7th International Symposium on Wireless Personal Multimedia Communication 2004, University of Padova, Italy, September 12-15,2004.
2. D. K. Gupta and Nisha Gupta " An Efficient Cost Optimization technique for VSAT Networks" in Proc. Of 7th International symposium on Wireless Personal Multimedia Communication 2004, university of Padova, Italy , September 12-15, 2004.
3. Nisha Gupta and V. R. Gupta " Microstrip Patch Antenna for 2.4 GHz Band" in Proc. Of Asia-Pacific Microwave Conference (APMC-2004), New Delhi, December 15-18. 2004.
4. K. Sambnasiva Rao, V. R. Gupta and Nisha Gupta " Characteristics of Fractal Dipole Antenna" in Proc. Of International Conference on Biomedical, Electronics and Communications (BET04), Visakhapatnam, December 9-10,2004.
5. Nisha Gupta and V. R. Gupta " Reduced Size, Dual Frequency band Antenna for wireless Communication " in Proc. Of IEEE International Conference on Personal Wireless Communication (ICPWC - 2005), New Delhi, INDIA , January 23-25, 2005.
6. M. Banerjee, P.Roy, D. Muhury and J. S. Roy " Handoff management for leaky spots in a simulated mobile environment", COMNAM 2000, Dec. 2000, Jadavpur University, Calcutta, India.
7. J. S. Roy and N. Chattoraj, " Magnetically Biased ferrite microstrip antenna " Proc. APSYM, pp 288-291, Dec. 2002 Cochin, India.

8. J. S. Roy, "Prioritized and nonprioritized handoff in mobile communication", Proc. Of CODIS-2004, Jan 2004, pp 142-144, Culcutta.
9. J. S. Roy, S. Bose, S. Chakrabarty and A. Prabhakar, "Performance Analysis of a Prioritized Handoff Scheme in mobile Communication", Presented in WPMC2004, Padova, Italy, Sep. 12-15, 2004.
10. J. S. Roy, T. Mondal and D. Sainath Reddy, "Design of Antenna Array for Intelligent Transport Systems", EISCO-2005, Coimbatore, 7-9 Jan, 2005.
11. S. Bose and J. S. Roy, "A Closed-form Expression for Characteristic Impedance of a Microstrip Line", ICMARS-2004, Jodhpur, 23-25 Nov., 2004.
12. J. S. Roy and N. Chattoraj, "A new technique for Scaling dielectric Impedance of a Microstrip Substrate from Measurement", ICMARS 2004, Jodhpur, 23-25 Nov., 2004.
13. S. S. Solanki "Intelligent PCB Drilling M/C, International Conf. EISCO-05, January 2005".

III. National Journal :

1. Manish Jha "Multistage Interconnection Networks" Types, Problems and It's Problem solutions, Ranchi University Journal of Science and Technology (RUJOST), Vol. 1 No. 1 pp. 87 – 91, June 2004.

IV. National Conference :

1. S. Das, A. Mitra, A. Dasgupta and J. S. Roy "Optimization of gain of a microstrip antenna using genetic algorithm", NSAMTATD, Jan. 2001, BIT, Ranchi, India.
2. S. K. Dash "Strain measurement in a simply supported beam by use of model interference in circular core few mode fibers" Paper published in National-Conference (NCMO) on Microwave and opt electronics, Aurangabad – June 2004.
3. Nisha Gupta and V. R. Gupta, "Fractal Patch Antenna for 2.4 GHz Band" in Proc. Of National Symposium on Antennas and Propagation, Cochin, 21-23 December, 2004.

E. Seminar/Symposium/short term course attended by faculty members :

I. International Conference :

1. Prof. S. C. Goel & Dr. J. S. Roy have participated in EAGER NetWIC meeting and in the International Workshop on Wireless Communications Technology, held in the Department of Electrical Engineering, Institute Teknologi Bandung (ITB), Indonesia. Prof. Goel and Dr. Roy delivered two Invited Lectures in the Workshop.
2. Prof. S. C. Goel, Dr. N. Gupta and Dr. J. S. Roy have visited University of Roma, TV, Roma, Italy. They have participated in EAGER NetWIC meeting in Padova and in the International Conference on Wireless Personal Multimedia Communication (IPMC-2004), Padova, Italy. Prof. Goel, chaired a session on Satellite Communication in WPMC. Dr. N. Gupta and Dr. J. S. Roy have presented papers in the Conference.

3. Dr. S. K. Ghorai, presented a paper on "Quasi Distributed Strain in Cantilever Beams by use of Model Interference" International Conference on Optoelectronics, fiber optics & photonics (PHOTONICS, 2004) , Cochin University of Science and Technology, Kochi (Ernakulam), December 9-11, 2004
4. Dr. S. K. Ghorai, presented a paper on " Generic Algorithm Approach for phase extraction in International Interference fiber optics sensor " International Conference on Optoelectronics , fiber optics & photonics (PHOTONICS 2004) , Cochin University of Science and Technology, Kochi (Ernakulam), December 9-11, 2004
5. Prof. B. B. Pal, presented a paper on " An Optimum configuration for Electro Surgery filter" date on 15.12.04 to 18.12.04 Name: ASIA PACIFIC 04, at Ashoka Hotel, New-Delhi.
6. Dr. Nisha Gupta, presented a paper on " Satellite Tracking Antenna with Fuzzy Logic Control," in Proc. Of 7th International Symposium on Wireless Personal Multimedia Communication 2004, University of Padova, Italy, September 12-15,2004.
7. Dr. Nisha Gupta, attended a Short Term course on "RF & Microwave for Wireless Application" offered by IIT, Kharagpur, during June 29 to July 10,2004.
8. Dr. Nisha Gupta , attended a UGC workshop " Capacity Building for Women Manager in Higher education – Training for Trainerr Programmes, 2004 – 2005, from 08-13 March 2005, organized by center for Women's Students & Department , BHU, Varanashi.

II. National Conference :

1. S. K. Ghorai, Dilip Kumar and S. K. Dash " Strain Measurement in a simply Supported Beam by Use of Model Interference in Circular Core Few Mode Fiber " National Conference on " Microwaves and Optoelectronics (NCMO-2004)", Dept. of Physics, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (M.S.) June 29-30, 2004.
2. M. K. Jha " Analysis of MIN for Multicast Communication, CETEC – 2004", 14th March 2004, Department of Electronics & Communication, Engg. , Sant Loongowal Institute of Engineering & Technology, Longwal – 148106, Sangwar, Punjab.
3. M. K. Jha "Multistage switching Networks " Evaluation of switch Redndancy to improve Availability, symposium on Emerging Trends in Electronics, ELECTRO – 2005, Feb. 3-5, 2005 Department of Electronics Engineering, I.T., B.H.U., Varanasi – 221005.
4. B. B. Pal " An Analog System for Phonocardio Graphy", Date on 22.12.04 at IIT, Chennai, Deptt. Applied Math, National Symposium on Mathematical Methods & Application (NSMMA 04).
5. Nisha Gupta and V. R. Gupta " Reduced Size, Dual Frequency band Antenna for wireless Communication " in Proc. Of IEEE International Conference on Personal Wireless Communication (ICPWC - 2005), New Delhi, INDIA , January 23-25, 2005.
6. V. R. Gupta, QIP short term course on " RF & Microwave for Wireless Applications" at IIT Khargpur, 29th June –10th July 2004.

7. M. Puri, A' chaired session in National Conference on Information & Communication Technology, Institution Of Engineers (India), Engineer Bhawan, Ranchi in 2005.
8. Prabhat Kumar Upadhyay " FDP on DSP at NERIM", Guwahati from 15-30 June 2004 Sponsored by AICTE.
9. A. K. Tiwari, Paper presented entitled " Status and Prospect of Energy management programme for conservation of energy".

III. International Symposium :

1. Nisha Gupta and V. R. Gupta , Amit Agarwal , Arnab Kr. Das and Uttam Minz, " Satellite Tracking Antenna with Fuzzy Logic Control," in Proc. Of 7th International Symposium on Wireless Personal Multimedia Communication 2004, University of Padova, Italy, September 12-15,2004.
2. D. K. Gupta and Nisha Gupta " An Efficient Cost Optimization technique for VSAT Networks" in Proc. Of 7th International symposium on Wireless Personal Multimedia Communication 2004, university of Padova, Italy , September 12-15, 2004.
3. Nisha Gupta and V. R. Gupta " Reduced Size, Dual Frequency band Antenna for wireless Communication " in Proc. Of IEEE International Conference on Personal Wireless Communication (ICPWC - 2005), New Delhi, INDIA , January 23-25, 2005.

IV. Short Term Courses Attend :

1. Dr. Nisha Gupta, Short term course on " RF & Microwave for Wireless Applications" Offered by IIT , Kharagpur during June 29 to July 10, 2004.
2. Dr. Nisha Gupta, UGC workshop " capacity Building for woman manager in higher education – Training for Trainer Programme' 2004 – 2005 from 8-13 march, 2005 Organised by center for Women's students & development, BHU , Varanasi.
3. Prof. B. B. Pal, One STTP attended – " Recent Advances in optical communication & Fiber – optics sensors", from 28-6-2004 to 10.7.2004 at BIT, Mesra, Co-ordination : Prof. S. K. Ghorai.
4. Prof. Bharat Gupta , "attended a short term course of one week , conducted by NITTTR, Chandigarh on Image Processing , 31st Jan. to 4th Feb. 2005.
5. Prof. V. R. Gupta, Short term course on " RF & Microwave for Wireless Applications" Offered by IIT , Kharagpur during June 29 to July 10, 2004.

F. Award/Nomination of faculty by important organization :

1. Prof. M. Puri, was awarded Prominent Citizens of India Award for the year 2004 in the form of a Trophy & a book of volumes " Prominent citizens of India" by progress India colloquium S-561 , School Block-II, 220, 2nd Floor, Bhagawati Complex, Shakarpur, Delhi 110092.

DEPARTMENT OF HOTEL MANAGEMENT

The Department of Hotel Management was established on 20th Jan. 2003. It is actively engaged in developing the laboratories like Food Production Lab, Food & Beverage Service Lab, Accommodation Operation Lab etc.

A twenty-six room with attached kitchen & dinning facility is managed by the Department so as to provide hands on practical exposure to the students. Departmental library is maintained to provide accessibility to wide range of Hospitality & Tourism related books & magazines to the students & staff members. Just within two years of existence Department enjoys a good name in the field of hospitality in the state of Jharkhand. Department has provided hospitality services to His Excellency-Governor of Jharkhand, Chief Minister & other dignitaries.

The Department has also been providing support in hospitality services for the institute as & when required like conferences, seminars & V.I.P visits. Students have also been taking keen interest in various co-curricular activities in the institute. The department organized a seminar on Hospitality & Tourism on 20th April 2004. A meet was also organized on 20th Jan. 2005 on the occasion of foundation day of the department where professionals from Indian Airlines, Capitol Hill etc. participated.

Degree/Diploma offered : Bachelor Degree in Hotel Management & Catering Technology.

Faculty Position : Lecturer –2, Associate Lecturer-3, Chef –1, Research Associate –1.

Number of Students enrolled in the Department : Eighty One.

Academic Innovation, Research & Infrastructure Development Activities :

1. Providing hands on practical exposure to the students by maintaining & upgrading twenty-six room guesthouse.
2. Training restaurant renovated & upgraded with a training bar adding an elegant touch.
3. Tourism info. Lab upgraded with international & national tourism related documents & literature.
4. Accommodations Lab upgraded with world-class machines & Equipments. (Karcher V.C. T-201; B.R. – 400; I.F.B-Elenza; Spazio D.B. Ringer trolleys, Karcher Euro 7630; W.M.S. Pinza Manufholder, Karcher Euro 6050;, & others).

A. Project Submitted :

1. Feasibility study of Tourism Potential in Jharkhand State.

B. Seminar/Workshop Conducted by the Department :

1. Organized seminar on Hospitality & Tourism on 20th April 2004.
2. Department conducted a Meet on “Hospitality & Tourism” to commemorate Department foundation day. The key speakers were Ms. Madhulika Manager Human Resources, Capitol Hill & Mr. Debasish Dasgupta, Area Manager Indian Airlines.

3. A training program on "Guest House Management" was conducted for NIFFT Hatia Ranchi.
4. Training program of Staff of Hotel Capitol Hill on Accommodation Management & Food & Beverage Service Operation was conducted by Sh. Ashish Dahiya & Sh. Praveen Srivastava (Faculty in the Department).

C. Publication by Faculty Members :

1. Sh. Ashish Dahiya, Submitted a research paper on "Developing Human Resources in Travel & Tourism" in National Conference organized by Centre for Mountain & Tourism Studies: HNB Grahwal University Uttranchal. The paper has been accepted for publication.
2. Sh. Sanjay Kumar presented a paper on "eco-tourism; constrains & existing opportunities in the State of Jharkhand". Organized by IISM Pundag Co-Sponsored by ITTM Gwalior.
3. Sh. Roshan Prasad & Sh. Sanjay Kumar presented their papers in National Seminar on Green Productivity & sustainable development organized by Environmental science & Engineering; B.I.T. Mesra, Ranchi.

D. Seminar/Short term Course attended by faculty members :

1. Sh. P.R. Sahoo attended a short term Training Program on "Knowledge Management" conducted by Department of Management B.I.T. Mesra, Ranchi.
2. Sh. Ashish Dahiya attended a training programme on "Training Methods & Techniques" organized by Director General of Employment & Training, Ministry of Labour, Govt. of India in December 2004.
3. Sh. P.R. Sahoo & Sh. Sanjay Kumar attended a short –term programme on Heritage Management organized by Department of Architecture B.I.T. Mesra, Ranchi.
4. Sh. Praveen Srivastava attended a A.I.C.T.E. sponsored short tem Staff training programme on "Continental Cuisine Service Management". From 16-30 September, 2004 at S.I.H.M.- Tiruchirappalli.
5. Sh. Shandilya Avhinav attended a short-term course on "Sugar Craft & Choclate Confectionary" conducted by Sayaji School of Management, Indore, M.P. under the Guidance of Chef. Nicolas from England.

E. Awards/Nominations of Faculty by Important Organization :

1. Sh. Ashish Dahiya & Sh. Moloy Das awarded as Certified Life Saver by F.H.R.A.I. in F.F.L.S. programme organized in Kolkata in October 2004.
2. Sh. Praveen Srivastava – have been awarded a certificate by "American Hotel & Lodging Association". As their certified trainer in Front Office Operations.
3. Sh. Sanjay Kumar have been appointed by Prabhat Kabhar – a esteemed daily for providing information on tourism subject in their Toursim/Jobs edition.
4. Sh. Ashish Dahiya has been nominated for South Asia Foundation S.M. Scholarship in the month of January 2005. By IGNOU.

F. Students Activities :

1. Students were taken on an Industrial Visit to Commercial Laundry in order to get an exposure from industry.
2. A cash prize of Rupees Three Thousand and five hundred only has been given by M/s. Unicraft Machinery & Trolley Pvt. Limited. Kolkata for the student who would be holding first position in the batch.
3. Provided hospitality services to Sh. Arun Shorie, The then Disinvestments Minister, Govt. of India.
4. Did excellent service for Chief Minister Govt. of Jharkhand, H.E. Governor of Jharkhand.
5. Provided hospitality services in various national & international conferences organized by Deptt. Of Production Engg., Deptt. Of Architecture, Computer Sciences & others.
6. Students under went training in various star hostels all over the country during their vacations viz. Sayaji Indore, Taj Kolkata, Taj Ganges Varanasi The Park Chennai, Cidade-de-Goa, Nirulas Delhi, My Fair Lagon Bhubneshwar and Capitol Hill Ranchi.

DEPARTMENT OF INFORMATION SCIENCE

In a Society where information is lifeline and central resource for all developmental activities, information management has become imperative. This paradigm shift has paved the way for the emerging trend in Information Science and Technology.

In this context, the need for an adequate supply of skilled manpower to design, develop and operate the numerous components of international national, regional and local information systems is apparent.

Degree/Diploma offered : M.Sc. and Ph.D.

Faculty Position : Lecturer –1, Associate Lecturer-1.

Numbers of Students enrolled : 55.

Academic Innovation, Research & Infrastructure Development Activities :

A. Seminar/Conference/Short term course conducted by the Department :

National Conference on Information Resource Management in Digital Environment during October 1-2, 2004. It was attended by 30 delegates from various parts of India including Ranchi. Dr. Jagdish Arora, Director, INDEST was the chief guest and delivered the keynote address. Dr. A.R.D. Prasad, Associate professor, DRTC and Dr. Ramesh Sharan, Professor, Ranchi University delivered the Expert lectures. Over 20 technical papers were also present by various authors including the students of the Institute.

B. Seminar/Conference/Short term course attended by the faculty :

1. Dr. Bhaskar Karn attended the International Conference ICIM-2005 in February, 2005.
2. Mr. Arnidam Dutta presented a paper on Intellectual Property Rights in Digital Age in INFOGOLD 2005.
3. Dr. Bhaskar Karn was appointed as a Rapporteur during ICIM-2005 in February, 2005.

Students Activity :

1. Students played an important role in organizing INFOGOLD –2004, A national conference on Information Resource Management in Digital Environment during October 1-2, 2004 and presented papers in that. Their papers were appreciated in conference and got special reference from the Chief Guest, Dr. J. Arora.

DEPARTMENT OF MANAGEMENT

Founded in 1979 the Department of Management is celebrating its Silver Jubilee this year. It was founded to impart holistic management education to potential young managers. Special emphasis remains on nurturing personal integrity and social responsibility. With its massive infrastructure base of well equipped library and computer labs, seminar and conference rooms, the department of Management facilitates better contemporary management education to the students. It is committed to trigger-off the scholars to become managers, leaders, innovators, challengers and continuous learners.

The department has been committed to continuous growth in every sphere. Keeping this in mind we have just upgraded our selection system from MAT to CAT from the current year 2005. The department has its own qualified and experienced faculty besides other faculty members drawn from the different departments of BIT. The faculty members are continuously exposed to different Quality Improvement Programs, Seminars, Conference and Workshops for their continuous upgradation.

The department has been accredited by National Board of Accreditation, AICTE and was been given 'B' grade. The MBA curriculum has been carefully designed to balance theory with practice as one of the most important developmental activities of the department. The two year full-time programme consists of forty-two papers spread over six trimesters. During the first three trimesters core courses cover areas of General Management and present an overview of the specialization papers. In the fourth and fifth trimesters, dual specialization courses are offered. In the sixth trimester, along with core courses students opt for sectoral specialization. The students undertake one project each in their functional area of their specialization and their sectoral specialization. The students also undergo a two months intensive on job training in industries during their summer vacation. It gives them the required exposure to real life work environment. Students are also exposed to one foreign language other than English. It helps them in their better placement in corporate world.

Degree/Diploma Offered : BBA, MBA, ME (QEM), Ph.D.

Faculty Position : Professor –1, Reader –5, Senior Lecturer –1, Lecturer – 6.

Number of Students Registered with Department : 160.

Academic Innovations, Research and Development Activities :

1. MoU signed with Department of Industries, Government of Jharkhand on IT enabled Services. A sum of Rs. 59.00 lakhs has been sanctioned.
2. Collaboration expected with Coventry University, UK for student exchange and Research and Development. Team has already visited BIT campus.
3. Imparting IT education to officials of Jharkhand State Electricity Board (JSEB).
4. The department achieved 39th and 41st position in All India ranking of Business Schools done by Business World and Outlook respectively.

A. Ongoing Projects :

Sl. No.	Project Title	Sponsor	Principle Investigator
1.	The influence of the integration of technological strategies with business strategy of a large public sector organization on small medium scale suppliers.	DSIR	Dr. S.K. Mukherjee
2.	Industry Institute Partnership Cell	AICTE	Dr. A.M. Agrawal
3.	Professional education and its impact on Industrialization in Tribal Region –Need for Government Support for creation of infrastructure (Jharkhand and Chattisgarh)	Ministry of Tribal Affairs	Dr. A.M. Agrawal
4.	Inventory Management and its effectiveness in the small scale industries of Jharkhand State	AICTE	Dr. A.N. Jha

B. Project Sanctioned during the year 2004-2005 :

Sl. No.	Project Title	Sponsor	Principal Investigator
1.	IT Enabled Services	Dept. of Industries, Govt. of Jharkhand	Dr. A.M. Agrawal
2.	NFFWP, Katihar & Araria	Govt. of Bihar	Dr. A.M. Agrawal

C. Project Completed during the year 2004-2005 :

Sl. No.	Project Title	Sponsor	Principle Investigator
1.	Professional education and its impact on Industrialization in Tribal Region – Need for Government Support for creation of infrastructure (Jharkhand and Chattisgarh)	Ministry of Tribal Affairs	Dr. A.M. Agrawal

D. Project Submitted during the year 2004-2005 :

1. Dr. (Mrs.) S. Shivani, “An Investigation of reasons for low level of woman entrepreneurship in south chotanagpur region” sponsored by AICTE.

E. Seminar/Conference/Short Term Training Programmes conducted :

1. A short term training programming sponsored by ISTE/AICTE was conducted by the department during December 6-18, 2004 on Knowledge Management. Twenty Five Participants from various institutions participated in the course and delegates From industry and institutions delivered the lectures. Dr. A.M. Agrawal was the Coordinator of the programme.

F. Publication by Faculty :

1. Dr. (Mrs.) Shradha Shivani, "Socio Cultural influences of Indian Entrepreneurship Measurement of Traits and Success of young entrepreneurs at Ranchi" published in the International Journal of Indian Society of Labour Economics, Vol. 47, Oct. – Dec. 2004.
2. Dr. (Mrs.) Sradha Shivani, "The making of an Indian entrepreneur, the socio-culture context" published in the Indian Journal of Social Development, Vol. 4, No. –2, December 2004.
3. Mr. Vijay Agrawal, "Business process outsourcing-Magic Mantra" published in masterstroke, ISSN 0972-9895, Vol. I, January-March, 2004.
4. Dr. A.M. Agrawal, "Curriculum Development and Need Based Courses: Some Thoughts", 2nd AIIMS International Conference on Management, December 28-31. 2004.
5. Dr. A.M. Agrawal, "IT Enabled Management" in the National Seminar at IMIT, Bhubaneswar on 17th April, 2005.

G. Seminar/Symposium/Short Term Training Course Attended by Faculty :

1. Mr. S.C. Mishra and Dr. R.N. Bhagat attended the conference and presented a paper on "Forest Management and primitive Tribes" at the International Congress of Asian and North African Studies ICANAS-XXXVII held at Moscow during the period August 16-22, 2004.
2. Dr. R.N. Bhagat attended the National Convention o "Public Governance Dividends – The Road Ahead" on December 10, 2004 organized by AIMA at New Delhi.
3. Dr. R.N. Bhagat presented a paper on "Green Productivity and Sustainable Development in Agriculture sector" at the All India Seminar on Green Productivity an Sustainable Development organized during 10-11 March, 2005 by Environmental Science and Engineering Group at BIT, Mesra, Ranchi.
4. Dr. (Mrs.) Manju Bhagat presented a paper on "Legal Frameworkv – Environmental Legislation" At the All India Seminar on Green Productivity and Sustainable Development organized during 10-11 March, 2005 by Environmental Science and Engineering Group at BIT, Mesra, Ranchi.
5. Mr. Utpal Baul presented a paper "Behaviour in Organizational Buying Behavior – A human element of competitiveness in the International Conference on Globalization and competitiveness organized by Vinod Gupta School of Management, IIT Kharagpur on January 11-13, 2005.

6. Dr. (Mrs.) Shradha Shivani presented a paper on "Green Marketing : Issues and Concerns" at the All India Seminar on Green Productivity and Sustainable Development organized during 10-11 March, 2005 by Environmental Science and Engineering Group at BIT, Mesra, Ranchi.
7. Ms. Ruma Tripathi attended the National Seminar on "Industry Verticals" organized by XLRI Jamshedpur in November 2004.
8. Mr. A.R. Srivastava attended a two weeks STTP on "Implication of Knowledge Management in Indian Business" during December 6-18 2004 organized by BIT, Mesra, Ranchi.
9. Mr. A.R. Srivastava attended the National Workshop on "Intellectual Property Rights" during November 6-7, 2004 organized by Guru Jambheshwar University, Hissar.
10. Mr. A.R. Srivastava attended an International conference on "Supply Chain Management and Retail Business" in November 2004 organized by FICCI, New Delhi.

H. Award/Nomination of Faculty :

1. Mrs. S. Shivani was awarded Ph.D. degree from BIT Mesra, Ranchi, Jharkhand.
2. Mr. P.C. Jha was awarded Ph.D. degree from Baba Bhivrao Ambedkar University, Muzaffarpur, Bihar.
3. Dr. A.M. Agrawal nominated to the panel of NAAC Committee, the panel of UGC Expert Committee, President's Nominee to Selection Committee of Assam University, member Distance Education Council of India, the panel of AICTE Expert Committee nominated by Department of Science and Technology, Government of Jharkhand.

I. Student Activities :

1. A three day Management Fest, SAMMAGAM was organized during 25th –27th February 2005. It was organized under the aegis of the Executive Club of the students. Students from over 15 outstation institutions participated in it. Seminars, Guest Lectures, industrial tours are also organized by them.

Others :

1. Dr. A.M. Agrawal visited – Dubai in October 2004 for a possible Collaboration with Royal College of Applied Sciences, RAK Dubai.
2. Dr. A.M. Agrawal visited – Bharti Vidyapeeth, Deemed University, Pune as UGC Expert Committee member during January 2005.
3. Dr. AM. Agrawal visited – Attended the Selection Committee meeting of Assam University as President's Nominee.
4. Dr. A.M. Agrawal visited – Delivered a lecture on "Curriculum Development & Need based courses" in UGC Academic Staff College, BHU, Varanasi on 28th September 2004 at the 37th Orientation course on Information Technology.
5. Dr. A.M. Agrawal visited – Conducted one day programme on Knowledge Management at MSM, Meerut on November 21, 2004.

DEPARTMENT OF MECHANICAL ENGINEERING

Research grant has been sanctioned for the Department of Mechanical Engineering for the development of infrastructure for Smart Mechanical Systems Laboratory from the Ministry of Science and Technology, Govt. of India, and identified as DST-FIST sponsored Department by the Department of Science and Technology, Government of India.

The Department has initiated three major research projects during the year under report :

1. Solar – Biomass hybrid cold storage cum Dehydration Unit for the Agro-products in Jharkhand (Ministry of Food Processing Industries, Govt. of India).
2. Bio-gas Reactor Unit
3. Development of Smart Materials and Sensors

Research processes have been initiated for the establishment of the Solar-Biomass hybrid cold storage cum Dehydration Unit for the Agro-products. The storage capacity is 80 tonnes (200 m³) and the dehydration unit has a capacity of 250 kg per day of dehydrated vegetables.

Degree/Diploma offered : B.E. (Mechanical Engg.), M.E. (1) Heat Power, (2) Design of Mechanical Equipment.

Faculty Position : Professor –2, Reader –4, Sr. Lecturer –1, Lecturer –17, Associate Lecturer –1.

Number of Students enrolled/registered with Department : B.E. – 337, M.E. –9.

Academic Innovations, Research & Development activities :

During the year under report, research collaborations have also been initiated with IRIMEE for solving technical problems of the Ministry of Railways.

A. Ongoing Project :

Sl. No.	Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
1.	Head of the Department (Dr. Ashok Misra)	Development of Infrastructure for Smart Mechanical Systems Laboratory (FIST)	Rs.26.00 Lakhs	DST
2.	Dr. Ashok Misra	Correlation of Micro-structural characteristics with stress-induced Magnetic and electromagnetic Effects in Metals (April 2001-Mrarch 2004)	Rs.5.18 Lakhs	UGC
3.	Dr. Ashok Misra	Engineering of Smart Materials through Mechano emission characteristics (Nov. 2002-Nov. 2005)	Rs.15.7612 Lakhs	DST

4.	Dr. Ashok Misra	Cold Storage and Dehydration of Vegetables through single Solar-Biomass Hybrid System for Tribal States (2005-2007)	Rs.66.80 Lakhs	Ministry of Food Processing Industries Govt. of India
5.	Dr. A.N. Sinha	Development of CAD Model for custom fit Artificial human limbs using Reverse Engineering Method (2005-2008)	Rs.15.00 Lakhs	DST

B. Project sanctioned during the year 2004-2005:

Sl. No.	Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
1.	Head of the Department (Dr. Ashok Misra)	Development of Infrastructure for Smart Mechanical Systems Laboratory (FIST)	Rs. 26.00 Lakhs	DST
2.	Dr. Ashok Misra	Cold Storage and Dehydration of Vegetables through single Solar –Biomass Hybrid System for Tribal States (2005-2007)	Rs.66.80 Lakhs	Ministry of Food Processing Industries Govt. of India
3.	Dr. A.N. Sinha	Development of CAD Model for custom fit Artificial Human Limbs using Reverse Engineering Method (2005-2008).	Rs.15.00 Lakhs	DST

C. Project of completed during the year 2004-2005 :

Sl. No.	Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
1.	Head of the Department (Dr. Ashok Misra)	Correlation of Micro-structural characteristics with stress-induced Magnetic Effects in Metals (April 2001- March 2004)	Rs.5.18 Lakhs	UGC

D. Seminar/Conference/Short term course conducted by the Department :

1. During the year 2004-2005, the Department has initiated to organize an International Symposium on "Intelligence based materials and manufacturing" (ISIMM- 2005). This ISIMM- 2005 has now been scheduled to be held on 18-20 August 2005.

F. Publication by faculty :

I. Journals :

1. Dr. Ashok Misra and Dr. Arbind Kumar, "Some basic aspects of electromagnetic radiation during crack propagation in metals", International Journal of Fracture, Vol. 127 (2004) pp. 387 –401.
2. Dr. Arbind Kumar and Dr. Ashok Misra, "Shape anisotropy of magnetic field generation during tensile fracture in steel, "J. Magnetism and Magnetic Materials.
3. B. Srilakshmi and Dr. Ashok Misra, "Secondary Electromagnetic Radiation during plastic deformation and crack propagation in metals", Journal of Materials Science, USA (in Press).
4. B. Srilakshmi and Dr. Ashok Misra, "Electromagnetic Radiation during opening and shearing models of fracture in commercially pure Aluminium at elevated temperature", Materials Science and Engineering –A, USA (in press).
5. B. Srilakshmi and Dr. Ashok Misra, "Effects of some Fracture Mechanics Parameters on the Emission of Electromagnetic Radiation from commercially pure Aluminium", Manufacturing Technology and Research –An International Journal (in press).

II. Papers presented in the International /National conferences by the Faculty

Members :

1. B. Srilakshmi and Dr. Ashok Misra, "Electromagnetic Radiation during Crack Propagation in Metals – a New trend in the development of Smart Materials", Proceedings of the International Symposium on Smart Materials & Systems, Dec. 15-17, 2004, Chennai.
2. Roy, A.K., Maiti, B. and Das, P.K. "Air Entrainment Characteristics in a Plunging Liquid Jet System", Proc. 58th Annual Session and First joint Meeting of the Indian and American institutes of Chemical Engineering, CHEMCON 2004, Mumbai, Dec. 27-30, 2004.

3. Praveen Mishra, "Physical Model Study of Hearth Drainage Phenomena of Blast Furnace by using NDE Techniques", National Seminar on Role of NDE in Modern Maintenance Management, 12-13 March, 2005, Organized jointly by IACR Engineering College, Rayagada, Orissa and ISTE Orissa Section.
4. Praveen Mishra, Systematic Maintenance of Blast Furnance by Physical Model Study of Hearth Drainage Phenomena", National Seminar on Role of NDE in Modern Maintenance Management, 12-13 March, 2005, Organized jointly by IACR Engineering College, Rayagada, Orissa and ISTE Orissa Section.
5. D.B. Lata, "Bioproduction of Hydrogen by Halobacterium Halobium" organized by Department of Biotechnology, Birla Institute of Technology, Mesra, Ranchi, March 17-19.

III. Papers communicated for Publication :

1. A.N. Sinha, Nibedita Das & G. Sahoo, "Ant Colony based Hybrid optimization for Data Clustering – Kibernet", U.K. (Communicated).
2. A.N. Sinha, "Optimum Column Design Using Genetic Algorithm", Engineering Computations" (Communicated).
3. D.B. Lata, R. Chandra, A.Kumar, A.Misra, "Effect of light on the generation of Hydrogen by Halobacterium Halobium NCIM 2852" International Journal of Hydrogen Energy (Communicated).
4. Rajeev Kumar & Ashok Misra, "Electromagnetic Radiation Emission during Crack Propagation and Fracture in commercial pure 68-32 Brass Sheet", Metals & Materials International (Communicated)

G. Seminar/Symposium/short term course attended by faculty members :

1. A.N. Sinha, Two day Programme on Rapid Prototyping – Application and Demonstration held on May 17-18, 2004 at I.I.T. Kharagpur.
2. A.N. Sinha, Short term course entitled "Genetic Algorithm for Engineering Optimization" held on April 7-9, 2004 at I.I.T. Kanpur.
3. Kumar Arbind, One day Workshop on "Vertical Shaft Shaft Brick Kiln" organized by Jharkhand Govt. on 23rd March 2005.

H. Award/Nomination of faculty by important organization:

1. A.N. Sinha: appointed Member of Selection Committee of interview Board of UPSC (2004-2005).

I. Students Activities :

1. The Mechanical Engineering Society is in process of bringing out a Technical Magazine for projecting the various Techno-Academic activities of the students and faculty members of the department.

DEPARTMENT OF PHARMACEUTICAL SCIENCES

Established in 1972 and during the past 32 years of its existence, the students of this department have made themselves well known for their Alma Mater worldwide. The department offers academic programmes in the Undergraduate and Postgraduate levels as well as Ph.D. in diverse area of Pharma Sciences. All the courses are recognized by the Pharmacy Council of India and AICTE and are accredited. These courses are designed to create professional in Pharmaceutical Sciences namely in Biopharmaceutics, Synthetic Drugs, Natural Products, Herbal drugs & Formulation, Pharmacology, Herbal drugs & Formulation, Pharmacology, Biochemical Pharmacology, Toxicology etc. The syllabi of the courses are updated from time to time to incorporate recent developments achieved in these fields in National and International Scenario and to cater to the requirements of the Industries and various Academic bodies. The department has state-of-the art laboratories for both teaching and research. Department also maintains a "Medicinal Plant Garden" which spreads over 10 acres of land on the campus and houses more than 200 plants. The training at garden is an integral part of the Pharmacognosy curriculum. The various species of the medicinal plants are used by the students for their projects and research work and generates interest in the subject. In addition, a number of entrepreneurs have been trained in processing and cultivation of medicinal plants. Department also maintains well equipped animal house which is also accredited under the respective act.

The department has well devoted and qualified team of faculty members who are consistently involved in various research activities. They are successful in getting a number of Research projects from organizations like UGC, AICTE and DST/KVIC. More projects are on the anvil and it is expected that this would be a continuous process in the years to come. The department currently offers courses leading to B.Pharm., M.Pharm. in 4 specialization and Ph.D. It also provide necessary support to department like Hotel Management & Catering Technology, Biotechnology, Biomedical Instrumentation and Environmental Sciences and Engineering Department has a plan to introduce Diploma in Pharmacy Programme as well as M.Pharm. in *Quality Assurances and * Clinical Pharmacy, and Pharm. Biotechnology.

To meet challenges of Pharmacy Profession and Industry, the department has introduced concept of specialization at undergraduate level itself. The unique feature being, during Final year, students may opt. and allowed to specialize either in community Pharmacy or Industrial Pharmacy oriented Programme.

The department is actively engaged in Research in the area of Herbal Drug Formulation & Development, Phytochemistry, Synthetic Drugs, Development Analytical procedure for Drugs, Novel Drug Delivery System, Agrotechnique development for Medicinal Plant.

Degree/Diploma offered : B.Pharm, M.Pharm. with specialization in Pharmaceutics, Pharmaceutical Chemistry, Pharmacognosy, Pharmacology.

Academic Innovations, Research & Development activities :

In view of Excellence in Teaching & Research AICTE has granted a QIP (Quality Improvement Programme) cell at the Department. The cell coordinator is Prof. S.P. Bhatnagar, sensing intake Ph.D. Programme – 8, M.Pharm. Programme – 8. The initial grand sanctioned Rupees 6.25 Lacs.

A. Ongoing Project :

Sl. No.	Title of Project	Funding Agency	Date of Sanction	Sanctioned Amount (Rs.)	Duration
1.	Design and Evaluation of Transdermal Drug Delivery of Selected Drug	AICTE (TAPEC)	April 2002	10 lakhs	3 Years
2.	Microcomputerized Identification of Indigenous drugs and Development of Standards	AICTE, New Delhi	April 2002	12 lakhs	4 Years
3	Modernization of Physiology & Pharmacology Laboratories	AICTE	March 2002	13.65. lakhs	3 Years
4.	Technical back-up to Rural Industries of Jharkhand-	KVIC, Mumbai	2002	42.25 lakhs	5 Years
5.	Creation of Infra-structure facilities including extension services under the scheme for human resource development	MFPI	Dec. 2004	50 lakhs	--
6.	Set up of Quality Control Laboratories for Food Processing Industries	MFPI	Jan. 2005	50 lakhs	--
7.	Food and Neutraceutical security with Biotechnology Interventions	MFPI	Mar. 2005	80 lakhs	2 Years

B. Project sanctioned during the year 2004-2005 :

Sl. No	Title of Project	Funding Agency	Date of Sanction	Amount	Duration
1.	Transdermal Delivery of Selected Drugs: Design, in-vitro and in-vivo Evaluation	UGC	2004	7.08 lakhs	3 Years
2	Creation of Infra-structure facilities including extension services under the scheme for human resource development	MFPI	Dec. 2004	50 lakhs	--
3	Set up of Quality Control Laboratories for Food Processing Industries	MFPI	Jan. 2005	50 lakhs	--
4	Food and Neutraceutical security with Biotechnology Interventions	MFPI	Mar. 2005	80 lakhs	2 Years

C. Project completed during the year 2004-2005 :

Sl. No	Title of Project	Funding Agency	Date of Sanction	Amount	Duration
1.	Formulation of herbal Face Cream with special reference to <i>Curcuma domestica</i> vol. rhizome.	KVIC	Aug. 2004	9.00 lakhs	2 Years
2.	Studies on Potent anti-inflammatory agents from Natural Sources.	UGC	Sep. 2000	5,82,560.00	3 Years

D. Project submitted during the year 2004-2005 :

Sl. No	Title of Project	Funding Agency	Date of Submission	Amount	Duration
1.	Synthesis and Evaluation of Some New Imidazole Derivatives	AICTE,	April 2004	12 lakhs	3 Years
2.	Phytopharmacological & Toxicological Studies of <i>Coccinia grandis</i> (Linn) voigt.	AICTE	June 2004	13.1 lakhs	3 Years
3.	Project on Drug design on antifungal agents.	AICTE	2004	6.00 lakhs	3 Years
4.	Phytopharmacological & Toxicological Studies of <i>Litsea polyantha</i> (Juss)	UGC	July 2004	13.118 lakhs	3 Years

E. Seminar / Conference / Short-term course conducted by the Department :

1. Department of Pharmaceutical Sciences organized a Workshop on Instrumental Methods of Chemical & Drug Analysis from 27-30 Jan. 2005. Thirty delegates participated in the workshop.
2. Dr. S. Jha (Convenor) arranged a workshop on Collection, Drying and Storage of Medicinal Plants – 53 persons attended at Chaibasa.
3. Dr. S. Jha (Convenor) arranged a workshop on Modern tools used in the formulation of herbal drugs – 22 persons attended at Chaibasa.

F. Publications by faculty :

I. International journals :

1. Avijit Mazumder, B.P. Saha, S.P. Basu, Rupa Mazumder, "In vitro and in vivo antibacterial efficacy of leaves of Lagerstroemia parviflora against Salmoella isolates from India: an area with a high prevalence of drug resistance," Ethiopian J. of Pharmaceutical Sciences, 21: 7-12, 2004.
2. Avijit Mazumder, S. Jaganath, B.P. Saha, S.P. Basu, Rupa Mazumder, "A Study on sedative hypnotic activity of leaves of Lagerstroemia parviflora Roxb." Advances in Pharmacology and Toxicology, 5(2), 61-64, 2004.
3. Avijit Mazumder, Rupa Mazumder, "Design of a package to increase the sales volume of a newly formulated cough syrup," Advances in Pharmacology and Toxicology, 5(2), 1-10, 2004.
4. Rupa Mazumder, Sujata G. Dastidar, S.P. Basu, Avijit Mazumder and S.K. Singh, "Antibacterial potentiality of Mesua ferrea Linn. flowers," Phytotherapy Research, 18:10, 824-826, 2004.
5. Avijit Mazumder, B.P. Saha, S.P. Basu, Rupa Mazumder R. Boominathan, B.Parimala Devi, C. Subhas Mandal, "Evaluation of antitussive activity of Lagerstroemia parviflora leaf," Phytotherapy Research, 18:9, 780-782, 2004.
6. R. Mazumder, A. Mazumder, S.P. Basu, B.Parimala Devi, C. Subhas Mandal, "Antiussive activity of Mesua ferrea Linn. flower extract," Ethiopian J. of Pharmaceutical Sciences, 21: 55-58, 2004.
7. Avijit Mazumder, B.P. Saha, S.P. Basu, Rupa Mazumder, "Evaluation of antipyretic activity of Lagerstroemia parviflora Roxb extract in rat," Pharmaceutical Biology, 40:1, 64-65, 2005.
8. Avijit Mazumder, Aruni Jha, Rupa Mazumder, S.P. Basu "A Comprehensive study on the factors affecting asthmatic patients in the newly formed state of Jharkhand," Advances in Pharmacology and Toxicology, 6(2), 1-4, 2005.
9. Avijit Mazumder, B.P. Saha, S.P. Basu, Rupa Mazumder "A Comparison of in vitro anti fungal activity of the methanol extract of various parts of Lagerstroemia parviflora (Roxb)," Ethiopian J. of Pharmaceutical Sciences, 2005 (in press).
10. D. Sasmal S.C. Shi, S.P. Rout, N.R.Pani, D.M. Kour "Synthesis & Antiinflammatory activity of some new Isatinoid compounds" Journal of Teaching & Research in Chemistry – vol. II No. 2 p. 83-87 Dec. 2004.
11. S. Jha & V. Puratchimani "Standardization of Gymnema Sylvestre R. Br. With reference to Gymnemagenin by High Performance Thin layer Chromatography," Phytochemical Analysis 15, 164-166, 2004.

II. National journals :

12. R. Mazumder, G.P. Rao, Ashutosh Singh, A. Mazumder, S.P. Basu, S.G. Dastidar "Antiviral potentiality of methanolic extracts of different parts of *Mesua ferrea*," Indian J. of Natural Products, 20(2), 31-33, 2004.
13. R. Mazumder, S. Bhattacharya, A. Mazumder Juthika Kundu, R.N. Gupta "Cholera: A Global Health Problem and its Control by Vaccines," Pharma Times, September-October, 36-37, 2004.
14. Avijit Mazumder, B.P. Saha, S.P. Basu, R. Mazumder "Comparison of the antibacterial spectrum of different parts of *Lagerstroemia parviflora*," The Indian Pharmacist, III: 28, 69-71, 2004.
15. Avijit Mazumder, B.P. Saha, S.P. Basu, R. Mazumder "Studies on anti-inflammatory activities of the extract of *Lagerstroemia parviflora*," J. of Sc. & Pharmacy, 5:3, 2004.
16. R. Mazumder, Priyanka Kapoor, Anju Singh, A. Mazumder, S. Bhattacharya "Effect of *Zizyphus mauritiana* root on organisms causing diarrhoea," The Indian Pharmacist, III: 29, 73-76, 2004.
17. Avijit Mazumder, Pradeep Raj, Rupa Mazumder "Studies on antibacterial potentiality of the leaf extract of *Lawsonia inermis*," Drug Lines (Accepted)
18. A. K. Pattnaik, A. Mazumder, H.N. Mahto, A. Oraon, R. Mazumder, Venkatesan J. "Studies on phytochemical and analgesic activity of bark of *Tectona grandis*," Drug Lines (Accepted)
19. R. Mazumder, Sujata G Dastidar, S.P. Basu, Avijit Mazumder "Effect of *Mesua ferrea* Linn. flower extract on *Salmonella*," Indian J. of Exp Biol, 2005.(Accepted)
20. Avijit Mazumder, M. Madhusudhan, M. Krishnamohan, R. Mazumder "Microbial polysaccharides: a new pharmaceutical adjuvant in the coming era," Pharma Times, 37(3), 2005.
21. S. Ganguly, S.P. Singh and R. Chandra "Synthesis and Antimicrobial Activity of some new 2-methyl – 5nitroimidazole derivatives," Indian Journal of Chemical Society, 81, 1-2, 2004.
22. S. Ganguly and B.K. Razdan "Synthesis and Pharmacological Activity of some 2-methyl-4 (5) – nitroimidazole," Indian Drugs, 41(4) 191-198) 2004.
23. S. Ganguly and Subrata Ghosh "Waking up to the threat of osteoporosis," Pharma Times, April, 12-15, 2004.
24. S. Ganguly and B.K. Razdan "Synthesis of Some New Derivatives of 2-methylimidazolic," Indian Journal of Heterocyclic Chemistry – (paper accepted).
25. S. Ganguly, P. Partani and S. Samanta "Solid Phase Organic Synthesis – A Review," Pharmatimes – (paper accepted).
26. S. Ganguly, S.P. Bhatnagar, P. Paul and Prachi Pandey "Development of a database for identification of crude drugs," Indian Journal of Pharmaceutical Education – (paper accepted.).

27. Subrata Ghosh and S. Ganguly "Computer Related Injuries – Are you next?" Indian Journal of Hospital Pharmacy –(paper accepted.).
28. J. Kumar, S.P. Bhatnagar, and R N Gupta "Fuzzy Inference system: A marvelous Tools in conservation of Traditional knowledge," Pharmatimes, June 2004.
29. J.Kumar,. and S.P.Bhatnagar "Simultaneous estimation of tannic acid, chebulinic acid, ethyl gallate and gallic acid from Terminalia chebula," accepted. August 2004.
30. P.R.P. Verma, S.M. Verma and H. Verma "Development and validation of spectrophotometric method for analysis of tramadol hydrochloride" J. Inst. of chemist- (Accepted).
31. P.R.P. Verma, S.M. Verma, H. Verma and M. Gupta "Development and validation of new spectrophotometric method for analysis of meloxicam" J. Inst. of chemist- (Accepted).
32. P.R.P. Verma, S.M. Verma and H. Verma and M. Bairwa and A. Sinha "Development and validation of new spectrophotometric method for analysis of nimesulide" J. Inst. of chemist- Accepted.
33. S.M. Verma, K. Das and L. Khani "Synthesis and anticonvulsant evaluation of 5-Sulfamoyl-1,3,4 Thiadiazolyl-2-thiosemicarbazones" J. Inst. of chemists Vol. 76, part 3, p. 89, 2004.
34. S. Jha & V. Puratchimani "HPTLC Standardization of Gymnema Sylvestre R. Br. Using Gymnemagenin as reference," Indian Journal of Pharmaceutical Sciences 242-244 , March –April 2004.

III. International Conferences :

1. Subhas Mandal, Saikat Dewanjee, B. Parimala, R. Boominathan, Rupa Mazumder and Avijit Mazumder "Evaluation of antifungal properties of methanolic extract of some medicinal plants of Eastern India," Proc. of 9th International Congress of International Society of Ethnobiologists, Kent University, London, June 14-18, 2004.
2. Avijit Mazumder, B.P. Saha, S.P. Basu, R. Mazumder "Emergence of Lagerstroemia parviflora flower extract as a potent bactericide," International Conference of APTI, Andhra University, Vishakapathanam, Oct. 2-3, 2004.
3. R. Mazumder, S. Bhattacharya, A. Mazumder B. Sarkar "The more fast moving a brand is greater is its therapeutic efficacy: do we agree?" International Conference of APTI, Andhra University, Vishakapathanam, Oct. 2-3, 2004.
4. Avijit Mazumder, B.P. Saha, S.P. Basu, R. Mazumder "TO identify and propose a suitable launching strategy for a newly formulated iron preparation," International Conference of APTI, Andhra University, Vishakapathanam, Oct. 2-3, 2004.
5. Avijit Mazumder, B.P. Saha, S.P. Basu, R. Mazumder "Sensitivity pattern of fungal strains against Lagerstroemia parviflora (Roxb) leaf extract a study in vitro," Proc. of International Conference on Botanicals with International Coordination : Exploring Quality, Safety, Efficacy and Regulation, Kolkata, Feb. 25-26, 2005.

6. R. Mazumder, Avijit Mazumder, S. Bhattacharya, S.P. Basu, S.G. Dastidar "Detection and isolation of antimicrobial component in *Mesua ferra* Linn. flower," Proc. of International Conference on Botanicals with International Coordination : Exploring Quality, Safety, Efficacy and Regulation, Kolkata, Feb. 25-26, 2005.
7. J.Kumar and S.P. Bhatnagar., "Fuzzy logic in conservation of herbal traditional knowledge" at proceedings of International Conference of APTI, Andhra University, Vishakapatnam, Oct. 2-3, 2004.

IV. National Conferences:

8. Avijit Mazumder, S. Jaganath, Rupa Mazumder, S.P. Basu, B.P. Saha and R. Mandal "A study on potentiation of pentobarbitone induced sleeping time by *Lagerstroemia parviflora* Roxb," Proc. of National Seminar on Ayurveda for better health and workshop on Clinical application of Rasa Shatra, Jamnagar, Jan. 24-25, 2005.
9. Rupa Mazumder, Avijit Mazumder, R. Mandal, S.P. Basu, B.P. Saha G.S. Dastidar "Studies on phytochemical screening and in vitro anti fungal activity of whole flower of *Mesua ferrea* Linn.," Proc. of National Seminar on Ayurveda for better health and workshop on Clinical application of Rasa Shastra, Jamnagar, Jan. 24-25, 2004.
10. Avijit Mazumder, R. Mazumder, B.P. Saha and S.P. Basu "Studies on toxicity effect of the leaves of *Lagerstroemia parviflora* Roxb," Proc. of Annual Conference of Chemists and Biologist, CDRI, Lucknow, Aug. 30-31, 2004.
11. Avijit Mazumder, B.P. Saha and S.P. Basu, R. Mazumder "Chemical investigation and pharmacological evaluation of the leaves *Lagerstroemia parviflora* for antipyretic activity," Proc. of 56th Indian Pharmaceutical Congress, Kolkata, Dec. 3-5, 2004.
12. R. Mazumder, Avijit Mazumder, S. Bhattacharya, Juthika Kundu "A Comprehensive study of the diseases and prescription pattern in diarrhoeal infection in rural and urban areas Jharkhand," Proc. of 56th Indian Pharmaceutical Congress, Kolkata, Dec. 3-5, 2004.
13. Dhiraj Kumar, A. Mazumder, Jayaram Kumar, R. Mazumder "Role of pharmacist in the 21st century," Proc. of 56th Indian Pharmaceutical Congress, Kolkata, Dec. 3-5, 2004.
14. Avijit Mazumder, S. Bhattacharya, Jayaram Kumar, R. Mazumder, R.N. Gupta "Pharmacy Students Counseling: A need of the new era," Proc. of 56th Indian Pharmaceutical Congress, Kolkata, Dec. 3-5, 2004.
15. R. Agrawal , R. Chandra ; "Production of bacterial polysaccharide Gellan and its potential in sustained release formulations" Proceedings of the Scientific session of 56th IPC, Kolkata, Dec., 2004.
16. S. Chandra , R.Chandra , & H.P Sharma "Agrobacterium rhizogenes mediated genetic transformation of *Spilanthes acmella* leaf explants and production of hairy biomass in CSTR"; Paper presented in Conference on Bioprocess Engineering & Biotechnology : Trends and Opportunities, March 17-20, 2005.
17. Biswatrish Sarkar, R.Chandra & R. Mazumder.; "Production of Cellulose from *Pleurotus ostreatus* on spent straw bed," Paper presented in Conference on Bioprocess Engineering & Biotechnology : Trends and Opportunities, March 17-20, 2005.

18. Sanjita Das, Subrata Kour, D. Sasmal, S.P. Basu "Analgesic activity of the Ethanol extracts of different plants parts of *Nyctanthes arbortristia* Linn." 37th Annual Conference of Indian Pharmacological Society, Kolkata, Jan. 14-16, 2005.
19. Sanjita Das, D. Sasmal, Subrata Kour, Manoj Kr. Biswal "Diuretic activity of the ethanolic extract of the leaves of *Nyctanthes arbortristis* Linn." 56th IPC, held in Kolkata Dec. 3rd- 5th 2004.
20. S.M. Verma and L. Khani "Synthesis and anticonvulsant evaluation of 5-Sulfamoyl-1,3,4 Thiadiazolyl Derivatives" 8th National Conference of Chemistry and Biology, CDRI, Lucknow Aug. 30-31, 2004.
21. B.N. Sinha, JARP Sharma, S. Vadivelan, G. Rawbabu, N. Rathie "Pharmacophore identification and mapping of cryptophycin Antitumor analogues: Application to a set of Tubulin inhibitors," Proc. of 56th IPC, Kolkata, Dec. 2004.
22. B.N. Sinha and Abhishek Kumar "Studies on anti-inflammatory activity of the aqueous extract of *Mollugo cerviana*," Proc. of 56th IPC, Kolkata, Dec. 2004.

G. Seminar / Symposium / Short-term course attended by faculty members :

1. Mr. S. Samanta attended Indian Pharmaceutical Congress held on December 2004 and presented paper on analgesic Peptides. He also attended national Seminar organized by KVIC and BIT as an expert speaker on "Cultivation Collection and during of Medicinal Plants" February 2004 at Chaibasa, Jharkhand. Mr. S. Samanta delivered lecture on mass spectroscopy and its applications in chemical and Drug analysis as an expert speaker in the National Seminar organized by Department of Pharmaceutical Sciences, BIT. February 2004.
2. Dr. R. N. Gupta attended and presented paper in 56th Indian Pharmaceutical Congress held at Calcutta during 3rd to 5th Dec. 2004. He attended workshop on "Instrumental Analysis of Drug & Chemicals" held at BIT. Mesra Ranch in Jan. 2005. He also attended Central Executive Council meeting of Indian Pharmaceutical Association held on 2nd Dec. 2004 at Park Hotel, Calcutta.
3. Dr (Mrs.) R. Mazumder attended & presented a scientific paper in the oral session in 56th Indian Pharmaceutical Congress, Kolkata. and she was a member of local organizing Committee of the aforesaid conference. She also presented two paper in the International Conference of APTI in Vishakapatnam held in Oct. 2004.
4. Dr. A. Mazumder attended & presented two scientific papers in 56th Indian Pharmaceutical Congress, Kolkata & he was a member of local organizing Committee of the aforesaid conference. He also presented scientific papers in International Conference on Botanicals, Safety & Regulations at IICB Calcutta.
5. Dr. S. Ganguly attended and presented a paper in 56th Indian Pharmaceutical Congress 2004 held in Kolkata from 3rd -5th December 2004. She attended an International Workshop on Drug Design held in BITS, Pilani Rajasthan from 24th - 25th February 2005.
6. Dr. (Mrs) P.M. Mazumder also attended & presented papers each in 56th Indian Pharmaceutical Congress & 37th Annual Conference of Indian Pharmacological Society at Kolkata

7. Ms. S. Ghosh delivered a lecture on DSC in Instrumental Analysis workshop at BIT, Mesra, Ranchi
8. Mr. J. Venkatesan Seminar & Workshop on Alternatives & Animal Welfare ISA., Kolkata – August 2004.
9. Mrs. A. Pandey attended Diamond Apicon 2005” from 22nd – 25th Jan. 2005 at Mumbai.
10. Dr. B.N. Sinha attended 56th Indian Pharmaceutical Congress to co-chair Medicinal Chemistry session Dec. 2004 at Kolkata

H. Award / Nomination of faculty by important organization :

1. Dr. S. Jha has been nominated as co-ordinator of Rural Technology Cell BIT, Mesra, Ranchi.
2. Dr. R.N. Gupta nominated as editorial board member of PHARMA TIMES & The Pharma Review. He has also visited Jadavpur University to conduct Viva-voce of 2 Ph.D students for award of Ph.D. degree.
3. Dr. B.N. Sinha nominated as PCI inspector.

D. Publication by faculty :

I. International journals :

1. Mr. C. Datta, Mr. D. Basu and A. Banerjee. Impact Behavior of Unidirectional Polyethylene-Glass Fibers: Resol/V Ac-EHA; FULL-IPN System: J. Applied Polymer Science 91 (1), 339-342, 2004.
2. Mr. C. Datta, Mr. D. Basu and A. Banerjee. Mechanical and Dynamic Mechanical properties of EPOXY/V Ac-EHA/HMMM IPN systems in aqueous medium, J. Applied Polymer Science, 91 (2), 958-963, 2004.
3. Mr. Sandeep Kumar & I.K. Varma Banana Fibers reinforced thermoplastics composites, International Journal of Plastic Technology, 8,165-171, 2004.
4. Mr. Sandeep Kumar, Veena Choudhary & I.K. Varma, Banana Fibers reinforced Soy protein composites, International Journal of e-Polymers, 18, 275-283, 2004.
5. Mr. C. Datta, D. Basu, A. Roy and A. Banerjee. Studies and Characterization of EPOXY/V Ac-EHA/HMMM IPN systems in aqueous medium, J. Applied Polymer Science, accepted.
6. A. Choudhary, M. Mukherjee and B. Adhikari. "Thermal stability and degradation of the post-use reclaim milk pouches during multiple extrusion cycles", Thermochimica Acta, 430, 87-94, 2005.
7. A. Choudhary, M. Mukherjee and B. Adhikari. "Recycling of edible oil pouches: composition and thermal stability", Progress in Rubber, Plastic and Recycling Technology. 21 (2), 117-137, 2005.
8. A. Choudhary, M. Mukherjee and B. Adhikari. "Mixture of recycled milk pouches with a virgin LDPE/LLDPE. Progress in Rubber, Plastic and Recycling Technology, 21 (3), 219-230, 2005.
9. S. Kumar & C. Guria. Alkaline Hydrolysis of Waste Poly (ethylene terephthalate): A Modified Shrinking Core Model. J. Macromol. Sci. Part A, 42, 237-251, 2005.
10. C. Guria, M. Varma, S.P.Mehrotra, & S.K. Gupta. Multi-objective Optimal Synthesis and Design of Forth Flotation Circuits Using the Jumping Gene Adaptation of Genetic Algorithm. Ind. & Engg. Chem. Res., 44, 2621-2633, 2005.
11. C. Guria, P.K. Bhattacharya & S. K. Gupta. Multi-objective Optimization of Reverse Osmosis Based Desalination Unit Using Adaptations of Genetic Algorithm. Comp. Chem. Engg. Accepted.
12. S. Kachhap & C.Guria. Multi-objective Optimization of Copoly (ethylene polyoxy-ethylene terephthalate) Batch Reactor Using Adaptations of Genetic Algorithm. Macromol. Theory & Simul., accepted.
13. G. Sarkhel, A.N. Banerjee, P. Bhattacharya. Effect of EPDM concentration on mechanical and rheological properties of LDPE/HDPE ternary blends, International J. Polymer Characterization, Communicated.

14. G. Sarkhel, A.N. Banerjee, C. Datta, P. Bhattacharya. Studies on mechanical and Dynamic Mechanical properties of dynamically vulcanized EPDM/Polyethylene blends, Rubber Chemistry and Technology, Communicated.
15. G. Sarkhel, A.N. Banerjee, P. Bhattacharya. Mechanical and rheological properties of LDPE/HDPE Binary Blends, J. Polymer/Plastic Technology, Communicated.
16. A. Choudhury, M. Mukherjee and B. Adhikari. "Recycling waste oil pouches containing polyethylene/PET by compatibilization", Advance in Polymer Technology, communicated.
17. A.K. Sen, S. Roy, V.A. Juvekar, Structure property relationship of sodium polystyrene sulphonate, J. Colloid & Interfacial Science, communicated.
18. C. Guria, M. Varma, S.P. Mehrotra, & S.K. Gupta. Validation of jumping gene adaptation in genetic algorithm for optimal synthesis and design of forth flotation Circuits for mineral processing, Int. J. Min. Proc. communicated.

II. National journals :

1. A Choudhury, M. Mukherjee and B. Adhikari. "Recycling waste oil pouches containing polyethylene/nylon 6 by compatibilization", Indian Journal of Chemical Technology, communicated.

E. Seminar/Symposium/short term course attended by faculty members :

1. C. Datta, G. Sarkhel and A. Banerjee "Mechanical, Dynamic Mechanical Studies of Unidirectional Polyethylene-Carbon fiber Resol/V Ac -EHA full IPN System", at International Seminar on Advances in Polymer Technology, Jan., 2004, Cochin Univ. of Sci., & Tech.
2. G. Sarkhel, A.N. Banerjee, C. Datta, P. Bhattacharya "Mechanical rheological, and thermal properties of polyolefin blends" at CHEMCON 2004 at Mumbai held in December, 2004.
3. Sri. S. Datta presented "Development of Grooved Rubber pads for Indian Railways with Natural Rubber only" by S. Datta and C. Datta at National conference at Allahabad held on 25th September, 2004.
4. Sri. G. Sarkhel presented "Effect of EPDM by Materials Science Centre IIT Kharagpur held on 5th December, 2004.
5. A. Choudhury, M. Mukherjee and B. Adhikari. "Recycling of polyethylene/PET based waste oil pouches by compatibilization. International Symposium of Eurofiller' 2005, Belgium, 9-11 May, 2005.
6. Sri. C. Datta presented the "Dynamic Mechanical properties of Jute fiber reinforced EPOXY/V Ac-EHA/HMMM IPN systems in aqueous medium" by C. Datta, G. Sarkhel and A.N. Banerjee, at International Conference on Recent Advances in Composite Materials held during 17-19 December, 2004 at Banaras Hindu University.
7. Sri. G. Sarkhel presented "Morphological and Dynamic mechanical properties of dynamically vulcanized Polyethylene-EPDM blends", G. Sarkhel, A.N. Banerjee, C.

- Datta, P. Bhattacharya, at International Conference on Polymer blends, composites and gels, at M.G. Univ. Kottayam, Kerala during March, 2005.
8. A. Choudhury, M. Mukherjee and B. Adhikari. "Blending of waste milk pouches with virgin LDPE/LLDPE", International Symposium Advance Material and Processing. IIT Kharagpur, 6-9 December, 2004.
 9. A. Choudhury presented "Recycling waste oil pouches containing polyethylene/nylon 6" by compatibilization. By A. Choudhury, M. Mukherjee and B. Adhikari. National Conference on Polymer Blends, SJC Engineering College, Mysore, 15-16 April, 2005.
 10. Sri. A.K. Sen, presented a lecture on "Infra red Spectroscopy", at workshop cum training programme in Instrumental methods of Chemical and Drug analysis on January 27th to 30th at Department of Pharmaceutical Sciences, Birla Institute of Technology, Mesra.
 8. Dr. P. Mukhopadhyay attended "Industry Academia Interface" at Petrotech 2005 organized by ONGC at Delhi, 17-18 January, 2005.
 9. Sri. K. Kumar, and M. Swain attended the short term training programme on 'CNC EDM M/c' at Electronica M/c Tools, Pune, 24-29 January, 2005.
 10. Dr. P. Mukhopadhyay attended National Conference on Nano Science and Technology, Nanosere 2004, at Sri. Venkateswara College of Engineering, Tamil Nadu 11-12 June, 2004.
 11. Dr. P. Mukhopadhyay attended the workshop on 'Application of Melt Rheology' at Amrita Institute of Technology, 3-7 June, 2004.
 12. Sri. C. Guria attended DST-SERC School on 'Modeling of Industrial Reactors' at IIT, Kanpur, 12-17 July, 2004.
 13. Dr. Chandan Datta attended Short Term "Rubber Technology Training -2004 India" organized by Akron Rubber Development Laboratory USA held on 9-10 November, 2004, New Delhi.
 14. Sri. Sandeep Kumar attended short Term course "Upgradation of Production Technology" organized by Plastindia Foundation at Kolkata on 11-12 March, 2005.
 15. Dr. P. Mukhopadhyay, Sri. Chandan Guria and Sri. Akhil Sen attended Conference on Bio process Engineering and Bio Technology Trends and Opportunities at BIT Mesra, 17-19 March, 2005.
 16. Sri. Guria and S. Kumar attended DST-SERC School on 'Processing of Advanced Polymeric Materials' at IIT, Delhi, 3-7 May, 2005.

F. Students Activities :

1. Students of sixth Semester attended Industry Academia Interface" at Petrotech 2005 organized by ONGC at Delhi, 17-18 January, 2005.

DEPARTMENT OF PRODUCTION ENGINEERING

Department of Production Engineering since its inception in 1964 has been trying to impart quality education to under graduates and train them to meet the demands of the manufacturing industry. Department of Production Engineering offers under graduate and postgraduate courses in Production Engineering and Automated Manufacturing Systems. The department has established links with the industry, R&D organizations, consultancy organizations and academic institutes of the near by area in furtherance of the cause of manufacturing engineering. The department sees itself as the pathfinder of emerging technologies and techniques in the area of production engineering, develops students to be technologically and managerially sound to meet the challenges of the open market in the present era of globalization.

The main objective of production engineering is integration of technology with management in planning and controlling the design, development and operation of manufacturing system. Rapid advances in manufacturing technology, e.g., computer controlled processes and management information systems, ERP and new manufacturing concepts like TPS, agile manufacturing, pull system etc., are reinforcing the recognition of technological, organizational, economic and human factors. Furthermore, specialized training in manufacturing technology is necessary for the young engineers to bring forth their potential. Directed at the growing requirements of industry in India and abroad department's interest encompasses on providing all round development requirements to would be production executives and manufacturing specialists. The structure of courses of the production engineering is based on an analysis of not only these needs but reflects the interrelationships among science, engineering, production and management.

The Department also aims at assisting manufacturing industry. An increasing number of university-industry collaborations is shaping through sandwich training programmes, Short term courses, and workshops, collaboration and support from industry for both laboratory as well as Industry based studies. The cherish & major long-range goal is to make this Department a Centre of excellence in teaching and research in various aspects of Production Engineering. In this respect, the Department has been able to establish well-equipped laboratories, upgrades the syllabi on regular basis and carries out its teaching and academic programme through its qualified and experienced faculty and visiting professors. Both our graduates and post-graduates have been doing well in industry and other Universities of higher learning in India and abroad. Some important research achievements of the department are in the field of forming Technology for New Materials, Manufacturing Automation & Robotics for specific Tasks and Work Space Design Considering Ergonomic Parameters.

Central Facilities

(a) Nontraditional Manufacturing Process Laboratory

In the modern manufacturing world flexibility is the key issue for manufacturing. In today's multi-option market there is greater need for flexible production that can be used on a variety of products, models and styles. In today's manufacturing world various materials are of HSTR (High Strength Temperature Resistant) type. In order to process those materials one needs some manufacturing processes, which are really able to tackle hard and temperature resistant materials.

Due to this very reason a modern non-traditional manufacturing laboratory has been set up at the department of Production Engineering.

- **Wire EDM**

In order to impart flexibility in the manufacturing process wire EDM can play a very important role in manufacturing complex items. It is completely computer controlled and the hardened materials can be easily processed with substantial ease and satisfactory levels of accuracy. A sophisticated Indian make Maxi cut wire EDM machine has been mounted in the nontraditional laboratory of the department. The machine can be used for welding, drilling, cutting, cladding, hardening, of different materials and composites. In future the department is planning to develop a prototyping machines through laser cutting.

- **Laser Cutting and Welding Machine**

Laser machining is an important nontraditional manufacturing application. It is becoming more and more popular due to its flexibility, accuracy and ease of operation. One laser processing machine set has been mounted in the nontraditional laboratory of the department. The machine can be used for welding, drilling, cutting, cladding. Hardening, of different materials and composites. In future the department is planning to develop a prototyping machines through laser cutting.

- **Water Jet Machining**

Water jet machining is also one of the important nontraditional manufacturing processes. A full-fledged hydraulically controlled abrasive water jet machine has been installed in the department of Production Engineering funded under the AICTE project. This machine is suitable for cutting hard material and very soft material. In future the system will be developed as a cutting tool for Indian mining industry.

- **Mechatronics Laboratory**

Mechatronics laboratory is equipped with Mechatronics kit. In the kit there is controller which is integrated with U-Bracket, linear slides, rotary tables, conveyor and X-Y position table. Three simulation packages namely, Hydraulic Simulator, Electrical Simulator and PLC Simulator are also equipped in the system. The system is suitable for providing training related to simulation of various motions.

- **Flexible Manufacturing Systems Laboratory**

Planners for new facilities now want their machines, robots and material handling systems to be integrated into a flexible manufacturing systems (FMS). The keyword is "System", FM takes advantage of the flexibility of robots, NC machine tools, industrial logic controllers and microprocessors in creating an over all flexible system. Realizing this trend of switchover from hard automation of 1950s to flexible automation today's industry, a Flexible Manufacturing Systems laboratory has been set up in the department of Production Engineering. Setting up of this laboratory is a step in the methodology of unmanned manufacturing. The laboratory is designed to carry out experiments that give an insight to students regarding fast changing manufacturing scenario in today's industry. The equipment and machines installed in the laboratory include –

- CNC Trainer Lathe (EMCO)
- CNC Trainer Milling Machine (EMCO)
- TRIAC CNC Milling Machine
- ORAC CNC Trainer Lathe
- Conveying System with Conveyor
- Two Move Master Robots
- PC and PLC Control System for coordinating control actions of different elements (DENFORD)
- Co-ordinate Measuring Machine (CMM-KEMCO0)

Ergonomics and work design Laboratory

Morgan breath-by breath Exercise test systems : (model plumbo-lab-Wx-505) programmable ergo meter is capable of memorizing a large number of exercise protocols. The system measures various body parameters such as oxygen consumption, Heat rate, Respiratory quotient, VO₂/Kg METs, Kcals, VE, VEQO₂, VECO₂ tidal volume, cardiac output, Strike volume, Anaerobic threshold, etc. these parameters are of utmost importance for arrangement, design and allocation work as well as design of work cycles in case of heavy and moderately heavy workloads in order to improve the industrial productivity and at the same time to enhance physical well being of the workers.

Research & Development/Interest of the Faculty Members

- a. Waste Minimization and Lean Processes
- b. Manufacturing Automation & Robotics
- c. Work Design and Ergonomics
- d. Water Jet Technology
- e. Formability of Sintered Preforms
- f. Hydrodynamics of Metal Forming Processes
- g. Wire Cut EDM
- h. CAD/CAM/FMS
- i. Friction stir welding

Degree/Diploma Offered : B.E. (Production Engg.), M.E. (AMS), Ph.D.

Faculty Position : Professor – 1, Reader -5, Lecturer –9.

Number of Students Enrolled : Undergraduate –90, Postgraduate –9.

Academic Innovations, Research & Development activities :

A. Ongoing Project :

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanction Amount	Duration
1.	Electro Chemical Machining	U.G.C.	April 2003	Rs. 5.6 Lacs	2 Years
2.	Development of Manufacturing Mechatronics Laboratory.	A.I.C.T.E.	04.03.2002	Rs. 12 Lacs.	2 Years

B. Project submitted during the year 2004-2005 :

Sl. No.	Project Title	Funding Agency	Sanction Amount	Duration
1.	Responsive shop floor control systems for automated manufacturing environment	U.G.C.	Rs. 14.82 Lacs	2 Years

C. Seminar/Conference/Short Term Course Conducted by the Department :

Sl. No.	Name of the Programme	No. of Participants
1.	National Workshop on "Curriculum Development for Technical Education" from 3 rd to 4 th April 2004.	100
2.	National Seminar on "Green Productivity & Sustainable Development" from 10 th –11 th March 2005.	50

D. International Journal being published by the Department :

On the occasion of the Golden Jubilee of the institute the Department of Production Engineering has introduced an International Journal in the area of Manufacturing Technology and Research [Biannually (January –July)].

E. Publications by the Faculty :**I. Journals (International/National)**

1. S.Kumar, S.K. Mukherjee and P.K. Srivastava, "Effect of Over-Voltage on Material Removal Rate During Electrochemical Machining", Tamkang J. of Sci. and Engineering, 2005.
2. S. Kumar and P.K. Srivastava, "Tribiochemistry of Lubrication Issues of Magnetic Disk Storage devices", Tribology International Journal, 2005.
3. Sanjay Kumar Jha, "Manufacturing metal artifacts by Dokra casting: A treatise with techno economic aspects with respect to Jharkhand state", Journal of current sciences, Vol 5, No. 1, 2004, pp 127-132.
4. Sanjay Kumar Jha, "Effect of musculoskeletal discomforts on productivity in rural artifacts manufacturing industries workers of Jharkhand", Journal of current sciences, Vol 5, No 2, 2004, pp 495-500.

5. Vijay Pandey, R.K. Srivastava, "Dynamic Modification of Machine Tool Structure". Journal of Mechanical Engineering, Institution of Engineers (India), Vol. 84, October, 2004.
6. R.K. Singh, Prakash, S. Kumar & M.K. Tiwari "Psycho-Clonal based approach to solve a TOC product mix decision problem", Int. J. of Advanced Manufacturing Technology. (Accepted for publication).
7. Vijay Pandey, M.K. Tiwari and Surender Kumar, "An Interactive Approach to Solve the Operation Sequencing Problem Using Simulated Annealing", Int. J. of Advanced Manufacturing Technology. (Accepted for publication).
8. Kumar S., Ranjan R.K., "High speed forging of solid powder discs of large cyliderness ratio", Indian Academy of Science, Sadhana, Bangalore Vol. 29, Part 5, pp 525-533. (Oct. 2004).
9. Kumar S., Ranjan R.K., "An upper bound solution closed die sinter forging of hexagonal shapes at high speed", Tamkag Journal of Sci. and Engg. (An Int. J.), Vol. 7, No. 4, pp 227-236 (Dec. 2004).
10. Saranjit Singh, A.K. Jha, S. Kumar, "An energy analysis during forging of sintered truncated conical perform at high speed", Tamkag Journal of Sci. and Engg. (An Int. J.), Vol. 7, No. 4, pp 227-236 (Dec. 2004).
11. Kumar S., Ranjan R.K., "High speed forging of solid powder polygonal discs with bulging", Tamkag Journal of Sci. and Engg. (An. Int. J.), Vol. 7, No. 4, pp 219-226 (Dec. 2004).
12. Vinay Sharma, Surender Kumar "A study of process parameters for coal cutting under Indian environmental condition using hydro jet cutting system", Int. J. Manufacturing Technology and Management, Vol. 7, Nos. 2/3/4, 2004.

II. Conference Proceedings (International/National)

1. S. Kumar, S.K. Mukharjee and P.K. Srivastava, "Nano Aspects of Electrochemical Machining", Proceedings of NANOSPHERE, 2004 page 59-65.
2. S.Kumar, S.K. Mukhejree and P.K. Srivastava, "Effect of Electrolyte on current carrying process in electrochemical Machining", proceedings of Advances in Manufacturing Technology in the Era of Globalization, page 349-353, January 21-22, 2005. Pune.
3. Vinay Sharma, S. Mutthukumaran "Parametric Optimization For Quality Surface Finish in Laser Cutting Using Fractional Factorial Design", Proc. Of 21st AIMTDR, Vellore Institute of Technology, Vellore, December 2004.
4. Vinay Sharma, Vijay Pandey, Surender Kumar, "Integrated Curriculum Design and its Analysis", National Workshop on "Curriculum Development for Technical Education" from 3rd to 4th April 2004.
5. Surender Kumar, A.K. Jha, "Perspectives on Engineering Education in the Information Age", National Workshop on "Curriculum Development for Technical Education" from 3rd to 4th April 2004.
6. Rajeev Agrawal, Surender Kumar, "Green Supply Chain Management, Environmental Concerns of supply chain: Strategic initiatives and implementation

for Indian Firms” National Seminar on “Green Productivity & Sustainable Development” 10-11 March, 2005 at BIT, Mesra, Ranchi.

7. Rajeev Agrawal, Surender Kumar, “Collaborative product development in the context of Product Lifecycle Management –A paradigm” National Conference on “Advancement in Manufacturing Technology in the era of Globalization” Organized by Pune Institute of Engineering & Technology, Pune & Indian Institution of Production Engineers, Pune, 21st–22nd January 2005.
8. B.K. Singh, “Planning and Evaluation of Laboratory Assignments”, National Workshop on “Curriculum Development for Technical Education” from 3rd to 4th April 2004.
9. R.K. Singh, S. Kumar & M.K. Tiwari, “A Theory of Constraint Based Product Mix Decision Problem : A Hybrid Tabu-Simulated Annealing Based Approach”, proceedings of National Conference on “AMTEG-2005” Organized by Pune Institute of Engineering & Technology, Pune & Indian Institute of Production Engineers, Pune, 21st–22nd January 2005.
10. R.K. Singh, S. Kumar & M.K. Tiwari, “Resolving a TOC Product Mix Decision Problem Using Psycho-Clonal Algorithm”, Proc of 21st AIMTDR, Vellore Institute of Technology, Vellore, Dec. 2004.
11. Vijay Pandey, Vinay Sharma, Ashutosh Shankar Gupta & Ujjawal Nag, “Effect of Internet on Decision and Manufacturing”, Proc. of Information Resource Management in Digital Environment, B.I.T., Mesra, Ranchi, October 1-2, 2004.
12. Surender Kumar, Vijay Pandey and Vinay Sharma, “Self Learning Concept in Technical Education Through Curriculum Development”, Proc. Of Destination 2020 India : A Developed Nation, 19th Indian Engineering Congress, Institution of Engineers (I), Maharashtra State Centre, Mumbai, December 17-19, 2004.
13. S.C. Srivastava, Surender Kumar, M.K. Tiwari & A.K. Choudhary, “Part Selection and Operation Allocation on machines in an FMS for Sheet Metal Processing using Genetic Algorithm with Chromosome Differentiation based Approach”, Proc. of National Conference on “AMTEG-2005” Organized by Pune Institute of Engineering & Technology, Pune & Indian Institute of Production Engineers, Pune, 21st–22nd January 2005.
14. S.P. Lal & Surender Kumar, “Manufacturing Technology Education in Era of Globalization”, Proc. of Destination 2020 India: A Developed Nation, 19th Indian Engineering Congress, Institute of Engineers (I), Maharashtra State Centre, Mumbai, December 17-19, 2004.
15. S.P. Lal & Surender Kumar, “Some strategic Problems on Sustainable Development Manufacturing Practice”, National Seminar on “Green Productivity & Sustainable Development” 10-11 March, 2005 at B.I.T. Mesra, Ranchi.
16. S. Mutthukumaran, Vinay Sharma, S. Kumar and S.K. Mukherjee & Pankaj Mishra, “Friction Stir Welding – An Environmental Friendly Manufacture Process”, National Seminar on “Green Productivity & Sustainable Development” 11-11 March, 2005 at B.I.T., Mesra, Ranchi.

17. S. Mutthukumaran, "Parameter Optimisation for Tensile Properties In Friction Stir Welding using Taguchi Technique" has been accepted for 7th International Trends in Welding Research Conference, May 16-20, 2005. Georgia, USA.

II. Book/Monographs :

1. Dr. S. Kumar, S.K. Jha, R.K. Singh, "Value Engineering – A Fast Track to Profit Improvement & Business Excellence" Narosa Publications, 2004.

F. Seminar/Conference/Short Term Course attended by attended by faculty :

1. Dr. Surender Kumar, 21st AIMTDR, Vellore Institute Technology, Vellore, December 2004.
2. Dr. Surender Kumar, International Conference on Industrial Tribology Materials, Mumbai, December 2004.
3. Dr. Surender Kumar & Rajeev Agarwal, AMTEG-2005, Organized by Pune Institute of Engineering & Technology, Pune & Indian Institution of Production Engineers, Pune, 21st –22nd January 2005.
4. Rajeev Agrawal, Two week ISTE Sponsored STTP on "Knowledge Management – Implications in Indian Business" Organized by Department of Management, Birla Institute of Technology, Mesra, Ranchi, 6th –18 December, 2004.
5. Rajeev Agrawal, One week short term course on "Advance Machining Processes" Organized by I.I.T. Kanpur, Center For Development of Technical Education, 18 – 23 Oct. 2004.
6. Rajeev Agrawal, S.C. Srivastava, S. Mutthukumaran & Ritesh Kumar Singh, National Workshop on " Implementation of Six –Sigma Programme in Foundry/Forge Technology, Hatia, Ranchi, 10th –11th April 2004.
7. Rajeev Agrawal, National Workshop on "Curriculum Development" Organized by Birla Institute of Technology, Mesra, Ranchi, Jharkhand, 3rd –4th April 2004.
8. Vijay Pandey & S.C. Srivastava, A Two Weeks Winter School on "Smart Material Opportunity and Challenges", Sponsored by AICTE-ISTE and Organized by Department of Chemistry and Department of Applied Mechanics, MNNIT, Allahabad, November 29 to December 10, 2004.
9. S. Mutthukumaran, Short Term Training Program on "An Modelling in Metals processing: Concepts, Theory and Application" at IIT, Kanpur during 1st –4th February, 2005.
10. S. Mutthukumaran, Short Term Training Program on "Soft Computing: Concepts and Applications" during 18th –30th December, 2004.

DEPARTMENT OF PHYSICAL EDUCATION & SPORTS

The Department of Physical Education and Sports is equipped with elaborate infrastructure including Multi Gymnasium, Yoga Centre, Cricket Oval, Indoor Badminton Stadium, Hockey and Football Grounds, Volley Ball, Basket Ball, Hand Ball, Khokho, Kabaddi and Tennis Courts besides an Athletics Stadium. National and Regional level competitions are frequently organized at the institute, and it can boast of hosting scores of Tournaments in a variety of Games, as well in Athletics.

Faculties Position : Lecturer – 1, Sr. Sport Officer – 1.

Organization :

1. N.E.Z. tennis tournament was organized by B.I.T. Mesra from 3.10.2004 to 9.10.2004, sponsored by A.I.U. in which Delhi University stood 1st position, G.N.D.U. Amritsar second position, Punjab University Chandigarh third and Kurukshetra University fourth position, prizes were distributed by distinguished chief guest Sri S. K. Choudhary (I.A.S.), Secretary Tourism of Jharkhand State.
2. Chetan Deo Raj Memorial Cricket tournament for the session 2004-2005 was organized from 4.11.2004 to 8.11.2004, I.S.M. Dhanbad got the championship. Prizes were distributed by Prof. T. Bose (Ex. Prof. & Registrar of Institute).
3. Institute organized All India inter technical Athletic meet on auspicious occasion of Golden Jubilee Celebrating year in which approximately 200 athletes took part. It was organized from 5th Feb. to 6th Feb. 2005. Meet was inaugurated by hon'ble Vice Chancellor of the Institute on 5th Feb., 2005. The overall championship was won by the host team B.I.T. Mesra. Prizes were distributed by Sri N.N. Sinha (I.A.S.), Secretary Sports Art Culture & Youth Affairs of Jharkhand State.

Activities of the year 2004-2005 :

I. Extra-murals :

1. Institute T.T. team participated in All India Inter University (East Zone) organized by Jadavpur University from 26th Sept. to 28th Sept. 2004 at I.T.C. Hall S.A.I.N.S. Eastern Centre, Salt Lake, Kolkata.
2. Institute Football Team participated in Chancellor Cup Football Tournament organized by Vinobha Bhave University, Hazaribagh from 3rd to 6th Oct. 2004. Under the Captainship of Joy Jaynt Beck of Mechanical branch.
3. Institute Cricket team participated in Chetan Deo Raj Memorial Cricket Tournament held from 4.11.2004 to 8.11.2004 organized by B.I.T. Mesra, Ranchi.
4. Institute Tennis Team participated in All India Inter University (N.E.Z.) Tennis Tournament held from 3.10.2004 to 9.10.2004.
5. Institutes Athletic team participated in All India Inter Technical Athletic meet 2005 organized by B.I.T. Mesra from 5th Feb. to 6th Feb. 2005.

III. Intra-Murals :

1. "Champion of Champions" Mr. B.I.T. was organized on 29.9.2004 inside the C.A.T. Mr. Rakesh Kumar Singh won the Championship for session 2004-2005.
2. Annual Athletic meet was organized from 28th Jan. To 29th Jan. 2005 in which Hostel No. 6 got the championship amongst the boys and University Polytechnic girls students. Students stood championship amongst the girls athlete, Prizes were distributed by Sri Amitab Choudhary 9I.P.S.), Sports Director of Jharkhand State.
3. Inter Hostel Volleyball, Final match was played on 19.2.2005 in which Hostel No. 5 got the winner up and Hostel No. 7 stood runnership prizes distributed by Dr. P. K. Barhai (Dean, Collaboration & Research Programme) others outdoor & indoor activities and in progress.
4. Inter Hostel Football final match was played on 10.2.2005 between Hostel No. 5 New and Hostel NO. 6 in which hostel No. 5 New won the championship.
5. Inter Hostel Basketball final match was played on 19.3.2005 between Hostel No. 3 and Hotel No. 5 in which Hostel No. 3 won the winning shield.
6. Final match of Open tennis tournament was played on 12.4.2005, Mr. Deepak of 6th semester Computer Science won the Trophy on that great occasion trophy was also given to winners & runners up in the memory of Prof. Somaya.
7. Practice Cricket match was played between Institute cricket team and S.A.I. center Ranch to encourage and motivate the player on which S.A.I. center Ranchi won the match on 17.4.2005.

Seminar/Conference Attended by Faculty Member :

Mr. Mahendra Kumar, Lecturer in Physical Education & Sports presented paper in National Seminar on Topic Information Technology and Management of Physical Education & Sports in 21st century held on 1st and 2nd September 2004-2005 by L.N.I.P.E. Gwalior.

1. Mr. Mahendra Kumar presented paper in 1st Indian Congress on Sports Psychology from 4th to 6th March 2005 on Topic Motivation Self Confidence in Sports, A Case Study of Sri Inderjeet Singh on International Power Lifter organized by Department of Physical Education & Sports Nagpur University in collaboration with Sports Psychology Association of India.

DEPARTMENT OF REMOTE SENSING

The Remote Sensing (RS) technology and Geographical Information System has provided State of Art tools for mapping and monitoring of our natural resources as well as infrastructure developmental activities. Looking to the growing significance of Remote Sensing, the Department of Remote Sensing started M.Tech. programme in Remote Sensing in July 1997. Since then it is incorporating the technological advancement in the field of geoinformatics in its M.Tech. Remote Sensing Programme curriculum. The course is designed to introduce Remote Sensing and GIS techniques including: Principles of Remote Sensing, Photogrammetry, Digital Image Processing and application of satellite data towards mapping and management of various natural resources.

The department is also engaged in research activities as well as consultancy projects in areas of satellite data applications where students of the department who have completed M.Tech. in Remote Sensing are given priority to get practical / industrial experience through such projects.

The department has shifted to new premises at top floor of R&D building having additional space for labs and seminar hall. The Image Processing and GIS Lab has been strengthened by adding up 15 Compaq P IV computers and 15 license of Geometica 9.0 Image Processing software, 15 license of Span - GIS software and 10 license of Arc GIS to the existing 15 IBM P IV machines, four Intergraph TD 260 desktops and one Wipro Voyager machine. In addition this one Resistivity meter for conducting geophysical surveys and one A-1 size printer was procured in the department from project funds. Department is also in possession of Magellan Promark V Global Positioning System (GPS), Umax Scanner, and software for GIS, Cartography and Digital Image Processing such as Arc Info 8.0.2, Image Analyst Modular, GIS Environment (MGE), I/RAS, Geomedia Professional, Geomedia, Microstation SE, Oracle 8.0. The department is also in the process starting one more PG course in M.Tech GIS and one graduate course in B.E. Geoinformatics

During 2004-05 the Department has conducted a National Seminar on "Role of Geoinformatics in Decentralized Planning for better Governance" during 7-8, Oct., 2004 where 200 participant from various parts of the country participated. The NRDMS Centre of the department was also inaugurated during this seminar.

The department also jointly coordinated the National Seminar on Green Productivity and Sustainable Development, organized by Environmental Sciences and Engg. Group, B.I.T., Mesra, during 9-10 March, 2004.

Degree/Diploma offered : M.Tech. (Remote Sensing)

Faculty position : Professor –1, Reader –3, Lecturer –3, Sr. Lecturer –1, Associate Lecturer –1, Scientific Officer –1.

Number of Student enrolled/registered with department : M.Tech. (R.S) –27.

Academic Innovations, Research & Development activities :

A. Ongoing Projects :

Project title	Funding agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration
Preparation of Land use and Land cover Maps Using Remote Sensing and GIS techniques for Subransiri Upper and Middle Dam Project of NHPC in Arunachal Pradesh	MECON Ranchi	01.05.2000	3.40	1 year
Establishment of District NRDMS Centre for Ranchi (Jharkhand) & Creation of Geo-Spatial Data Base for the Development of Decision Support System	Department of Science and Technology, GOI	1.09.03	29.60	3 years
Geo-informatics based water resources management plan for Ghad sub watershed, Maharastra	Department of Science & Technology, Gol, New Delhi	October 4, 2004	10.02	3 years

B. Project sanctioned during the year 2004-2005:

Project Title	Funding agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration (Years)
Geo-informatics based water resources management plan for Ghad sub watershed, Maharastra	Department of Science & Technology, Gol, New Delhi	October 4, 2004	10.02	3

C. Project completed during the year 2004-2005 :

Project Title	Funding agency	Date of Sanction	Amount Sanctioned (Lacs)	Duration (Years)
Updation of Wastelands Atlas Mission	National Remote Sensing Agency DOS, Gol	23.09.03	1.67	1 year

D. Project submitted during the year 2004-2005 :

Project Title	Funding agency	Date of Sanction	Amount Sanctioned (in Rs.)	Duration
GIS Database Creation Using Remote Sensing & GPS Technologies for Planning Electrical Transmission in Jharkhand State	MECON Ltd.	Under process	----- (Proposed amount: Rs. 96,36,979.00/-	2 years
Evaluation of land dynamics affect on surface-subsurface hydrological regimes in the new state capital of Jharkhand using Geoinformatics. Project submitted to UGC	University Grant Commission (UGC) New Delhi	Under process	----- (Proposed amount: Rs. 10,50000/-	3 years
Hydrogeological investigation of water resources & development of GIS for Ranchi district	Department of Mines & Geology, GoJ	Under process	----- (Proposed rates as per NRSA, DOS)	3 years
Invitation for expression of interest (EOI) from Companies/ NGO's for selection of strategic partners and tender document for GIS based database creation	Department of Mines & Geology, GoJ.	Under process	----- (Proposed rates as per NRSA, DOS)	2 months

E. Seminar/conference/short term course conducted by the Department :

National Seminar on Role of Geoinformatics in Decentralized Planning for better Governance, held in Department of Remote Sensing, B.I.T., Mesra, 7-8, Oct., 2004. A total of 150 delegates attended the seminar. Specialist of the area like. Dr. N.C. Gautam, Former Deputy Director, NRSA, DoS, Hyderabad, Dr. J.R. Sharma, Head, RRSSC, DoS, Gol, Jodhpur, Brig. (Dr.) R. Sivakumar, Head NSDI and Advisor, NRDMS, DST, Gol. participated in the seminar.

F. Publications by faculty :

I. International journals :

1. Hao yan, Shaoqiang Wang, Changyao Zhang, Nilanchal Patel, Losses of Soil Organic Carbon under Wind Erosion in China, International Journal of Global Change Biology

II. National journals :

1. Pandey A.C, Saklani, P.S. and Chandra S. Dubey, 2005. Geological and Morphotectonic Studies Using Satellite Images of Tehri-Uttarkashi district, Lesser Garhwal Himalaya. In: Himalaya- Geological Aspect, volume-3. Ed: P.S. Saklani, Satish Serial Publishing House, Delhi, 2005.

III. Books/ Monographs :

1. Resource Atlas of Haryana, **Edited by A.C. Pandey**. Published by Haryana State Council for Science & Technology, Chandigarh, April 2004.

G. Seminar/ Symposium / short-term course attended by faculty :

1. Mr. V. S. Rathore, Associate Lecturer, attended a two month Course in RS & GIS Applications in Water Resources at IIRS, Dehradun, sponsored by NNRMS, DoS, Gol. During May 3, 2004 - June 25, 2004.
2. Dr. A.C. Pandey, Senior Lecturer attended ISRS Annual Convention- 2004 on Converging Space Technology for National Development, 3-5 Nov., 2004, Jaipur, India.
3. Dr. A.C. Pandey, Senior Lecturer attended National Seminar on Green Productivity and Sustainable Development, Organised by Environmental Sciences and Engineering Group, B.I.T., Mesra, 10-11, March, 2004
4. Dr. A.C. Pandey, Senior Lecturer attended National seminar: Disaster Management- Role of meteorology and allied discipline, March 22-23, 2005, BIT, Mesra, Ranchi.
5. Mrs. R.N.K.Sharma, Lecturer, attended International Conference "MapIndia 2005", held in New Delhi from 7-9 February, 2005.
6. Mrs. R.N.K.Sharma, Lecturer, attended Attended two weeks long AICTE-ISTE sponsored training programme on "Resource Management and planning using RS & GIS techniques" in March 2004 and held in VNIT, Nagpur, under the QIP programme.
7. Shri. Roheet Bhatnagar, Lecturer, attended An International Conference "MapIndia 2005", held in New Delhi from 7-9 February, 2005.
8. Shri. Roheet Bhatnagar, Lecturer, attended two weeks long AICTE-ISTE sponsored training programme on "Resource Management and planning using RS & GIS techniques" in March 2004 and held in VNIT, Nagpur, under the QIP programme.
9. Shri. Roheet Bhatnagar, Lecturer, attended National Seminar on Green Productivity and Sustainable Development, Organised by Environmental Sciences and Engineering Group, B.I.T., Mesra, 10-11, March, 2004

H. List of Publications in Conference Proceedings :

I. International :

1. N. Patel, Shi Jun, Liu Jiyuan Modeling Stand Age of Plantation Species with Stand Parameters: A case Study in Heilongjiang Province, Northeast China ,proc. 4th Int. Colloquium on Lucc in Asia Beijing , China, 15-16 October, 2004.
2. Linli Cui, Wenyi Fan, Jun Shi, Zhiqiang Gao, N. Patel, Some key pre-processing techniques on airborne imaging spectrometer data for quantitative analysis, proc. 4th Int. Colloquium on Lucc in Asia Beijing , China, 15-16 October, 2004.
3. Lakhan Lal Mahato, N. Patel, D. Kapoor, Ajay Kumar Pathak and M.S.R.Murthy, Surface Water Monitoring And Evaluation of Indravati Reservoir using the application of Principal Component

II. National :

1. M.S.Nathawat, V.S. Rathore, Anand K. Sinha and Praveen Kumar, Water Resources Development in Hard Rock Terrain- A Geo-informatics Approach, Proc., National Seminar on Role of Geoinformatics in Decentralized Planning for better Governance, held in Department of Remote Sensing, B.I.T., Mesra, 7-8, Oct., 2004.
2. Praveen Kumar, A.K.Sinha, M.S.Nathawat and A.K.Singh, Application of Geo-informatics in Quantifying Water Supply Status and its Futuristic Demand in and around Ranchi City, Proc., National Seminar on Role of Geoinformatics in Decentralized Planning for better Governance, held in Department of Remote Sensing, B.I.T., Mesra, 7-8, Oct., 2004.
3. Amitabh Ghose, M.S. Nathawat, Deepak Srivastava, Policy Needs for Utilizing Geoinformatics for natural Resource Management in Bihar & Jharkhand, Proc., National Seminar on Role of Geoinformatics in Decentralized Planning for better Governance, held in Department of Remote Sensing, B.I.T., Mesra, 7-8, Oct., 2004.
4. Tanima Sarkar, M.S.Nathawat, Application of Radar data and Interferometry with Optical data in Urban Growth Sprawl Measurement in and around Kolkata, West Bengal, , Proc., National Seminar on Role of Geoinformatics in Decentralized Planning for better Governance, held in Department of Remote Sensing, B.I.T., Mesra, 7-8, Oct., 2004.
5. P.S. Arun, R. Jana, M.S. Nathawat, Characterization of Soil-Slope of Drought Prone, Residual Chhotonagpur Plateau, Proc., National Seminar on Role of Geoinformatics in Decentralized Planning for better Governance, held in Department of Remote Sensing, B.I.T., Mesra, 7-8, Oct., 2004.
6. Kirti Avishek, M. S. Nathawat, Human Intervention Analysis on Landscape Ecology Using Geo-spatial Technology, Proc., ISRS-National Symposim, 3-5 Nov. 2004, Jaipur.
7. Kirti Avishek, M. S. Nathawat, Ecotopic Changes Due to Human Pressure on an Ecosystem -A Geoinformatics Approach, Proc., National Seminar on Role of Geoinformatics in Decentralized Planning for better Governance, held in Department of Remote Sensing, B.I.T., Mesra, 7-8, Oct., 2004.

8. A.K. Singh and Praveen Kumar, Ground Water Study in the Pediment zone of Jamtara District and Nirsa block of Dhanbad District in Jharkhand, Using Remote Sensing Techniques, Proc., 3rd national Seminar on Inland Water Resources and Environment, 2-4 February, 2004, Thiruvananthapuram.
9. Pandey, A.C., 2004: Remote Sensing and GIS Technologies for Natural Hazards Mapping with Special Emphasis on Seismogenic Activity, Proc., National Seminar on Role of Geoinformatics in Decentralized Planning for better Governance, held in Department of Remote Sensing, B.I.T., Mesra, 7-8, Oct., 2004.
10. Mondal S, Pandey A.C., Minakshi kumar and Garg R.D. 2004, Landuse-Landcover assessment and its spatio-temporal dynamics using multi-temporal satellite images in southern part of Lower Garhwal Himalayas. Under publication in the proceedings of National seminar on Geoinformatics, 7-8 Oct., 2004, BIT, Mesra, Ranchi.
11. Pandey A.C., 2004: Remote Sensing Applications in Regional Geological Mapping in High Mountainous Terrain –A case study from Tehri-Uttarkashi districts, Lesser Garhwal Himalaya, Proc., ISRS-National Symposim, 3-5 Nov. 2004, Jaipur.
12. Pandey A.C., 2005: Waiting for inevitable natural disaster in Lesser Himalayas, Garhwal- A geoinformatics based geoenvironmental perspective on feasibility of Tehri dam. Paper accepted for publication in seminar proceedings of National seminar: Disaster Management- Role of meteorology and allied discipline, April 8-9, 2005, BIT, Mesra, Ranchi.
13. Krishna, A.P., Kumar, N. & Nathawat, M.S. (2005). Natural Hazard Assessment through Remote Sensing and GIS – A Case Study from Sikkim State, India; Accepted for Publ. in Proc. Of National Seminar on Disaster Management: Role of Meteorology and Allied Disciplines, April 8 - 9, 2005, Deptt. of Applied Mathematics Birla Institute of Technology, Mesra, Ranchi.
14. Roheet Bhatnagar & Richa N K Sharma and S P Bhatnagar. Potential site Suitability for Herbal plants Cultivation Using RS & GIS techniques. MapIndia 2005, New Delhi, 7-8 February, 2005, .
15. Richa N.K. Sharma & Subrata Ghosh. GIS Based Drug Survey-A case study within Ranchi Municipal Limits. MapIndia 2005, New Delhi, 7-8 February, 2005.

I. Award/Nomination of faculty by important organization :

1. Dr. N. Patel has been awarded Visiting Scientist Award by Chinese Academy of Sciences, Beijing, P.R. CHINA.
2. Dr. R. Sivakumar has been selected for Young Scientist Project by Department of Science & Technology, Gol.
3. Dr. M.S. Nathawat, has been appointed as an organizing secretary, 25th ISRS symposium.

J. Student Activities:

1. Participated in the National Seminar on Role of Geoinformatics in Decentralized Planning for better Governance, held in Department of Remote Sensing, B.I.T., Mesra, 7-8, Oct., 2004.
2. Participated in the National Seminar on Green Productivity and Sustainable Development, Organized by Environmental Sciences and Engg., B.I.T., Mesra, 9-10 March, 2004.
3. Participated in the National Seminar on Disaster Management- Role of meteorology and allied discipline, March 22-23, 2005, BIT, Mesra, Ranchi.

DEPARTMENT OF SPACE ENGINEERING & ROCKETRY

The Department is actively engaged in modernisation and development of its various laboratories. The faculty members have carried out and guided considerable R & D work in the broad areas of Aerodynamics, Propellant Technology, Combustion, Rocket Propulsion and Composite Materials.

In addition to the existing M.E. Programme in Space Engineering and Rocketry with two specializations, viz. Aerodynamics and Rocket Propulsion, started in 1968, the Department has started an M. Tech. Programme in Fuels and Combustion w.e.f. Monsoon 2002.

The research work carried out during the period of Report is summarized below:

Aerodynamics Division

Experimental investigation to obtain the flow characteristics around slender body at high angles of attack has been made using the Subsonic Wind Tunnel. Flow visualization using tuft, as also the measurement of static and unsteady pressures have been made. Load distribution along the slender body has also been obtained. Effect of various parameters, like nose shape and angle of attack, have been elaborately investigated. The studies are quite relevant for the design of missiles / aircrafts.

Computation of flow field around bluff bodies like cylinder, wedge, etc. at low subsonic speed have been made by developing a Navier-Stokes solver for incompressible flow, using structured grid. Computed results have been compared with available results from the literature. Experiments have been conducted using Subsonic Wind Tunnel for further validation of the code.

Flow field around three dimensional protrusions have also been obtained at supersonic speed through flow visualization and measurement of static and unsteady pressures using the Supersonic Wind Tunnel. Effects of various parameters like height, leading edge angle, gap between protrusions, etc. have been investigated. These results would be useful for the design of missiles.

Experimental investigation has been made to characterize the flow field around fin, mounted on flat surface, at supersonic speed adopting oil flow visualization and measurement of static and unsteady pressures. Effect of various parameters, like height and shape of fin, and gap and angle between fins has also been investigated.

The above studies are being carried out under ongoing Projects sponsored by AR & DB, Ministry of Defence, DRDL, and RESPOND of ISRO. Various improvements are being made to enhance the measurement capability of the existing Wind Tunnels.

Propellant Technology Division

Thermal Analysis studies of Hydroxyterminated polybutadine, Ammonium nitrate and their virgin and Iron (III) oxide catalyzed propellants have been conducted under slow decomposition conditions, to assess the catalytic influence on condensed phase combustion. Experimental investigation on combustion behavior of HTPB-AN-IO system have also been carried out in a pressure range of ambient to 70 bar using Crawford Bomb to study the overall impact of catalyst in propellant combustion.

The design and development work on a precision orifice flow meter has been carried out. The source code for data acquisition system has been developed and validated. The research work on fluid characterisation and flow behavior of unsymmetrical dimethyl hydrazine – methylcellulose gelled system with varying extent of aluminization, set-up has been carried out. The set up has shown an excellent reproducibility of results in terms of flow parameters, like pseudo-plasticity and consistency indices.

The R & D work on the design and fabrication of Swirl burner has been completed using CFD approach. An intensive investigation has been performed to study the mixing behavior and stabilization of LPG - Air flames. Efforts have also been made to visualize different velocity regions inside the mixing chamber of swirl burner of different fuel – air injection details, using ANSYS 5.7 software. High-speed photographic technique was used to study the flame structure.

Metal combustion is an extremely important area and the particle size of incorporated metals in the propellant system influences various aspects of its formulation and combustion behavior. Efforts have been initiated to develop a process for preparation of submicron size metal particles at laboratory scale.

Rocket Propulsion Division

The performance characteristics of PVC-AP solid propellant has been determined and the effect of various parameters evaluated using static thrust stand, Auto Firing Console and associated software. The effects of metallised particles as well as cross flow velocity of combustion products on internal ballistic parameters and performance characteristics have also been investigated. Extensive work has been carried out to determine the effect of various parameters on the regression rate of PVC Plastisol burning in the stream of gaseous oxygen.

A new laboratory, Cryogenic Propulsion Laboratory under Special Assistance Programme (SAP) of UGC is under development in the Department. A small Cryogenic rocket engine (50 kgf thrust) using liquid oxygen and cooled gaseous hydrogen has been designed and some of the components, like injector holder and injector body, have been fabricated. Essential equipments, including liquid nitrogen plant, cryogenic storage dewars, transfer tubes, solenoid valves, etc. have already been procured, and the design of static test stand and associated flow circuits have been completed. The laboratory building, 21m X 5.5 m, is now complete and necessary fittings and amenities are being taken up, before housing the equipments and accessories.

A high-speed dynamic type herringbone- grooved journal bearing system, to be used in a turbo-expander device of a cryogenic propellant manufacturing plant, is under advanced stage of development. The innovative technique of chemical milling, developed earlier has been further improved by using a template made by wire cutting and by using an appropriate fixture to wrap the paper-mark on the rotor. Detailed design with required dimensional accuracy has been completed and fabrication of most of the precision components is ensured from established sources, while the chemical milling of grooves on the journal with greater precision is being undertaken in-house. Department of Science and Technology, Govt. of India is sponsoring the developmental activities.

Composite Materials Division

Investigation towards extended designed service life of Composite Materials have gained more importance in recent years because of growing use of Composite Materials in aerospace application in fuselage, leading edges, landing gears, brake pads and such other

critical components in military and civilian aircrafts; and broad investigations in this direction have been carried out here. Extensive research has been carried out for determining mechanical and thermal properties, like tensile, flexure, shear, fatigue and creep, under various loading conditions under different environmental exposure. Work has also been carried out on determination of properties of stiffened composite plates and adhesive joints of composite plates. Also, work has been initiated in the area of smart materials and structures, so as to manifest some active effects and to maintain optimum condition in response to environmental changes. Design and development of advanced composite materials, like Glare and Arral have also been initiated.

Degree/ Diploma offered : M.E. (Space Engineering & Rocketry)with specialization in Rocket Propulsion & Aerodynamics. M.Tech. (Fuels & Combustion).

Faculty Position : Professor –4, Lecturer –4.

Number of Students enrolled/ registered with department : M.E.- 12, M.Tech. -13

Academic Innovations, Research & Development activities :

A. Ongoing Projects:

Project title	Funding Agency	Date of Sanction	Sanctioned Amount (Lakh)	Duration
Combustion Studies on Eco-friendly Solid Propellants	UGC	2001	4.90	4 years
Studies of Flow Behaviour of Heterogeneous Gelled Propellants	AICTE	2001	9.20	4 years
Development of Cryogenic Propulsion System	UGC (SAP)	2002	49.00	5 years
Experimental Investigation of Flow Field around Protrusions at Supersonic Speeds	AR&DB Min. of Defence	2003	8.26	2 years
Investigation of Flow Field around Fore Body with Vertical Fences at Supersonic Speeds	DRDL Min. of Defence	July 2004	9.50	9 months
Investigation of Flow Field Interaction around Protrusions at Supersonic Speeds	RESPOND ISRO Dept of Space	July 2004	9.30	2 years
Experimental Investigation of Flow Field around Slender Body at High Angles of Attack	AR & DB Min. of Defence	July 2004	7.22	2 years
Propellant Technology and Combustion Facility	DST (FIST)	Feb 2005	25.00	5 years

B. Projects Sanctioned during the year 2004-05 :

Project title	Funding Agency	Date of Sanction	Sanctioned Amount (Lakh)	Duration
Investigation of Flow Field around Fore Body with Vertical Fences at Supersonic Speeds	DRDL Min. of Defence	July 2004	9.50	9 months
Investigation of Flow Field Interaction around Protrusions at Supersonic Speeds	RESPOND ISRO Dept of Space	July 2004	9.30	2 years
Experimental Investigation of Flow Field around Slender Body at High Angles of Attack	AR & DB Min. of Defence	July 2004	7.22	2 years
Propellant Technology and Combustion Facility	DST (FIST)	Feb 2005	25.00	5 years

C. Project Completed during the year 2004 – 05 :

Project title	Funding Agency	Date of Sanction	Sanctioned Amount (Lakh)	Duration
Transonic Buffeting : Shock Boundary Layer Interaction	RESPOND ISRO	2001	9.96	3 years

D. Project submitted during the year 2004 – 05 :

Project title	Funding Agency	Date of Application	Projected Amount (Lakh)	Duration
Development of Gel Propulsion System	DRDL Min. of Defence	Feb 23,2005	23 .00	18 months

E. Seminar/ Conference/ Short Term Course conducted by the Department :

Title : Short Term Training Programme (STTP) on “Advances in Aerospace Engineering and Rocket Propulsion”

Coordinator : Dr. A. K. Chatterjee Dr. T. K. Nandi

Sponsored by : All India Council for Technical Education & Indian Society For Technical Education

Date & Year : June 28- July 10, 2004

F. Publication by faculty :**I. International/ National Journals :**

1. P. K. Dash and A. K. Chatterjee " Effect of Environment on Fracture Toughness of Woven Carbon / Epoxy Composite" – Journal of the Institution of Engineers (I), Vol. 35, May 2004, pp. 16-21.
2. A. Roy and G. Bandyopadhyay, " Numerical Investigation of Confined Flow Past a Square Cylinder Placed in a Channel", Journal of the Institution of Engineers (I) (Aerospace Div.), Vol. 35, Nov 2004, pp. 60-63.

II. Publication in Seminar / Symposium :

1. S. Challa, A. Roy, S. Das, J. K. Prasad, " Effect of Height on Flow Field around Protrusions at Supersonic Speed", Proc. National Conference on Fluid Mechanics and Fluid Power, Jadavpur University, pp. 679-686, Dec 16-18, 2004.
2. Tarun Kumar, A. Roy, S. Das, J. K. Prasad, " Flow Field around Slender Body having Different Fineness ratio at High Angle of Attack", Proc. National Conference on Fluid Mechanics and Fluid Power, Jadavpur University, pp 622-632, Dec16-18, 2004.
3. M. K. Ralh, A. Roy, S. Das, J. K. Prasad, " Flow Field around Blunt Protrusions Mounted on Flat Surface", Proc. Eighteenth National Convention of Aerospace Engineers, IIT, Kharagpur, pp. 6-11, Nov 17-19, 2004.
4. Tarun Kumar, A. Roy, S. Das, J. K. Prasad, " Effect of Nose Shape on Slender Bodies at Large Angle of Attack at Subsonic Speed", Proc. Eighteenth National Convention of Aerospace Engineers, IIT, Kharagpur, pp. 58-65, Nov 17-19, 2004.
5. Mohan Varma, "Condensed Phase Phenomenon in Propellant Combustion : Technological Implications", Invited Lecture in National Seminar on Impact of Condensed Matter Physics on Technology, Sikkim Manipal Institute of Technology, Rangpo, Sikkim, March 4 & 5, 2005.

G. Seminar / Symposium / Short term Course attended:

1. Dr. A. K. Chatterjee attended Nineteenth Indian Engineering Congress and Congress Seminar on " Destination 2020 : India- A Developed Nation", Mumbai, Dec 16-19, 2004.
2. Dr. A. K. Chatterjee attended Eighteenth National Convention of Aerospace Engineers, and National Seminar on " Aerospace Research in Twenty first Century : Prospects and Challenges", I.I.T., Kharagpur, Nov 17-19, 2004.
3. Dr. Mohan Varma attended the National Seminar on " Impact of Condensed Matter Physics on Technology" , Sikkim Manipal Institute of Technology, Rangpo, Sikkim., March 4 & 5, 2005.
4. Dr. J. K. Prasad attended Eighteenth National Convention of Aerospace Engineers, and National Seminar on " Aerospace Research in Twenty first Century : Prospects and Challenges", I.I.T., Kharagpur, Nov 17-19, 2004.
5. Dr. J. K. Prasad attended National Conference on Fluid Mechanics and Fluid Power, Jadavpur University, Dec 16-18, 2004.

6. Shri Arnab Roy attended Eighteenth National Convention of Aerospace Engineers and National Seminar on “ Aerospace Research in Twenty first Century : Prospects and Challenges” , I.I.T., Kharagpur, Nov 17-19, 2004.
7. Dr. P. K. Dash attended Short Term Course on “Soft Computing Concepts and Application”, B. I. T., Mesra, Dec 18-30, 2004.
8. Shri Sudip Das attended Eighteenth National Convention of Aerospace Engineers, and National Seminar on “ Aerospace Research in Twenty first Century : Prospects and Challenges”, I.I.T., Kharagpur, Nov 17-19, 2004.
9. Shri Sudip Das attended National Conference on Fluid Mechanics and Fluid Power, Jadavpur University, Dec 16-18, 2004.
10. “Shri Chetan R. Chodankar attended Short Term Quality Improvement Program on “Applied Combustion” , I.I.T., Kanpur, Feb 13 –18, 2005.

H. Award / Nomination :

1. Dr. Mohan Varma has received AICTE – Best Research Project Award – 2004 and has received Technology – Day Award – 2004.

DEPARTMENT OF ENVIRONMENTAL SCIENCE & ENGINEERING

The Environmental Science & Engineering Group was established in the year 2002. It offers a full time 2 year programme in M.Tech. Environmental Science & Engineering. ESEG is emerging as a center of excellence in the field of environment. ESEG has well established labs in collaboration with the other departments of the institute. ESEG is also engaged in various research & developmental projects. ESEG offers a Ph.D. Programme in interdisciplinary mode. Researchers from most of the established central government organizations are pursuing their Ph.D. research in the field of environment.

Degree/Diploma offered : M.Tech. Degree (Environmental Science & Engineering)

Faculty Position : Associate Lecturer – 1.

Number of student enrolled/registered with Department : M.Tech.(ESE) -17.

Academic Innovations, Research & Development activities :

A. Seminar/Conference/Short term course conducted by the Department :

- I. National Seminar on “Green Productivity & Sustainable Development” on 10th-11th March, 2005. The prominent dignitaries participated in the seminar were Mr. M.K. Mandal, Development Commissioner, Govt. of Jharkhand, Ranchi., Mr. Shiv Basant, IAS, Secretary, MOEF, Govt. of Jharkhand, Ranchi., Mr. V.K. Jaiswal, Senior Vice President (Operations), TATA Cummins, Jamshedpur., Dr. A.K. Saxena, Director, National Productivity Council, New Delhi., Mr. B.S. Upadhyay, CGM, Central Coal Fields Ltd., Ranchi., Dr. T.D. Banerjee, Chief (Organizational Engg. & Planning), Tata Steel., Mr. R.P. Sharma, Chief (Environment & Occupational Health), Tata Steel. A total of 60 delegates attended the seminar.

EXTENSION CENTRE

ALLAHABAD

The Extension Centre at Naini (Allahabad) is located at the Raymond crossing of Allahabad – Mirzapur road on plot B-7 Industrial Area, Naini, Allahabad-211010. This Centre was setup in the session 1997-98 with the decision to start B.Tech Degree programme in Civil, Mechanical and Electrical & Electronics Engineering for the Engineering diploma holders on part time basis. The first batch of students of B.Tech (Part-Time) programme was admitted in January 1998 and so far, three batches of students have completed their B.Tech Degree programme.

In order to bridge the gap between availability and demand of trained computer and management personnel and specially to provide job-oriented professional education and training to youth of the area, the Institute introduced (3-years) full-time courses like Bachelor of Computer Applications (BCA), Bachelor of Business Administration (BBA) and Master of Computer Applications (MCA) in subsequent years. As a result the Allahabad Centre offers the following programmes at the moment:

- | | |
|--|-------------|
| 1. Master of Computer Applications (MCA) | - Full Time |
| 2. Batchelor of Computer Applications (BCA) | - Full Time |
| 3. Bachelor of Business Administration (BBA) | - Full Time |
| 4. B.Tech In Civil, EEE & Mech. Engineering | - Part Time |

The computer laboratory of this centre has over 100 P-4 computers connected through LAN network and Internet connectivity are available through out the day. The Institute Library has a reasonably good number of text books and Technical Journals are being regularly subscribed by it.

Some of the engineering laboratories developed by the centre are Electrical Machines laboratory, Basic Electronics laboratory, Microprocessor laboratory, Digital Electronics laboratory, Control Engg. laboratory, IC Engines Laboratory, Manufacturing processes laboratory and Non-conventional Energy laboratory.

The centre has a moderate play ground, Volleyball Court, and Badminton Court. The centre encourage students to organize co-curricular and extra curricular activity such as Games and Sports meet, Cultural meet, Quiz, Debates & Essay competition, Painting & Photographic competition etc at periodic intervals.

Keeping in view the requirements of the area, the following full time programmes are being planned to be added in near future at Allahabad Centre.

- (1) 4-years (Full Time) BE in Electronics and Communication Engineering
- (2) 4-years (Full Time) BE in Computer Science & Engineering
- (3) 2-years (Full Time) Master of Business Administration (MBA)
- (4) 2-years (Full Time) M.Sc. Information Technology

The centre is poised for expansion in a big way. The deck has been cleared for a three-storied new Institute building having floor area of 75,000 sq. ft. and the construction work is due to begin soon.

Department of Computer science:

The Computer Science Dept. has laboratories which is spread over an area of 190 sq. meter and equipped with Computers like DELL PIV(30Nos), IBM PIV (15 Nos.), Compaq PIV (40 Nos), Compaq Celeron (15 Nos.), Compaq Proliant Server (1 No.), Unix Server-PI (1 No.). The softwares that are used to train our students are like Windows NT, Windows 98, Windows XP, Windows 2000 Professional, Linux, Visual Studio, MS Office 2000, Oracle, Java etc. The Computer Centre is completely networked and has ISDN connection for Internet access. Students are actively carrying out live project work on latest fields: Network, Web Design. Multi Media Applications, Internet Controlling Tools, Image Processing, E-Security, Artificial Intelligence etc.

Department of Management:

At the moment BBA Programme is conducted. An adequate number of various titles of management books and a good number of technical journals are being subscribed by the Dept. The department also extends service to the other departments.

Department of Civil Engg:

The department is at the developing stage. It has at the moment moderate Surveying lab and Soil Mechanics lab instruments. Presently only the Part-Time B.Tech programme is being run by the department. The students of the department have worked on live projects on Environmental Pollution, irrigation, rural water supply schemes and rural link roads, etc.

Department of Electrical and Electronics Engg.

The department is establishing Basic Electronics and Basic Electrical Lab wherein B.Tech/BE students can perform experiments related with there subjects.

The department has Electrical Machine lab, digital electronics lab, microprocessor lab and control Engg. Lab equipped with MATLAB software. The department presently has only Part-Time programme leading to B.Tech degree. The students have done some good projects on High Voltage transmission of power, modern communication system, Energy Saving devices and so on.

Department of Mechanical Engg.

The department has set up experimental models in the area of Non-Conventional Energy having reasonably good performance.

The department has Manufacturing processes lab having standard machine tools of general types and I/C Engine lab. The department presently has only Part-Time programme leading to B.Tech degree. The students have done some good projects on Non-Conventional Energy, improvement of Engine performance, pollution control, Computer aided Design and so on

Degree / Diploma Offered : Full time Programme – BBA, BCA, MCA, Part time Programme – B.Tech. in Civil Engineering, Electrical & Electronics Engineering, Mechanical Engineering.

Faculty Position: Professor –1, Sr. Lecturer –3, Lecturer – 3, Associate Lecturer –6.

Number of Student Enrolled : Undergraduate – 255, Postgraduate – 86.

Academic Innovations, Research & Development activities:

A. Publication by faculty :

1. Prof. A.K. Singh, Lecturer, Department of Mechanical Engineering, has presented a paper entitled "Solar Drying – A Prospective Approaches for India Scenario" in International Workshop and Symposium on Industrial Drying, Mumbai during 20-23 December, 2004.
2. Dr. P. Bubna, Associate Lecturer, Dept. of Management, has published a paper titled "Information Technology in Banking & Financial Sector", in the journal of Purvanchal University, Jaunpur.

B. Seminar / Symposium / short term course attended by faculty member :

1. Prof. B.K. Singh, Sr. Lecturer, Department of Civil Engineering, has participated in the short term course under QIP on Data Driven Modeling in Civil Engineering:
Soft computing techniques at Department of Civil Engineering, IIT Madras during 8-13 Nov 2004.
2. Prof. B.K. Singh, Sr. Lecturer, Department of Civil Engineering, has attended a Teacher's Training Programme at MNNIT, organized by the Dept. of Computer Science and conducted by Technical Teacher's Training Institute Chandigarh in March 2005.
3. Prof. S. Kanungo, Sr. Lecturer, Department of Computer Science has participated at the 1st International Conference on Distributed Computing and Internet Technology, organized by KIIT, Bhubaneswar from 21st to 24th December 2004.
4. Prof. R.S. Pandey, Sr. Lecturer, Department of Computer Science has participated the 6th International workshop on Distributed Computing held in ISI, Kolkata during 27th to 30th December 2004.
5. Prof. (Mrs.) A. Kushwaha, Lecturer, Department of Computer Science has participated in short term training programme on Soft Computing: Concepts and Applications organized by Department of Computer Science and Engineering, BIT Mesra during December 18-30, 2004.
6. Prof. A.K. Singh, Lecturer, Department of Mechanical Engineering, has participated in International Workshop and symposium on Industrial Drying, organized by Mumbai University, Institute of Chemical Technology during 20-23 December 2004.
7. Prof. R.K. Srivastava, Lecturer, Department of Management, has participated in the National Workshop on Role of IT in University Management, organized by Association of Indian Universities, New Delhi and IIIT Allahabad during September 13-17, 2004.
8. Dr. A.K. Mahanty, Associate Lecturer, Department of Management, has attended a Workshop on Export procedures, Marketing and Documentation, jointly organized by the Departement of Economics, University of Allahabad at IIFT, New Delhi from March 31 to April 3, 2005.
9. Prof. S. Das, Associate Lecturer, Dept. of Management, has attended the 7th Annual Conference on "Money & Finance in the Indian Economy" held at Indira Gandhi Institute of Development & Research, Mumbai from February 10 to February 11, 2005.

10. Prof. Kumar Nikhil, Associate Lecturer, Department of Electrical & Electronics Engineering, has attended a short term course training programme organized by Department of Electrical and Electronics Engineering on MATLAB Oriented Electrical System Modelling and Real Time Control during December 06-18, 2004.

Golden Jubilee Lecture Series

1. Lecture-I: Speaker - Mr. V.L. Varma, Retd Director BEML & Ex. MD BPCL & Director BYN Topic: Perspectives of Industrial Operations Beyond 2000 & Role of Young Managers Date: 6th November 2004.
2. Lecture-II: Speaker – Dr. Utpal K. Banerjee, Advisor, Indraprastha University, Delhi & Fellow, Computer Society of India Topic : Business Process Outsourcing (BPO): IT in public service Date : 4th December 2004.
3. Lecture-III: Speaker – Dr. Utpal K. Banerjee, Advisor, Indraprastha University, Delhi & Fellow, Computer Society of India Topic : IT As A Business Strategy Tool Date: 5th December 2004.

Students Activities

1. BITEC Souvenir – 2004 published for better interaction of the outgoing students.
2. The students cultural committee organized various competitions such as debate, solo song, group song to promote spirit of healthy competition among the students on 15th August and 26th January.
3. Conducted Annual athletic meet held at BITEC, Allahabad during 22-01-05 to 24-01-05.
4. Student participated in BITOTSAV –2005 held at BIT Mesra, Ranchi during 26.02.05 to 01.3.05, 19th Annual Sports of BIT Ranchi held at Ranchi during 28-01-05 to 29-01-05 and in International UNNAYAN held at BIT Ranchi during 2.02.05 to 5.02.05. They won many prizes.

CHENNAI

Birla Institute of Technology, Extension Centre, Chennai commenced its operation with the signing of the memorandum of understanding by the Vice-Chancellor of BIT, Dr. S. K. Mukherjee and the Chairman Mr. J. Ramachandran, Academy of Maritime Education and Training, Chennai on 2nd September 2002.

From the batch of 2001, BIT Ranchi, formerly accorded approval of AMET to conduct a four year BE (Marine Engineering) Programme. In June 2003, BIT extended affiliation to AMET to conduct three year B.Sc. (Nautical Science) course and during the same period, approval was given to conduct Post-Graduate course leading to MBA degree-shipping and Port Management.

It may be observed from the above, all courses of study offered are sector specific and are designed to equip the students with appropriate and adequate skills and knowledge in specific fields.

The opening up of the Chennai center has facilitated to bring in the presence of Birla Institute of Technology, Ranchi into the state of Tamilnadu, where none existed earlier.

The Chennai centre has already acquired 1.5 acres of land adjacent to the Academy of Maritime Education and Training with plans to acquire 3.5 acres in the near future. Vice Chancellor Emeritus Dr. H. C. Pande and Dr. S. K. Mukherjee visited Chennai centre and conducted the Bhoomi Pooja on February, 7th 2005 of the land acquired by the Birla Institute of Technology, Extension centre Chennai. The team lead by Dr. H. C. Pande Vice Chancellor Emeritus consisted of Vice Chancellor Dr. S. K. Mukherjee, Shri S. S. Jajodia, Treasurer, Dr. Anand Mohan Agarwal, Dean Extension Centre, Shri J. B. Saxena, Ex. Registrar BIT. They conducted various meetings with the Chairman Shri J. Ramachandran, of AMET and Capt. Jacob Abraham, Director AMET during their visit in February 2005.

Degree/Diploma Offered : B.E. (Marine Engineering), B.Sc. (Nautical Science), MBA (Shipping & Port Management).

Faculty position : Professors – 2, other faculty on deputation from AMET – 50.

Number of students enrolled : Undergraduate – 499, Postgraduate – 34.

Academic Innovations, Research & Development Activities :

Prof. Awadh Prasad and Prof. C.S. Venkata Ratnam guided the doctoral thesis of Mrs. Asha Prasad, Reader, Management Studies, Noida Centre, who submitted her thesis on “Electricity reforms in India and Human Resource Adjustment Issues” to BIT Ranchi on 11.03.2004.

1. Prof. Awadh Prasad and Dr. Hari Haran, Joint Director, MTI, Ranchi guided Shri Utpal Baul and he submitted his thesis captioned “Mutuality of Influence between Organizational Buying Behaviour and Marketing Strategies” during January 2005 to Birla Institute of Technology.
2. Mr. J. Rengamani, Lecturer in Management at AMET left for Australia for higher studies.
3. Mr. S. Muthukumaran, Chemistry Department, AMET submitted his Ph.D. thesis on “A Study of Reactivity on Mixed Ligand β -keto Iminates Coordinated Bivalent Quadridentate Thioschiff's Base Ligands of Transition Metal (II) IONS – A Study of Dyes, Flavones, Benzoyl, Cotarmine and their Metal Analogues” to the University of Madras. He was awarded Ph.D. by the University of Madras. He was guided by Dr. V. Balasubramanian, Prof. of Chemistry (Retd.) Pachaiyappa's College and was a faculty member of AMET.

Students Activities :

1. Students from the BIT Centre, Chennai participated in the BITOTSAV-2005, held at Ranchi. The students secured first place in high jump and third place in long jump, 400 hurdles and 4 x 100 relay respectively.
2. The students from the centre also participated in the NMSC sports meet conducted at Vel's College, held on 5th March 2005. The team has won the overall championship in both athletics and Swimming.

3. The students of first batch of MBA (Shipping and Port Management) Programme are to be graduated during this academic year 2004-2005. Since the start of the programme, a lot of steps has been taken to imbibe the quality consciousness in the programme. More emphasis was given to the practical aspects of the shipping industry as this is the core of sector specialization. The institution-industry interactions were kept at the maximum in order to infuse the practical knowledge. We appraise below some of the initiatives pursued by the Department towards achieving the above objectives.

- Industrial visit – Visit to Goa Port & Goa Ship yard during November 2004.
- Students deputed to the 3 days seminar conducted by Institute of Marine Engineers – Chennai Chapter during 18.11.2004 to 20.11.2004.
- Participated in one day seminar organized by Sri Sai Ram College of Engineering Chennai 600 044. The theme being “Research Methodology – Applications in Management”.
- Students of MBA (S & PM) has participated in the most of the management meets conducted by the city Management Institutes. To mention few : students participated in the ‘Management Meet’ conducted by Jeppiyar Engineering College, Chennai and our 1st year MBA student Mr. Narendrakumar has won the “Best Manager” award with a cash prize of Rs. 3,000/- and another group of our students has won a group event – ‘ad zap’.
- As a part of Industry visit, MBA students have visited Chennai Petroleum Corporation Ltd. Chennai on 15/04/05 and understood the concepts of Operations Management and Materials Management.

JAIPUR

The Birla Institute of Technology, Extension Centre, Jaipur was established in 1995 for imparting Technical Education & Research with special emphasis to improvement of Information Technology Education. Its target was to improve quality of Information Technology Professional through the pursuit of Excellence in Information Technology Education & Research, Consultation & Training. Hence, Post Graduation Course of Master of Computer Applications (MCA) is being run along with graduation courses such as Bachelor of Business Administration (BBA), Bachelor of Computer Applications (BCA), Bachelor of Engineering (BE). Seven batches of MCA and three batches of BCA have successfully found placement in renowned industries of the country.

For all round development of students, extra-curricular activities such as sports, art and cultural programmes are given due weightage along with the academics. The students organize such activities and as a result, improve their own communication and leadership skills. Various cultural events, Information Technology/Software Quizzes, debates are organized at inter & intra college level to promote and foster sportsmen competition spirit in students and thus to bring the all round personality development. Industrial visits were organized to impart real life experience to students.

To boost up confidence of students and to make them ready for their professional life ahead, Internal and External Seminars are organized here from time to time and students are encouraged/motivated for utmost participation so as to develop their technical and orate skills. The entire purpose of organizing such events is to give the students an adequate atmosphere for exercising their internal search and analysis skills and interact with their peers through topic of their interests. The seminars organized in the current year are : "Research methods in Management and Writing Research Papers", "Designing Strategies for Sustainable Competitive Advantages in Rural and Agricultural Markets", "Changes in Indian Economic Environment", "Business Communications" etc.

Summer Training for 30/45/70 days are given to students of various Engineering Colleges in Computer Stream. These trainings are gaining popularity with every passing year. Besides this, Summer Training/Project for students of BCA, BBA, BE and MCA of this institution are initiated to impart maximum research activities along with the course. These students are deputed to reputed industrial houses on summer project assignment for a period of 40 days. During this tenure, they are expected to learn and understand general functioning of the organization and to obtain specialized knowledge in the area of their interest by understanding projects under the able guidance and supervision of experienced executives of the industrial houses. Meeting for recruitment with prospective companies are organized and campus interviews with these were organized successfully in the last year. The institute assist graduating students in securing positions in leading National Corporations as well as providing contacts for jobs or higher education. Some of the companies which have recruited students of this institution are Birla Soft, Wipro, NIC, IBM, HCL Technologies, Honeywell, Convergup Technologies, Siemens, etc. A Placement Cell has been developed for providing placement of students in leading industrial sectors.

Degree/Diploma Offered : MCA, BCA, BBA, BE (CS/ECE).

Faculty Positions : Professor – 1, Reader – 2, Lecturer 15, Asso. Lecturer – 4, S.S.O. –1, JSO – 1, System Manager – 1, System Analyst – 1, Programmer – 1.

Number of Students enrolled/registered with Department : MCA – 153, BCA – 93, BBA –99, BE – 74.

Academic Innovation, Research & Development activities :

A. Seminar/Conference/Short Term course conducted by the Department :

1. "Research Methods in Management and writing Research papers", a National Workshop organized between 16th to 19th March 2005 jointly by Birla Institute of Technology, Extension branch Jaipur and National Institute of Agricultural Management, Jaipur.
2. National Seminar on "Designing Strategies for Sustainable Comptititive Advantages in Rural and Agricultural Markets" on 30th March 2005, organized jointly with National Institute of Agricultural Management, Jaipur.
3. Workshop on "Business Communications" by Dr. Sangeeta Sharma, Associate Professor, Birla Institute of Technology & Science, Pilani organized for one day for BBA – II & III students.
4. Two days workshop on "Team Building & Leadership Skills" by Mr. R. N. Krishania, Manager HRD, Naval Docks, Mumbai.
5. One day workshop on "Changes in Indian Economic Environment" by Prof. J.P. Sharma, University of Rajasthan.

B. Publication by Faculty :**I. International Journal :**

Sl. No.	Name of Journal	Title of the Paper
1.	Journal of Applied Physics, Volume 97, Feb. (2005), p. 43301-43307	"Characterization of Helium Discharge Cleaning Plasmas in ADITYA Tokamak using CR-model Code"
2.	Jpn. Journal of Applied Physics, Volume 43, No. 5A (2004) p. 2704-2710	Theoretical Model of Transient Sheath Dynamics"
3.	Phys. Scr. Volume 69 (2004) p. 303-312	"Electron Inertial delay Effects on Acoustic Solution Behaviour in Transonic Region".

C. Seminar/Symposium/Short Term course attended by faculty members :

1. In National Seminar on "Corporate Communication for Sustainable Advantage" organized by Birla Institute of Technology & Science, Pilani, paper was presented by Dr. Raghuvir Singh, HOD, Management, Birla Institute of Technology Extension Centre, Jaipur.
2. A paper on "Attaining Training and Detaining Employees" was presented by Dr. Raghuvir Singh, HOD, Birla Institute of Technology Extension Centre, Jaipur during annual convention ISTE organized by NSIT, New Delhi.
3. Invited lecture was delivered by DR. Raghuvir Singh, HOD, Management, Birla Institute of Technology Extension Centre, Jaipur at University Grants Commission sponsored refresher course (case study solutions) organized by MDS University, Ajmer.
4. Invited lecture delivered by Dr. Raghuvir Singh, Raghuvir Singh, HOD, Management, Birla Institute of Technology Extension Centre, Jaipur at University Grants Commission sponsored refresher course organized by Department of EAFM, University of Rajasthan on reforms in Indian Capital Markets.
5. Workshop on "Scientific Computing, Numerical Analysis and Application" from 24 Jan. to 4 Feb. 05, at Indian Institute of Science (Bangalore) sponsored by DRDO & NBHM, participated by Mr. Gurminder Singh, Birla Institute of Technology Extension Centre, Jaipur.
6. Invited talk delivered by Dr. Ram Prakash, Department of Physics, Birla Institute of Technology Extension Centre, Jaipur on "Computational Quantitative Plasma Spectroscopy for Spectroscopic Diagnostic", during 19th National Plasma Symposium (Plasma – 2004) held at Bundelkhand University, Jhansi, India from 7th – 10th Dec. 2004.

7. Poster on "Comparative Study of the Synthetic Spectrum of Neural Helium Line Emissions in Purely Ionizing & Recombining Plasmas", presented by Dr. Ram Prakash, Department of Physics, Birla Institute of Technology Extension Centre, Jaipur during 15th National Conference on Atomic & Molecular Physics (NCAMP) held at Physics Research Laboratory, Navarangpura, Ahmedabad, during 21 Dec. – 24 Dec., 2004.
8. Paper presented by Dr. Ram Prakash, Department of Physics, Birla Institute of Technology Extension Centre, Jaipur in International Host Lab Experiment Workshop organized by the Abus Salem International Centre for Theoretical Physics (ICTP) Trieste, Italy and BARC, Mumbai. Conference on "Synthesis on Nanomaterials by Thermal Plasma" at Pune University, Pune, India during 17th Nov. to 1st Dec. 2004 on topic "Comprehensive Medeling of Thermal Plasma using CR Model Codes".

Students Activities :

The students of the centre took active part in Sports, Cultural Activities, Annual Day function, Intra College Software Development Quiz, Inter College Software Development Quiz, Quizzes, Industrial Visit.

KOLKATA

BIT Extension Centre, Kolkata has shifted to its new premises in March, 2005. The total area of the premises is 20, 589 sq. ft which includes a lab of 120 machines capacity, faculty room, seven class room, one bigger class room/seminar room, server room. The library is approximately 2500 to 3000 sq. ft. of area and is having reading space, books and journal storage and 10-12 machines are installed to facilitate the E-library. The whole campus including class room is networked through cat-6 cable and the internet facility is given through dedicated leased line of 128 kbps. All the computers are from Dell and HP make of latest technology.

There is a further plan to purchase an open terrace in the same floor measuring 4025 sq. ft and a three bed room flat for guest house purpose. Presently two full time batches of MCA and BCA and one part time batches of MCA are running at our center and One batch of MCA and One batch of BCA will be passing out in the year June, 2005. In the year 2005 we have a plan to take Full time MCA, full time BCA and BBA. The total number of seats are 40 for MCA, 80 for BCA(two sections) and 80 for BBA(sections). We have a plan to start MBA full time in the year 2006.

The MCA-2k2 batch have done their final semester projects in various organizations like CTS, WIPRO, ISI Calcutta, Jadavpur University, Electra Design automation, IBM GLOBAL, Sunrise software, Flextronics(HSS), BIRLASOFT, Metalogic Systems. They have done projects on different platforms like R&D, Networking, Image Processing, VLSI design, Database software. The students had been selected in the above mentioned projects by

proving their ability through various kinds of tests and the result of which the company are now absorbing them.

Six final semester MCA students have done their final semester project under the guidance of Mr. R. T. Goswami and Mr. Debasish Jana. They have developed their project on webportal of BIT, Kolkata and the intranet facility. The software they have used is My Sql, Linux, Tomcat/Apache, JSP. The project is not fully completed within the stipulated time frame, it has a scope for further enhancement.

All the final semester students have been placed through campus interview in the renowned organizations like Birlasoft, IBM Global, Accenture, Flextronics(HSS), Mahindra British Telecom, Wipro, Metalogic Systems, Sunrise software etc

The MCA and BCA students have also done inhouse projects in their fifth/sixth semester under the guidance of the respective faculty. The MCA students have presented seminars under their fifth semester curriculum.

Degree / Diploma Offered : BCA (FT), MCA (FT/PT).

Faculty Position : Three (Full Time), Six (Part Time)

Number of Student enrolled/registered with Department Course : MCA (PT) – 20, MCA (FT) – 144, BCA – (FT) -74.

Academic innovations, research & Development activities :

A. Seminar / Symposium /short term course attended by faculty :

1. Faculty In Charge R. T. Goswami have participated in two seminar organized by viz. sun, Computer Today. Apart from the above Mr. R. T. Goswami and Mr. Debasish Jane Jointly presented a paper entitled **“Biometrics authentication in Digital Library”** in the National Seminar on Digital Library at BIT, Mesra, Ranchi organized by the Department of information science and central library during October, 2004.

Student Activities :

1. MCA(FT) and BCA (FT) semester has developed different projects during their respective semester under the guidance of the faculty members Mrs. J. Ray and Prof. R. T. Goswami. Projects include Hospital management System, Library Information System, Restaurant Billing System, Inventory Management System, Hotel Management System, Airline System, Students Profile Mangement System, Banking System and internet related.
2. MCA and BCA students took part in almost all events of the Bitotsav'05. They have performed in both informal and formal events in front of the huge gatherings. They have been awarded with the certificates.

LALPUR

The Institute first started a Centre for Continuing Education at Lalpur in Ranchi, initially with part-time postgraduate M.E. courses in the disciplines of Mechanical, Civil, Electrical and Electronics Engineering, for the benefit of officers working in various Ranchi based public sector undertaking and private industries such as, MECON, SAIL, HEC, CIL, CMPDI, SBL, UMIL, nationalized banks, etc, who wished to upgrade their qualifications. Part-time evening courses were offered for first the M.E. then subsequently the MBA, MCA, and DCA courses, with laboratory classes being conducted on Sundays and holidays at the Mesra campus. This Centre is now named the Lalpur Extension Centre.

In 1997 the Institute started the full time courses, B.Sc. Computer Science and B.Sc. Electronics for girls, and in 1998 the BCA course also for girls only. The fact that these were extremely successful led in 1999 to extra shifts were added to run the BCA course for boys also. In addition to these courses M.Sc. Information Technology and M.Sc. Electronics and Telecommunication courses for girls only and BBA course for all were introduced in 1999. Currently the Lalpur Extension Centre has over 1622 students on its rolls. The management Department, BIT Extension Centre at Lalpur, in Ranchi City.

The centre has well equipped computer laboratories and library facilities to cater the need of the student and staff.

Degree Offered : BBA, BCA, MBA, MCA, ME, (QEM), M.Sc., Ph.D.

Faculty Position : Reader - 1, Lecturer –14, Associate Lecturer –3, Teaching Assistant – 4, Visiting Faculty – 6.

Number of Student Enrolled/Registered : Undergraduate – 1129, Postgraduate – 493.

A. Seminar/Conference/Short term course/QIP programme attended :

1. Ms. Anupma Sahai, Attended Quality Improvement Programme organized by Narsee Monjee Institute of Management Studies (NMIMS), Mumbai, and AICTE, during the period 31st January – 5th February 2005. She also presented paper entitled “Economic Interpretation of why most of the top 500 Indian Companies are outsourcing their HR Administration”.
2. Ms. Anupma Sahai has also attended and presented the paper “Sustainable Development : With an Holistic View to Improve Overall Quality of Life” in the National Seminar on Green productivity & Sustainable Development (10th –11th March, 2005), BIT, Mesra, Ranchi.
3. Mr. A.K. Singh participated in Indian State Fiscal Management Programme. Organized by Bearing Point Global Operations and Govt. of Jharkhand.
4. Mr. A.K. Singh participated in ISTE sponsored short term training programme on Knowledge Management organized by BIT Mesra.
5. Mr. A.K. Singh presented a paper on management Challenges –System operations in National Seminar in ISM Dhanbad.
6. Mr. Somnath Mukherjee participated in AICTE-ISTE short term training programme on “Knowledge Management –its impact in Indian Business” conducted by the Department of Management, BIT Mesra from December 6-18, 2004.

7. Mr. Somnath Mukherjee participated with paper presentation (paper titled "Green Marketing – emerging trends") in National seminar on Green Productivity for sustainable Development, organized by the Environment Engineering Group, BIT Mesra on March 10 and 11, 2005.
8. Mr. Somnath Mukherjee's research Article titled "Socio Cultural context of Indian Entrepreneurship: A gender based study of salient Entrepreneurial traits". Co-Author with Dr. S. Shivani. Accepted for publication in 'The Alternative' – A publication of the Development of Management, BIT Mesra.
9. Mr. Neeraj Mishra participated in Indian State Fiscal Management Programme. Organized by Bearing Point Global Operations and Govt. of Jharkhand.
10. Mr. Neeraj Mishra participated in ISTE sponsored short term training programme on Knowledge Management organized by BIT, Mesra.
11. Mr. Sushil Kumar participated in ISTE sponsored short-term training programme on Knowledge Management organized by BIT, Mesra.
12. Mr. Sushil Kumar presented a paper on management challenges –System operations in National Seminar in ISM Dhanbad.
13. Kumar Rajnish attended International Conference on Emerging Technologies in IT Industry (ICET-2004) Organized by Punjab College of Technical Education (PCT) on 27 November 2004 and presented a paper "Class Complexity in Object Oriented Design – A New Metric".
14. Sanjay Kumar attended International Conference on Emerging Technologies in IT Industry (ICET-2004) Organized by Punjab College of Technical Education (PCT) on 27 November 2004 and presented a paper "Soft cost estimation and its relevance in Indian Software Industry".
15. Mr. A.K. Choudhary, Mr. N.P. Tiwary, Mr. P.S. Bishnu attended Soft Computing concepts and Application (Dec. 18-30, 2004) organized by BIT Mesra, Ranchi.
16. P.S.Bishnu, B.K. Sharma attended a Short term course on Internet working organized by IIT Kharagpur.
17. Mrs. Amrita Priyam attended refresher course on Bio-informatics (30 Aug-4, Sep. 2004) organized BIT Mesra, Ranchi.

Publication :

1. Ms. Rupa Mahanti, "Software Engineering Education from Indian perspective" IEEE, Conference proceeding, Ottawa, Canada, 2005.
2. Ms. Rupa Mahanti, "Software Quality Management" Journal of Industrial Engineering, Accepted for Publications.

Students Activities :

1. Students of the centre actively participated in all India Inter technical athletic meet 2004 organized BIT Mesra, Ranchi. They also took part in BITOTSAV 2004 and SAMAGAM organized by BIT Mesra, Ranchi.

Noida

The Birla Institute of Technology, Noida extension centre was started in 1998 with BCA course. At present it is running two Postgraduate Courses viz., MCA & MBA, and three Graduate Courses viz., BCA, BBA and this year a new course BAM (i.e. B.Sc. in Animation & Multimedia) has also been added.

The Centre is well equipped in computer labs. It has a computer lab for PG students with 60 computers and two computer labs for UG (with 40 computers each). An Internet lab. With 20 no. computers has been set up. The library will soon be enlarged & upgraded to e-library. The setting up of LAN is in progress & all departments/sections will be networked.

A New wing (admeasuring 16000 Sqft.) has been created in the Institute. This includes an auditorium having a capacity of 288 seats. A cafeteria for 120 students & lunch/common room for staff has been provided in the new wing.

A lift linking all the four storey has been provided for the staff, visitors & handicapped students.

Degree/Diploma offered : BBA, BCA, B.Sc. (Animation & Multimedia), MBA, MCA.

Faculty Position : Professor-1, Reader –1, Sr. Lecturer –3, Lecturer –12, Associate Lecturer-7, Junior Programmer –1, Junior System Analyst –1.

Number of students enrolled/Registered with Department : Undergraduate – 437, Postgraduate – 224.

A. Publication by faculty :

I. Books/Monogram :

1. Indian Economic Environment
2. Credit Policy (Rural & Industrial by Dr. K. Singh) Sr. Lecturer

B. Seminar Symposium/Short term course attended by faculty members :

1. Four day training session on IBM – Rational Rose for all Computer Science faculty.
2. Attended a seminar on 4G Mobile communication held at Delton house, New Delhi.
3. Mrs. Mallika & Mr. Rayees attended a seminar on Linux Asia-2005.

Students Activities :

1. The MBA students participated in the Management fest of BIT, Mesra, Ranchi. The BCA & BBA students also participated in the BITOTSAV at the BIT, Mesra, Ranchi and won the second prize. The students of Noida centre also participated in the management fest of Amity Institute and won the first prize. An Essay competition was held by the Noida Management Association and our students secured the second position.

2. An Intra college cricket tournament was organized in which students from all courses and semester of the Noida campus participated. The Institute organized BIT UTSAV'04, a cultural evening at Shah Auditorium. Dr. Rajput Secretary (Administration) University Grants Commissions was the chief guest.

Placements :

The Institute's placement cell assisted the students in securing positions in leading national corporations and multinational companies. More than 95% students of MBA & MCA got placement in the following major & renowned companies. XANSA, HCL Technologies, Accenture, Satyam, Birla Soft, Alcatel, Aceva, RIS, Stingray, Hughes

BAHRAIN

Computer Science & Engineering Department

The department has well-equipped laboratories with latest versions of different software along with Internet facilities.

Electronics & Communication Department

The department has good laboratory facilities in the areas of Basic Electronics, Micriprocessorsf, Digital systems Design, Instrumentation and Process Control, Communication, Circuit Simulation, etc.

Production Engineering Department

The centre has established the state of art workshop facilities to offer higher education programme in Production Engineering. The facilities include most modern machine shop, fabrication shop, sheet metal shop and a host of other facilities. To cope up with the latest trends in machining, CNC train masters and Electric Discharge machining, facilities have also been installed.

All the departments are currently engaged in conducting the educational programmes of the Institute.

Additional facilities created during the year

Over 2200 books have been added during the period.

Degree/Diploma Offered : B.E. (CS), B.Sc. (IT), BBA, D.Tech. (CS & E, Production Engineering), MBA.

Faculty Position : Professor –3, Associate Professor- 2, Lecturer –2, Associate Lecturer-1, University Education Teacher –6.

Number of Student enrolled : Undergraduate –116, Postgraduate - 21.

Academic Innovation Research & Development activities :

A. Seminar/Conference/Short term Training programme :

1. A full day seminar on 'Current Trends in Management Practices' was organized at the Institute. Dr. Shaikh Mohmmmed Bin Khalid Al Khalifa. Present of Bahrain Management Society was the Chief Guest. Following papers were presented. Dematerlisation and Securities Marketing in Bahrain Stock Exchange, Management of Intellectual Capital: Today's Investment, Tommorrow's Assel, Viral Marketing in the Internet Age, Time Management.
2. Two 3-days Short Term Training programmes for the technicians of the Arab Ship Building & Repair Yard Co. (ASRY) : Measurements and Precision work-24th October to 28th October 2001, Shaft Alignment –7th November to 9th November 2004.

B. Seminar/Symposium/Short term courses attended by the faculty members :

1. 'Gulf Aluminium Rolling Company and the Management Challenge' organized by the Bahrain Management Society on 10-1- 2005 in Manama.
2. 'Development of Human Resources (The case of Toyota)' organized by the Bahrain Management society on 2-2,2005 in Manama.
3. 'The Challenges of Changing Management in Americal Express Middle East & North Africa organized by the Bahrain Management Society on 25.5.2005 in Manama.

Student Activities :

1. Participated in the Career Expo at the Indian School Kingdom of Bahrain from 1st – 3rd .December 2004.
2. Published news letter.
3. Celebrated Induction day on 12 –9-2004 for the freshers.

Any other Information

I. Garduation Ceremony :

The second batch of 24 students comprising of 11 boys in Production Engineering 7 boys and 6 girls in Computer Science & Engineering-sponsored by the Ministry of Labour & Social affairs, Kingdom of Bahrain, successfully completed their Diploma in Technology (D.Tech.) programme in June 2004. Further 18 students of the 3 year Bachelor of Science (Information Technology) successfully completed their degree programme. The Degree and Diploma in Technology certificates were awarded to all the successful candidates in the graduation ceremony organized under the patronage of the Ministry of Labour & Social affairs His Excellency Dr. Majeed Bin Mohsin Al Aawi at the Gulf International Convention Centre .on 7th March 2005. His Excellency the undersecretary in the Ministry of Labour, Shaikh Abdulrahman Bin Abdulla Al Khallifa was the chief guest Dr. S.K. Mukherjee, Vice Chancellor, and Dr. K.V. Krishnamurthy, Registrar, Birla Institute of Technology, Mesra, Ranchi, graced the function. The centre has helped 18 of the Diploma in Technology students to secure jobs. 36 students of the Diploma in Technology programme were awarded Diploma Certificates by the City & Guilds of London Institute on this day.

II. Golden Jubilee Celebrations :

A cultural Programme was organized at the Gulf Hostel on 7th March 2005 to mark the Golden Jubilee celebrations of the Birla Institute of Technology, Mesra, Ranchi. The Chairman of the Executive Council of Birla Institute of Technology International Centre, Kingdom of Bahrain, Mr. Jalal M. Jalal, Board of Directors of Jalal-BIT (Bahrain) W.L.L., Vice Chancellor of BIT Dr. S.K. Mukherjee, Registrar of BIT, Dr.K.V. Krishnamurthy, other dignitaries, parents and others attended the function.

Inspection of BITIC :

The Institute was inspected by the Manpower Development Inspectorate in the Directorate of Manpower Development, Ministry of labour & Social Affairs, Kingdom of Bahrain, from 6th to 9th March 2004 and the report has since been received. As result BITIC is qualified to bid for the government sponsored training programmes besides becoming qualified to organize training programmes for the levy paying companies under the levy scheme of the Kingdom of Bahrain.

Muscat

This center started functioning in Muscat from October 2001 in academic partnership with Waljat Colleges of Applied Sciences. Initially it offered engineering in Electronics & Communication, Computer Science and BCA. Today it offers BE in Electronics & Communication, Computer Science & Biotechnology along with BBA & BCA. It now also offers certificate programs, Diplomas and advanced diploma in different streams.

The college has expanded its facilities by building a new four storied teaching block that has facilities for 40 classrooms, a state-of-the-art library with e learning facility, computer lab, staff rooms, medical room and offices for administrative staff and facilities for disabled students. Place for language laboratory and multimedia laboratory is earmarked and the facilities are under progress.

Other than the new teaching block, a multipurpose seminar hall, featuring the latest public address and audiovisual system with a capacity of 337 participants, is also being constructed. Adjacent to the seminar hall, a spacious canteen with common room (having TV, carom and chess boards) facility is already functional. Medical room with first aid facility including oxygen cylinder, drip, ECG, etc. and managed by a trained nurse is available during the college hours in the new teaching block. With the current expansion, the college now has a capacity to cater to 1200 students. The total floor area of the old building (3,000 sq. mtrs.) and recently built teaching complex (5,825 sq. mtrs.), seminar hall (700 sq. mtrs.) and canteen (395 sq. mtrs.) is 24,420 sq. mtrs.

Apart from the above, a spacious car parking area (7,500 sq. mtrs.) has come up with a flexibility to utilize it as an open air theater with a seating capacity of more than 1000 spectators is already in place. The college is in the process of developing an athletic ground with foot ball field, cricket practice net, basket ball ground, etc. at its premises in Knowledge Oasis Muscat.College Campus in KOM, Rusayl Muscat.

Course Details :

At present center offers following programs :

- a. 4 year Bachelor of Engineering in Computer Science.
- b. 4 year Bachelor of Engineering in Electronics & Communications.
- c. 4 year Bachelor of Engineering in Biotechnology.
- d. 4 year Bachelor of Computer Applications (Hons.).
- e. 4 year Bachelor of Business Administration & Information Technology, Bachelor of Business Administration & Finance, Bachelor of Business Administration & Accountancy, Bachelor of Business Administration & Banking, Bachelor of Business Administration & Commerce, Bachelor of Business Administration & Human Resource Development.
- f. 3 year Bachelor of Computer Applications.
- g. 3 year Bachelor of Business Administration.
- h. 3 year Advance Diploma in Computer Engineering; and Electronics & Communication Technology.
- i. 2 year diploma in Computer Engineering; Electronics & Communication Technology; Business Administration; and Computer Applications.
- j. 1 year certificate course in Computer Engineering; Electronics & Communication Technology; Business Administration; and Computer Applications.
- k. 1 year foundation program in Engineering; Business Administration; and Computer Applications.
- l. Certificate program in Polymer technology (HDPE and PVC).
- m. Foundation program in BBA, BBA (Part Time), BCA, BE.

Faculty Position : Professo –1, Reader –3, Sr. Lecturer –3, Lecturer –21, Associate Lecturer –5.

Number of Students enrolled : Undergraduate – 587.

Academic Innovations, Research & Development Activities :

I. Books Published :

Dr. Neeta Baporikar: "Case Method of Teaching: Cases in Management" Himalaya Publishing House, Mumbai, 2005. (ISBN 81-8318-III-2)

II. Seminar/Conferences Conducted/Attended :

1. Dr. Munish Makkad conducted one day *workshop for the Accountancy teachers* on September 16, 2004 at Indian School, Muscat. The workshop was inaugurated by Mr. Sridharan, President of the ISM Managing Committee. Teachers from different Indian Schools in the Sultanate of Oman attended the workshop.
2. Ms. Maruthi Kumari presented a paper "Reading Strategies for Engineering Students" in Fifth Annual National ELT Conference, held at Sultan Qaboos University, Muscat on April 20 & 21, 2005.
3. A research paper of Dr. K. A. Goyal entitled "Impact of Globalization on Developing Countries (With Special Reference to India)" was accepted for presentation at the International Conference in Economics and Finance 2005 held on 26-27 May 2005, at Labuan International Campus, Universiti Malaysia Sabah, Labuan Federal Territory, Malaysia, as well as publication in the conference proceedings.
4. Mr. Piyush Gupta presented a paper "Application Of e-Learning In Higher Education India: A Case Study" in International Conference: Higher Education and Emerging Trends in Information Technology held by Majoon College, Muscat on March 29-30, 2005.

III. Publications by the faculty :

1. A research paper on "Hydromagnetic channel flow of particulate suspension" by Ms. Sanchita Ghosh with Dr. A. K. Ghosh has been published in Journal of the Physical Society of Japan, Vol. 73, No 6, June 2004, PP 1506 – 1513. It was also selected for ISCA YOUNG SCIENTISTS AWARD PROGRAM held on 92nd Indian Science Congress by All Indian Science Congress Association.
2. A research paper by Dr. Neeta Baporikar titled "Factoring" was published in "The Journal of Banking, Information Technology and Management" Volume -1, Number 2, July – December 2004, published by the Research Development Research Foundation, Jaipur.

IV. Paper Review as Expert :

Dr. Neeta Baporikar has reviewed a paper "An Analytical Study on Social Responsibility Performance Evaluation as an Accounting Measure of Management Efficiency", for International Refereed Journal: AI & Society, Special Issue – Jan 2005, AI & Society, the Journal of Human – Centered Systems and Machine Intelligence, Published by Springer – Verlag London Limited, United Kingdom.

V. Short Term Courses Conducted :

A short – term course on Ms Office XP & English for working people was organized by the Center in its premises. Around 100 students attended the same.

Award/nomination of faculty by important organization :

Mrs. Helen Daniel was honored by Bharat Gaurav, an award instituted by International Integrity Peace & Friendship Society, for her contribution in the field of education.

Student Activities :

1. The Quiz 2004 was successfully organized by the students on 8th December 2004.
2. Students commemorated the Open Day and Golden Jubilee Year of Birla Institute of Technology, India on May 2, 2005 at the college premises in KOM, Rusayl.

The college rolled out the red carpet for Dr. H.C.Pande, Vice-Chancellor (Emeritus) of BIT, and other eminent dignitaries. Dr. Pande graciously inaugurated the Exhibition at 10am. The theme of the exhibition was the fusion of Omani and Indian cultures. It showcased very aptly the creativity and artistic skills of the students. At the same time, it was an opportunity to get to know the beauty and rich heritage of the two countries.

This was followed by the 'Open Day' when the visitors could move around the campus and watch various activities being held in the college. The day's activities included Photography competition, Painting competition, IT and Electronics exhibition, Poetry recital etc. which were immensely appreciated and applauded.

Later on in the evening, these events culminated with a Cultural Program of music and dance. After the welcoming address, the Chief Guest, Dr. Pande enthralled the audience with his invigorating and encouraging speech. The students displayed their talents on stage, making it a vibrant extravaganza of color, music and fun. The highlight of the show was the integration of the cultures.

UNIVERSITY POLYTECHNIC

Year 2004-2005 was a historic one for the University Polytechnic – the first batch students belonging to Automobile Engineering and Electronics Engineering disciplines passed out of the Institute. These students, 13 from Automobile Engineering and 16 from Electronics Engineering, received their Diploma in Technology at the last Convocation of the University held on Feb. 26, 2005. The continued effort of the Training and Placement Cell of the University Polytechnic resulted in placement of over 90% students through campus selection process. The Polytechnic gave a memorable and touching farewell to the first batch of students on May 12, 2004 and the occasion was honoured with the august presence of the Chief Minister Sri Arjun Munda, Welfare Minister Sri Ramesh Singh Munda, Welfare Secretary Sri C. Nayak and the Vice-Chancellor Dr. S. K. Mukherjee.

A three-storied Boys' Hostel having a total accommodation around 225 students, was nearly completed during the year. Two floors of this hostel were occupied during the year. The 2nd floor of this hostel, and a similar hostel are expected to be ready for occupation by the boys' section of students during the coming year. Similarly, the first floor of the Girls' Hostel having accommodation of 52 students, was occupied during the year, and the 2nd floor having same capacity is expected to be ready during the coming year. The compound wall of the Polytechnic campus was partly completed during the year.

The programme of SELF GOVERNANCE for students was launched during the year to draw the student in the process of playing their role and carrying out their responsibilities in creating a healthy and productive culture at the Institute and its campus. The persistent effort of the Institute staff in this regard was reflected through an improved response characteristics on the part of students, and their participation in various hostel committees was enthusiastic.

There was significant participation of students in vocational training in different industries/organizations and in visits to industrial centres organized during the year. The students also contributed meaningfully to development of laboratories by undertaking useful projects. There were also notable participation of students during the year in cultural and sports and games activities. Significant achievements on the sports field were listed when the women athletic team of the institute was declared winners-up at the 19th Annual Athletic Meet of the University and Runners-up at the All India Inter Technical Athletics (AIITA) – 2005. Its women athletes bagged individual women championship at both the meets, and established new records in several events.

The Training and Placement Cell, cultural Activities Committee, Sports & Games Committee, Examination Committee, Registration Committee, Creativity Forum of the Institute were reconstituted during the year.

Degree/Diploma Offered : Diploma in Technology in i) Automobile Engineering,
ii) Computer Engineering, iii) Electronics Engineering, iv) Manufacturing Technology.

Faculty Position : Director – 1, Lecturer – 4, Associate Lecturer – 11, Tutor – 1,
Scientific Officer – 1, Superintendent – 1, Jr. Superintendent – 1, Jr. System Analyst – 1.

Number of Students enrolled : Automobile Engineering – 64, Computer Engineering – 48,
Electronics Engineering – 63, Manufacturing Technology – 28.

Academic Innovations, Research & Development Activities :

The following machines, tools and components were developed and fabricated in the workshop of University Polytechnic

1. "Hand-operated Brass/Bronze Utensil Polishing Machine", developed under KVIC project for Rural Technology Cell, BIT Mesra.
2. "Fixtures for Shear and compressive Tests" under project entitled "Effect of Low Temperature on Mechanical Properties of Composites" developed for Department of Applied Mechanics, BIT Mesra.
3. "Amla Pricking Machine" developed for Rural Technology Cell, BIT Mesra, Ranchi.
4. "Fin Model & Protrusions Made of Brass & Stainless Steel to Check Air Pressure", developed for Department of Space Engg. & Rocketry, BIT Mesra.

Seminars/Interactive Lecture Sessions organized by the Training & Placement Cell of the University Polytechnic.

1. Lecturer cum interactive session on "Scope of Employment for Diploma-holders in India and Abroad" on 14.08.2004 by Sri B. K. Jhawar, Vice-Chairman, Usha Martin Group and Director, Usha Siam Ind., Ltd., Bangkok.
2. Seminar on "Self-employment & Entrepreneurship Development" jointly organized by University Polytechnic and Small Industries Service Institute (SISI), Ranchi on 25.2.2005. The Vice-Chancellor Dr. S. K. Mukherjee inaugurated the Seminar. Speaker were drawn from -
 - a) KVIC (Krishi Vikas and Industries Centre), Ranchi
 - b) DIC (District Industries Centre), Ranchi
 - c) LDM (Lead District Manager), Bank of India, Ranchi
 - d) XISS, Ranchi.
3. Lecture cum interactive session on "Degree course through A.M.I.E." on 16.3.2005 by Dr. A. K. Chatterjee, Head, Space Engineering and Rocketry, BIT, Mesra, also Member of National Council, Institution of Engineers, India & former President, Jharkhand State Branch of Institution of Engineers.

Industrial visits organized for students :

- | | |
|--|----------------------|
| i) TELCO, Jamshedpur | 9.4.2004 & 10.4.2004 |
| ii) INDALCO, Muri | 9.4.2004 |
| iii) Heavy Engineering Corporation, Ranchi | 8.10.2004 |
| iv) TISCO, Jamshedpur | 2.11.2004 |
| v) TELCO, Jamshedpur | 3.11.2004 |
| vi) B.S.N.L., Ranchi | 16.10.2004 |
| vii) Door Darshan & Radio-Station, Ranchi | 27.1.2005 |

Seminar/Symposium/Short-term Courses/Workshop attended by faculty :

Sl. No.	Name of the course & duration	Organized/ Sponsored by	Attended by
1.	Recent Advances in Optical Communication and Fiber Optic Sensors, June 28-July 10, 2004	Deptt. of E.C.E., BIT Mesra, Sponsored by ISTE	Mr. D.K. Jain Ms. Tanushree Bose Ms. Sumana Kumari
2.	MATLAB – Oriented Electrical System Modelling & Real Time Control, December 6-18, 2004	Deptt. of E.E.E., BIT Mesra, Sponsored by ISTE	Ms. Sumana Kumari Ms. Tanushree Bose Mr. Vikas Verma Mr. Abhay Kumar Mr. Ramnish Sinha
3.	Knowledge Management – Implication in Indian Business, December 6-18, 2004	Deptt. of Management, BIT Mesra, Sponsored by ISTE & ISTE	Mr. Shambhu Sharan Kumar
4.	IP, Innovation & Technology Management, December 10-12, 2004	Indo-French Workshop organized by Sc. & Tech. Park, University of Pune & Promoted by DST, Govt. of India	Mr. P. K. Sinha
5.	Soft Computing : Concepts and Applications, December 18-30, 2004	Deptt. of Comp. Sc. & Engg., BIT Mesra, Sponsored by ISTE & ISTE	Ms. Sumana Kumari Ms. Tanushree Bose Mr. Abhay Kumar Mr. Ramnish Sinha

Placement :

The effort and activities of Training & Placement Cell of the University Polytechnic throughout the year bore fruit with the following result :

Out of seventeen students belonging to final semester Automobile Engineering course, fourteen students in all were selected through campus placement by Hero Honda Motors Ltd., Sushila automobiles, Basudeo Auto Ltd. And Pratik automobiles, Ranchi.

With regard to Electronics Engineering discipline seventeen out of 23 students in all, were picked up through campus placement by industries such as ONIDA Customer Relation Centre (Adonis Electronics Pvtl. Ltd.), Libra Scale Industries, MEDITRON, STECH Engineers & Consultants Pvt. Ltd., Transgietz Enterprises and NTPC.

Some of these students opted for higher studies.

Students' Activities :**A. Vocational Training :**

During the year as many as 106 student took vocational training in various organizations/industries. Naming the few are –

Bokaro Steel Ltd., Bokaro – 25, Indo Danish Tool Room, Jamshedpur – 16, Hindustan Motors Ltd., Kolkata – 10, Heavy Engg. Corporation, Ranchi – 12, Usha Martin Ind. Ltd., Ranchi – 8, Mimec Electronics, Ranchi – 6, Basudeb Auto Ltd., Ranchi – 4, Auto Bikes, Ranchi – 2, Tata Motors, Jamshedpur – 2, ASL Motors Pvt. Ltd., Jamshedpur – 2, Pratik Automobiles, Ranchi – 2, Ashok Automobiles, Ranchi – 2, Meditron, BIT Mesra – 2, Tinplate Co. of India Ltd., Jamshedpur – 2, Philips Service Centre, Ranchi – 2, ONIDA Electronics, Ranchi – 2, Door-Darshan Kendra, Ranchi – 2, Tata Coalfields Ltd., Ghato, Hararibagh – 1, PTPS, Patratu – 1, CCL Central Workshop, Barkakhana – 1, Samsung Service Centre, Ranchi – 1, Bansal Electronics, Ranchi – 1, CMPDI, Ranchi – 1.

Notable Projects :

The Automobile Engineering students of the 1st batch developed demonstration model of Brake System and Electrical Control System of Maruti 800 Car for Automobile Engineering Laboratory.

Cultural Activities :

The first batch of the University Polytechnic was given a touching farewell by their juniors during the month of April, 2004. An entertaining cultural programme having components of dance, music, patriotic songs, poems, drama and caricature was presented by students on the occasion of Republic Day, 2005.

Sports & Games Activities:

These activities on the University Polytechnic Campus were on the rise during this year due to extension of some facilities for athletics as well as indoor and outdoor games on the campus. Some significant achievements on this count are listed below :

1. 19th Annual Athletics Meet of BIT Mesra, 2004-2005

- Overall Athletics Women Team championship was bagged by the University Polytechnic
- Individual women athletic championship was won by Ms. Sunita Jujur, a 4th semester student.
- Ms. Fulmani Telra established new records breaking her own previous record in Javelin Throw and Discus Throw
- Ms. Sunita Kujur won 100 m Run and Broad Jump in women's section by breaking her previous record in these event.

2. All India Inter Technical Athletic Meet, AIITA - 2005

- Individual women championship was bagged by Ms. Sunita Kujur
- Ms. Sunita Kujur was declared the fastest woman of the meet
- Women athletic team of the University Polytechnic was adjudged runners-up at the meet.

Self Governance Programme :

The concept of SELF GOVERNANCE PROGRAMME for students was launched during the year, and while initiating the programme it was emphasized to the students that they have equal role to play and responsibilities to carry out, individually as well as collectively, in evolution of a healthy and productive culture at the Institute and its campus and also in development and build-up of the Institute. The continued effort of the faculty and other staff of the institute in this regard was rewarded by a positive response on the part of the students, and the year saw a gradual improvement in the students' response characteristic on different counts. Their participation in room management, lobby management committee, mess management committee, hostel management committee, cultural committee and sports and games committee was on the whole satisfying. A further build-up on this programme is expected in the coming year.

CENTRAL LIBRARY & DOCUMENTATION
SERVICES

1. **Journals** : 264 print journals were subscribed for the year 2004-2005.

2. **Online Journals** :

The university through INDEST consortium has continued the online subscription of following IEEE/IEL journals. By this more than 4000 publications which includes conference proceedings and standards are available online. ASCE (American Society of Civil Engineers) journals numbering 30 and ASME (American Society of Mechanical Engineers) journals numbering 18 were subscribed bringing the total no of on line journal subscription to 169.

The following online journals are available with access for full text.

- IEEE/IEL
- ASCE
- ASME

Apart from these under the UGC Infonet scheme we have received free full text access to 3100 journals comprising the following and 3600 journals with abstracts.

- Springer 500 Journals
- Institute of Physics 52 Journals
- Kluwer Online 688 Journals
- Astrophysics 42 Journals
- Taylor & Francis 1197 Journals
- Annual Review 40 Journals
- Project Muse 354 Journals
- Cambridge University Press 220 Journals

More journals are expected to be available under this scheme.

3. **Books** :

Addition during the year

- General Books – 7953
Total No. of Books in General section – 86228
- SC/ST Books – 1191
Total No. of Books in SC/ST section – 21438
- Bound issue of journals added – 348
Total No. of bound journals – 17, 625

4. CDs :

1143 CDs were added during the period.

5. Library Hours

Library hours were extended by 4 hrs on Saturdays.

6. Internet Hours :

Internet is available throughout the library working hours.

7. Training and Staff Development :

The following training programmes were attended by the library staff.

1. 1st to 7th August 2004 Libsys 2nd Level training program at Libsys Corp, Kolkata attended by K.S. Naganarasimha.
2. 3rd August 2004 Libsys 2nd Level training program, Acquisition Module at Libsys Corp, Kolkata attended by Ms. Shamida Lakra.
3. 7th August 2004 Libsys 2nd Level training program, Serials Module at Libsys Corp, Kolkata attended by Mr. Nandalal Mahato.

8. Organising Conference :

National Conference on Information Resources Management in Digital Environmental was organized in collaboration with Dept. of Information Science from 1st to 2nd Oct. 2004. About 90 delegates from all over the country participated in the conference.

TRAINING & PLACEMENT DIVISION

The Training & Placement Division of the Institute initiates and nurtures contacts with the leading organizations for generating training as well as campus placement opportunities for the students of the Institute.

The Training & Placement Division is functional throughout the year with the dual objectives of organizing Summer Training/Internship as well as Campus Placement opportunities. It also initiates and organizes training programme for development of skills necessary for facing the selection process including a series of mock tests/ interviews/group discussions. Such activities are regularly organized with support from the Industries and other organisations.

The campus placement programme is initiated in the month of July every year. The Institute has a good track record of student placements through campus recruitment. Several organizations covering almost all sectors of the economy visit the campus every year to conduct selection tests on campus. Visits by leading organizations year after year as well as introduction of new companies every year ensures that a majority of students are well placed during the pre and final year of their study.

Industry-Academia Interactions

The Training & Placement Division took several initiatives jointly with the Industry. During this year, a MOU was signed by the Institute with Infosys Technologies Limited, Bangalore, covering wide spectrum of activities ranging from Guest Lectures to Faculty enablement Programmes as well as Soft-Skills Development Programme. Under this agreement the students got an opportunity to use the web learning portal giving them access to learning resources. Tata Consultancy Services (TCS), instituted the Best Student (IT) and the Best Project (Software) award for the students which has generated a lot of enthusiasm. TCS also organized a Faculty Development Programme at their Centre in Kolkata. The Training & Placement Division arranged a day long activity with Cognizant Technology Solutions, Kolkata called 'Getting Cognizant' which involved several sessions whereby information regarding the industry and its expectations from engineering students were discussed at length. In order to give more inputs to the students inclined towards a career in semiconductor industry, a session was organized with the support from Freescale Semiconductors Limited).

During the year, the Training & Placement Division has also contributed towards arranging several guest lectures from the distinguished alumni of the Institute as well as leaders from the industry. As a step towards increasing public speaking skills, the concept of "Orators Club" was introduced.

Training & Placement Division is also responsible for development of the Institute's Website. During the course of the year, several new initiatives have been taken including complete online registration of the students through the Institute website. Amongst the other features providing value addition to the site are on line biodata submission for the faculty recruitment. Online survey for getting the students views about the different organizations visiting the Institute for campus recruitment as well as their choices was also conducted through Institute website.

During the year (till date) 48 leading organisations have visited the campus offering 528 offers to the students from different disciplines. The details of the Branch wise Placements as well as the organization wise break-up are given hereunder.

	Discipline/Branch	Students Placed
BE	Comp Sc	105
	Electronics & Comm.	108
	Electrical & Electronics	46
	IT	25
	Mechanical	44
	Production	5
	Polymer	5
	Civil	7
MCA	Computer Applications	113
MBA	MBA	15
M. Sc.	MIS	11
	MIT	3
M Tech	Computer Science	11
	Remote Sensing	1
ME	CAAD	2
	Electronics	5
	Electrical & Electronics	4
	Mechanical	3
	Quality Engg. & Management	1
	Software Engg.	6
	Civil	2
B. PHARM		4
M. Pharm		2
	Total No. of appointments	528

Visiting Organisations

Tata Consultancy Services (TCS), Oracle, Wipro, CTS, Freescale, Verizon, tata Elxsi, Infosys, tata Telecom, Birlasoft, Tata Motors, Telcon, IBM, Accenture, HCL Tech. ITC Infotech, Eicher, HSS, ZenSar, HP, Ushacomm, L&T NEI, VSNL, Siemens Information systems Limited, Philips Software, MBT, NIIT, L&T ECC Sterlite, Tavant, Satyam, Agilent, Tata Ryerson, NDPL, BRCM, SAMTEL, TCE, HCL, COMNET, Tata Infotech, IDBI Bank, HCL INFO, Ispat, Hindalco, Baxter, Blue Star, Ranbaxy.

STUDENTS CULTURAL ACTIVITIES

1. The Annual Cultural Festival of the Institute BITOTSAV –2005 under the name TATVA was organized from 26th Feb. to 2nd March 2005. The programme began with the Heritage Nite and then followed by Band Nite, Dance Nite, Music Nite and Core Nite. Two famous Rock Bands namely Friends of Drums & Aryans performed during the Cultural Fest. The events organized during the Fest were a blend of both Technical and Cultural nature in which other extension centers of the Institute also took active participation.
2. Ms. Sohini Roychoudhary (BE/88/03) won 2nd prize in Eastern Solo (Vocal) at the SPRING-FEST of I.I.T. Kharagpur held in January, 2005.
3. Santoor recital event was organized by the BIT Music Cub where two famous Calcutta based artists were invited. Santoor was recited by Shri Sandip Chatterjee and Shri Biswajit Pal accompanied on Tabla.
4. Dance Club of BIT organized Kathak Dance event on 15th July, 2005. Mrs. Manju Malkani and group performed Kathak Dance.
5. News and Publication Society (NAPS), released its annual magazine 'CONFLUENCE'. From this year only, the society has started a weekly event named 'Editor's Choice' in which various technical articles, funzone articles etc. are invited and the selected articles are published in the weekly Column 'BIT BYTE' of a leading newspaper 'HINDUSTAN TIMES'. This society also published the newsletter 'UTSAVNAMA' during the Institute Annual Festival, BITOTSAV-2005.
6. International Unnayana Technical Fest-2005 was organized by IEEE and IEE societies of the Institute on 4th –5th Feb., 2005.
7. The High-Lander's Adventure Club (HAC) of BIT, Mesra conducted the following adventurous activities during the year.
 - (a) A trekking team of 27 students of HAC participated in National Winter Trekking Expedition 2004-2005 on December, 2004 organized by Youth Hostel Association of India. This trekking event was from Dollhousi to Champa in Himachal Pradesh.
 - (b) More than 100 students of HAC participated in 2 day Parasailing Event organized at Dipatoli Cantt. Ranchi in Nov., 2004.
 - (c) The club organized a 2 day Rock Climbing Camp at Tagore Hill Ranchi during March, 05. Many students of HAC participated in this Camp.
 - (d) A cycle race competition was organized by the club during March, 05.

STUDENTS WELFARE SCHEME

Financial Assistance to needy students:

The Institute provides Full free ship/half free ship under merit cum means scheme. This year, the following number of free ships were given.

- | | | |
|--------------------|---|-----|
| 1. Full free ships | – | 9 |
| 2. Half free ships | – | 211 |

Book bank :

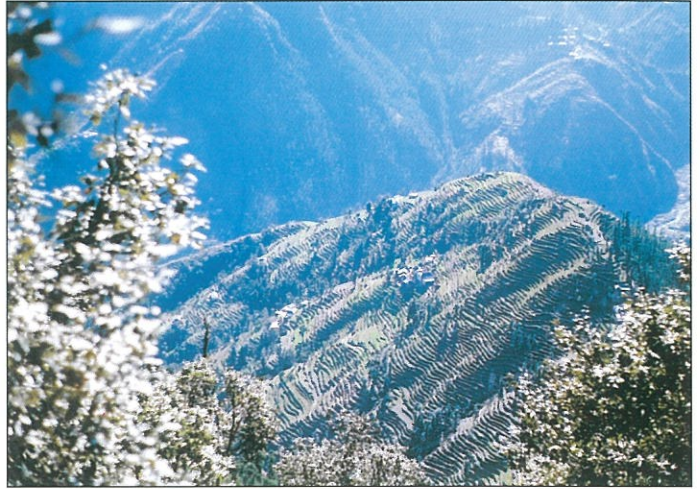
Books are loaned to the needy students through book banks scheme.

Remedial Classes :

The Institute organized remedial classes for students of weaker class to improve their performance



Chamba Valley HAC Winter Trecking



Chamba valley – Natures beauty



Management Festival



Raising Social Problems



God Bless us

BITOTSAV 2005



Short play - BIT E.C. Chennai



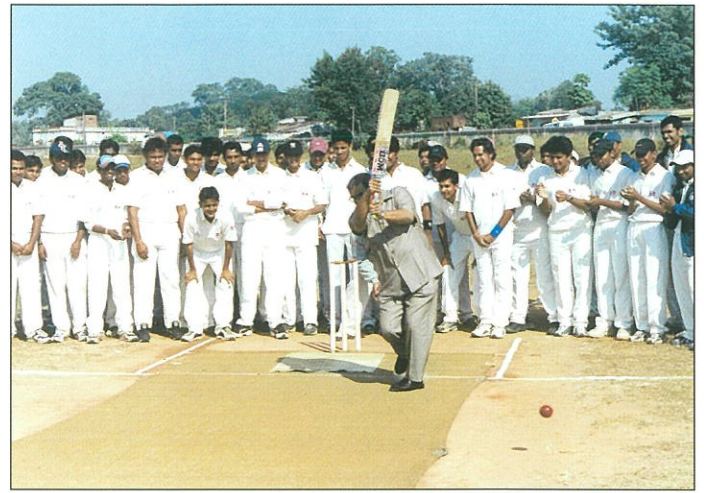
Maintaining the Rythm



We are ready for the show



What hurdle, I have to move ahead



V.C. Inagurating the Cricket Tournament



Ready, Steady, go



We are the best



One, Two, Three

ANNEXURE

MEMBERS OF THE GENERAL COUNCIL

Shri G.P. Birla	-	Chairman
Shri C.K. Birla	-	Founder Member
Shri S.L. Bhatler	-	Founder Member
Shri G.L. Bansal	-	Founder Member
Dr. A.K. Chatterjee	-	Founder Member
Shri Sarosh Ghandy	-	Founder Member
Dr. A.R. Kidwai	-	Founder Member
Shri G.D. Kothari	-	Founder Member
Shri Russi Modi	-	Founder Member
Shri D.N. Patodia	-	Founder Member
Dr. Karan Singh	-	Founder Member
Dr. H.C. Pande	-	Vice President & Life Member
Shri Mohammed Y. Jalal	-	Life Member
H.E. Dr. Omar bin Abdul Muniem Al-Zawawi, OSQ,WO	-	Life Member
Shri R.D. Singh I.A.S.	-	Representative of the Ministry of Human Resource Development, Government of India
Dr. Kota Hari Narayana	-	Representative of the University Grants Commisson
Shri H.K. Mittal	-	Representative of the Department of Science & Technology Government of India
Prof. Raj Pal Singh	-	Representative of the All India Council for Technical Education
Ms. Rajbala Verma, I.A.S.	-	Representative of the Department of Science & Technology Government of Jharkhand
Shri S.S. Jajodia	-	Representative of the Birla Institute of Scientific Research

Dr. S.K. Mukherjee	-	Vice Chancellor, B.I.T., Mesra
Shri H.P. Singhi	-	Representative of Corporate Member – M/s National Engineering Industries Ltd.
Dr. P. Ghosh	-	Representative of Corporate Member M/s Indian Press Exchange Ltd.
Shri P.C. Agarwal	-	Representative of the Corporate Member – M/s General Marketing & Manufacturing Co. Ltd.
Dr. H.S. Sagar	-	Alumni Member
Shri D. Sahay	-	Alumni Member

BOARD OF GOVERNORS

Shri G. P. Birla	-	Chairman
Shri C.K. Birla	-	Vice Chairman
Shri R.D. Sahay	-	Nominee of Government of India Ministry of Human Resource Development
Dr. Balagurusamy E.	-	Nominee of the University Grants Commission
Prof. Raj Pal Singh	-	Nominee of All India Council for Technical Education
Ms. Rajbala Verma, I.S.A.	-	Commissioner-cum-Secretary, Dept. of Science & Technology, Government of Jharkhand
Shri A.K. Singh, I.A.S.	-	Commissioner-cum-Secretary, Higher Education, Government of Jharkhand
Ms. Sheela Rapaj Kisku, I.A.S.	-	Commissioner, South Chhotanagpur, Jharkhand,
Dr. Anil Wilson	-	Nominee of the Chancellor
Shri Deepak Chatterjee	-	Nominee of the Hindustan Charity Trust,
Dr. H.C. Pande	-	Nominee of the Hindustan Charity Trust,
Shri D.N. Patodia	-	Nominee of the General Council
Shri G.P. Lal	-	Nominee of the General Council
Dr. P. Ghosh	-	Nominee of the General Council
Dr. S.K. Mukherjee	-	Vice Chancellor, B.I.T., Mesra,
Dr. D. Sasmal	-	Teachers' Representative, B.I.T., Mesra,
Mrs. Bindhu Lal Sukesh	-	Teachers' Representative, B.I.T., Mesra,

FINANCE COMMITTEE

Shri G.P. Birla	-	Chairman
Dr. K. Gunasekaran	-	Nominee of the University Grants Commission
Shri Mithilesh Kumar, I.A.S. (Retd)	-	Nominee of the Chancellor
Shri C.K. Birla	-	Vice Chairman, Nominee of the Board of Governors
Dr. H.C. Pande	-	Nominee of the General Council
Shri S.S. Jajodia	-	Hony. Treasurer
Dr. S.K. Mukherjee	-	Vice Chancellor

BUILDING & WORKS COMMITTEE

Chairman

Vice-Chancellor, BIT, Mesra, Ranchi : Dr. S.K. Mukherjee

Members

Adviser, Planning & Campus Development : Prof. P.P. Singh

Treasurer, B.I.T., Ranchi : Shri S.S. Jajodia

Representative of the Institute Architects : M/s. Kothari & Associates.
Calcutta.

Representative of the State PWD : Nomination Awaited

Head, Department of Civil Engg. : Prof. S. Sengupta

Members- Secretary

Registrar : Dr. K.V.Krishnamurthy

TECHNICAL COUNCIL

Chairman

Vice-Chancellor, BIT, Mesra Ranchi (Ex. Offico):

Prof. S.K. Mukherjee

Members :

Chancellor's Nomminees	:	Shri Siddhi Nath Singh
	:	Dr. Madhukar S. Bhat
	:	Dr. Krishna Kumar
Director of Technical Education Government of Jharkhand, (Ex. Offico)	:	
Director of Higher Education Government of Jharkhand, (Ex. Offico)	:	Dr. K.K. Srivastava
Professor of the Institute/Head of the Departments	:	
Dr. S. Kumar	Prof. S.C. Goel	Prof. S.P. Bhatnagar
Dr. Ashok Mishra	Dr. A.N. Sinha	Dr. A.K. Chatterjee
Dr. J.K. Prasad	Dr. R.C. Prasad	Prof. B.P. Roy
Dr. N.C. Mahanti	Dr. D. Jairath	Dr. P.K. Barhai
Prof. S. Sengupta	Prof. K.R. Roychoudhary	Dr. B.M. Karan
Dr.G.M. Panpalia	Dr.R.K. Narayan	Dr. G. Sahoo
Dr. P.C. Joshi	Prof. R.P. Singh	Dr. D. Sasmal
Dr. (Mrs.) Mandira Mukherjee	Dr. Mohan Varma	Dr. B.N. Das
Dr. Gopal Pathak	Prof. R. Sukesh Kumar	Dr. A.K. Srivastava
Prof. A.K. Ray	Dr. R.K. Popli	Dr. M.S. Nathawat
Dr. A.M. Agarwal	Dr. (Mrs.) Usha Jha	Dr. K.V.Krishnamurthy
Prof. P.K. Sinha	Dr. S.K. Jain	

Secretary

Registrar

:

Dr. K.V. Krishnamurthy

EXECUTIVE AND DEPARTMENT HEADS/IN CHARGE

Vice-Chancellor	:	Dr. S.K. Mukherjee
Treasurer	:	Shri S.S. Jajodia
Registrar	:	Dr. K.V. Krishnamurthy

Deans

Post-Graduate Studies	:	Dr. S. Kumar
Under-Graduate Studies	:	Dr. D. Sasmal
Collaborative Research Programmes:	:	Dr. P.K. Barhai
Academic Coordination & Students Welfare	:	Dr. P.C. Joshi
Extension Centres	:	Dr. A.M. Agrawal
Faculty Development	:	Dr. Gopal Pathak
Finance	:	Prof. S.P. Bhatnagar
Academic Infrastructure	:	Dr. B.M. Karan
Doctorial Research & Professional Development Programme	:	Dr. (Mrs.) M. Mukherjee (till Nov.04)
Doctorial Research Development Programme	:	Dr. Mohan Varma
	:	Dr. (Mrs.) M. Mukherjee

Associate Deans

Women Affairs	:	Dr. (Mrs.) Usha Jha
Boys Affairs	:	Shri A.K. Thakur

Departmental Heads/ In charge :

Applied Chemistry	:	Dr. (Mrs.) Usha Jha
Applied Mathematics	:	Dr. N.C. Mahanti
Applied Physics	:	Dr. P.K. Barhai
Applied Mechanics	:	Prof. A.K. Ray
Civil Engineering	:	Prof. S. Sengupta

Architecture	:	Dr. D. Sasmal
Computer Science & Engineering	:	Prof. S. C. Goel
Electrical & Electronics Engineering	:	Dr. B.M. Karan
Electronics & Communication Engineering	:	Prof. S.C. Goel
Management	:	Dr. A.M. Agrawal
Bio-Medical Instrumentation	:	Dr. B.N. Das
Mechanical Engineering	:	Dr. Ashok Mishra
Pharmaceutical Science	:	Dr. S.P. Bhatnagar
Polymer Engineering	:	Dr. (Mrs.) M. Mukherjee
Information Science	:	Prof. A.M. Agrawal
Production Engineering	:	Dr. S. Kumar
Physical Education & Sports	:	Dr. D. Sasmal (Secretary)
Remote Sensing	:	Dr. M.S. Nathawat
Space Engineering & Rocketry	:	Dr. A.K. Chatterjee
Biotechnology	:	Dr. D. Sasmal
Hotel Management & Catering Technology	:	Dr. A.M. Agarwal
Center of Environmental Engineering & Science	:	Dr. Gopal Pathak
OSD & Controller Entrance Examination	:	Prof. S.P. Bhatnagar
Controller of Examination	:	Dr. Mohan Verma (till Nov. 04)
	:	Dr. S.K. Jain
Co-coordinator Semester Programme	:	Dr. D. Sasmal
Finance (Comptroller)	:	Shri M.L. Verma
Finance (Chief Accountant)	:	Shri G.S. Sharma
Library	:	Dr. B.M. Karan
Chief Medical Officer	:	Dr. Arjun Prasad Singh
Training & Placement	:	Shri B.B. Pant
Cultural Coordinator	:	Prof. Ram Pal Singh

DEPARTMENTAL BOARD OF STUDY

Department of Applied Chemistry

Chairman - Dr. (Mrs.) Usha Jha, Head of the Department

Members - 1. Dr. P.K. Shrivastava 2. Dr. D. Tiwari
3. Dr. R.K. Dey 4. Dr. I. Sinha

Panel of Experts from outside of the Institute

1. Dr. H.M. Chawla IIT, Delhi	2. Dr. J. Ghosh IIT, Kharagpur
3. Dr. M.M.Singh IT BHU, Varanasi	4. Dr. A. Sarkar Jha ISM, Dhanbad
5. Dr. B.J. Allapat IIT, Delhi	

Center of Environmental Science & Engineering Group

Chairman - Dr. Gopal Pathak Coordinator ESE

Members - 1. Dr. (Mrs.) M. Mukherjee 2. Dr. (Mrs.) U. Jha
3. Dr. M.S. Nathawat 4. Mrs. Bindu Lal

Panel of Experts from outside of the Institute

1. Dr. Gurdeep Singh CESE, ISM, Dhanbad	2. Dr. S.K. Gupta CESE, IIT, Mumbai
3. Dr. (Mrs.) R.S. Patil CESE, IIT, Mumbai	4. Dr. Mukesh Khare IIT, Delhi

Department of Biotechnology

Chairman - Dr. D. Sasmal, Head of the Department

Members - 1. Dr. P. Ghosh 2. Prof. S. P. Bhatnagar
3. Dr. (Ms) Mandira Mukherjee 4. Dr. Pratyoosh Shukla
5. Dr. A.S. Vidyarthi

Panel of Experts from outside of the Institute

1. Prof. P. Kaliraj Anna University	2. Dr. V.P. Gupta New Delhi
--	--------------------------------

Department of Pharmacy

Chairman - Prof. S.P. Bhatnagar, Head of the Department

Members - 1. Dr. G.M. Panpalia 2. Dr. D. Sasmal
3. Dr. B.N. Sinha 4. Mrs. S.M. Verma
5. Dr. (Mrs.) M. Mukherjee 6. Dr. (Mrs.) Usha Jha

Panel of Experts from outside of the Institute

1. Dr. Taushif Monif (Industes Clinical Pharmacology & Pharmacokinetics) Ranbaxy Research Laboratories, Udyod Vihar, Plot No.20, Sector 18 Gurgaon-122001,	2. Dr. S.K. Kulkarni Professor, University College of Pharm. Sc., Punjab University Chandigarh.
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Post Graduate Programme

Chairman - Prof. S.P. Bhatnagar, Head of the Department

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3. Dr. B.N. Sinha 4. Dr. S. Ganguly
5. Dr. N.C. Mohanti 6. Dr. Mohan Verma

Panel of Experts from outside of the Institute

- | | |
|---|--|
| 1. Dr. P. Gundu Rao
(Director)DIVIS Laboratory
R & D Centre, C-26, Santha Nagar
Hyderabad 500018 (India)
Mulshi Taluka -PUNE-2 | 2. Dr. S. J. Surya Kumar
Assistant Director
(Formulation) Lupin (Ltd.)
46A/47A, Nande Village |
| 3. Dr. Taushif Monif (Industry)
Associate Director (Clinical
Pharmacology & Pharmacokinetics)
Ranbaxy, Research Laboratories
Udyog Vihar, Plot No. 20, Sector-18,
GURGAON-122001 | 4. Dr. Roop K. Khar
Professor, Hamdard
College Pharmacy,
Jamia Hamdard, Delhi |
| 5. Dr. S.Y. Gabhe,
Principal & Professor
C.V. Shah College of Pharmacy
SNDT Women's University
Santacruz, Mumbai-49 | 6. Dr. C.K. Kokate
Vice Chancellor
Kakatiya University
Warangal (A.P.) |
| 7. Dr. P.G. Yeole (Principal)
Institute of Pharm. Education &
Research, Baraon, Wardha 442001.
Punjab University,
Chandigarh. | 8. Dr. S.K. Kulkarni
Professor, University
College of Pharm. Sc., |

Applied Mathematics:

Chairman - Dr. N.C. Mohanti, Head of the Department

Members - 1. Dr. S.S. Roy 2. Dr. S. K. Chakraborty
3. Prof. Sukesh Kumar, 4. Prof. Awadh Prasad

Panel of Experts from outside of the Institute

- | | |
|--|---|
| 5. Prof. K.S. Choudhary,
Deptt of Mathematics
Jadavpur University, Kolkata | 6. Prof S. Nanda
Deptt. of Mathematics
IIT, Kharagpur |
| 7. Prof. K.C. Prasad
Deptt of Mathematics
Ranchi University, Ranchi | 8. Prof. S. Dev
Deptt. of Mathematics
Indian School of Mines
Dhanbad |

Department of Applied Mechanics

Chairman - Prof. A. K. Roy, Head of the Department

Members - 1. Dr. S. Kumar

3. Prof. Rampal Singh

Panel of Experts from outside of the Institute

5. Dr. S. Talapatra

B.E College Shibpur.

2. Prof. K. R. Rochoudhary

4. Prof. U.S. Prasad

6. Dr. B.N. Sreedhar

IIT Kharagpur

Department of the Physics

B.E. Programme

Chairman - Dr. P.K. Barhai, Head of the Department

Members - 1. Dr. R.K. Popli

3. Dr. J.T. Andres

5. Dr. N.C. Mahanti

7. Dr. D. Jairath

2. Dr. A.K. Shrivastava

4. Dr. S. K. Sinha

6. Dr. (Mrs.) M.Mukherjee

8. Dr. G.G. Sarkar

Panel of Experts from outside of the Institute

1. Prof. Subhandu Kr. Ghatak
Head, Physics & Metrology
IIT Kharagpur

3. Dr. T.K. Dey
IIT, Kharagpur

2. Dr. B.K. Chakraborty
NIFFT, Ranchi

4. Dr. P.S. Gupta
Indian School of Mines,
Dhanbad

Department of Civil Engineering:

Chairman - Prof. S. Sengupta, Head of the Department

Members - 1. Prof. K.R. Rochoudhary

3. Dr. Balram Singh

5. Dr. Ashok Mishra

2. Dr. Gopal Pathak

4. Prof. Arun Kumar

6. Prof. A.K. Ray

Panel of Experts from outside of the Institute

1. Dr. B.P. Verma
Prof. Dept. of Civil Engg.
RIT, Jamshedpur

2. Dr. K. Sudhakar Reddy
IIT, Kharagpur

Department of Computer Science & Engineering

Chairman - Prof. S.C. Goel, Head of the Department

Members - 1. Dr. G. Sahoo

3. Mr. P.K. Sharma

5. Dr. B.M. Karan

7. Dr. N.C. Mahanti

2. Prof. S. Dutta

4. Mrs. Aruna Jain

6. Prof. R. Suresh Kumar

Panel of Experts from outside of the Institute

- | | |
|--------------------------------------|---|
| 1. Dr. S.K. Rath
N.I.T. Rourkela. | 2. Dr. S. Bhattacharjee
Jadavpur University, Kolkata |
| 3. Dr. A. Mishra
RIT, Jamshedpur. | |

Department of Electrical & Electronics Engineering

Chairman - Prof. S. C. Goel, Head of The Department

- | | |
|------------------------------------|----------------------|
| Members - 1. Prof. R. Sukesh Kumar | 2. Prof. R.C. Prasad |
| 3. Prof. R.K. Narayan | 4. Prof. B.P. Roy |
| 5. Dr. B.N. Das | 6. Prof. R.C. Jha |
| 7. Dr. T. Ghosh | |

Panel of Experts from outside the Institute

- | | |
|-------------------------------------|---|
| 1. Dr. M.K. Ghosh
IIT, Kharagpur | 2. Dr. Samiran Choudhary
Jadavpur University |
|-------------------------------------|---|

Department of Electronics & Communication Engineering

Chairman - Prof. S.C. Goel, Head of The Department

- | | |
|------------------------------------|-----------------------|
| Members - 1. Prof. R. Sukesh Kumar | 2. Prof. M. Puri |
| 3. Dr. N.S. Gupta | 4. Dr. J.S. Roy |
| 5. Dr. S.K. Ghorai | 6. Prof. S.S. Sonanki |
| 7. Dr. P.K. Barhai | |

Panel of Experts from outside of the Institute

- | | |
|---|---|
| 1. Dr. G. Panda
R.E.C. Rourkela. | 2. Dr. P.C. Bakshit
Calcutta University. |
| 3. Dr. Ajay Chakraborty
IIT Kharagpur. | |

Department of Mechanical Engineering

Chairman - Dr. Ashok Mishra, Head of the Mechanical Engineering

- | | |
|---------------------------------|-------------------------|
| Member - 1. Dr. A.K. Chatterjee | 2. Dr. A.N. Sinha |
| 3. Mr. B.N. Giri | 4. Prof. P.K. Choudhary |
| 5. Mr. R.P. Sharma | 6. Dr. Surendra Kumar |

Panel of Experts from outside of the Institute

- | | |
|---|--|
| 1. Dr. S.K. Agrawal
MNIT, Allahabad | 2. Dr. B.N. Prasad
NIT, Jamshedpur |
| 3. Dr. Jyotimoy Saha
Jadavpur University | 4. Sri. A.P. Mishra
Kansbahal, Rourkela |

Department of Management

Chairman - Prof. Anand Mohan Agarwal, Head of The Department

Members - 1. Prof. S. Kumar
2. Prof. A. Prasad
3. Mr. Utpal Baul,
4. Mrs. S. Shivani

Panel of Experts from outside the Institute

1. Prof. J. Mahapatra,
Sambalpur University
IIM Kolkata
2. Prof. R. Mazumder,
IIM, Kolkata

Department of Polymer Engineering

Chairman - Dr. (Mrs) M. Mukherjee, Head of The Department

Members - 1. Dr. Usha Jha
2. Dr. S. Kumar
3. Sri. S. Guria

Panel of Experts from outside the Institute

1. Prof. Anup Kumar Ghosh
IIT, Kharagpur
2. Prof. N. Bhatnagar
IIT, Delhi
3. Prof. D.D. Kale
University Dept. of Chemical
Technology, Mumbai

Department of Production Engineering

Chairman - Prof. (Dr.) Surender Kumar

Members - 1. Dr. A.M. Agarwal
2. Dr. Ashok Mishra
3. Prof. A.K. Thakur
4. Prof. Vinay Sharma

Panel of Experts from outside of the Institute

Members - 1. Dr. B. Kumar
RIT, Jamshedpur
2. Dr. A.K. Jha
IT BHU, Varanasi
3. Dr. S. Sahu
IIT, Kharagpur
4. Dr. S.K. Agrawal
M.N.R.E. College,
Allahabad

Department of Remote Sensing

Chairman - Prof. M. S. Nathawat, Head of The Department

Members - 1. Dr. A.K. Singh
2. Mrs. R.N.K. Sharma
3. Dr. Gopal Pathak
5. Dr. P.K. Barhai

Panel of Experts from outside of the Institute

1. Dr. J.R. Sharma
CAZIR, Jodhpur
2. Dr. P.L.N. Raju
Dehradun
3. Dr. I.V. Murlikrishna
Hyderabad
4. Dr. S.M. Ramaswami
Tamilnadu

Department of Space & Rocketry Engineering

Chairman - Dr. A.K. Chatterjee, Head of the Deptt.

- Members -
- | | |
|---------------------|--------------------|
| 1. Dr. P.C. Joshi, | 2. Dr. Mohan Verma |
| 3. Dr. J.K. Prasad | 4. Dr. T.K. Nandi, |
| 5. Mr. P.K. Dash | 6. Dr. S. Kumar |
| 7. Dr. M. Mukherjee | |

Panel of Experts from outside the Institute

- | | |
|---|---|
| 1. Dr. A.K. Ghosh,
Dept. of Aerospace Engg.
IIT Kharagpur | 2. Dr. N.G. R. Iyengar
Dept. of Aerpc Engg.
IIT Kharagpur |
| 3. Shri A.K. Chakrabarti
Dept. of Aerospace Engg,
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