

ANNUAL REPORT

2005 - 2006



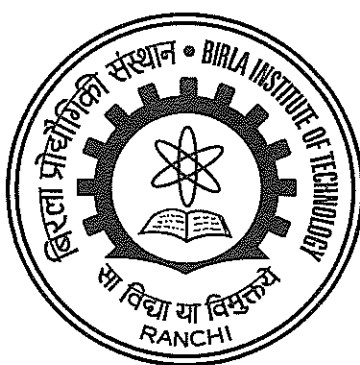
BIRLA INSTITUTE OF TECHNOLOGY
(DEEMED UNIVERSITY)
MESRA, RANCHI, JHARKHAND
INDIA



XVIth CONVOCATION 5th FEBRUARY, 2006

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प्रार्थना

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

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VICE-CHANCELLOR'S REPORT

The Institute in response to its due concern to the three important dimensions of education in developing countries namely, quality, access and equity, continued its endeavour to provide ever increasing opportunities to the youth of our country to have the benefit of cost-effective quality education in technical and professional disciplines. While the Kolkata Extension Centre has been the most recent addition in the list of Extension Centres located within the country, Ras-al-Khaimah located in United Arab Emirates has become the location of the third International Centre of the Institute. The Institute utilised its MoU with the leading academic institutions abroad by identifying students to participate in academic programmes of the University of New Brunswick, Canada and University of Leeds, U.K.

The continued thrust on research encouraged by the Institute and pursued by its faculty members in conjunction with the recognition of the quality level research carried out at the Institute, funding agencies like UGC, CSIR, DST etc. continued to support new programmes/projects in the Institute. The high quality of training and teaching imparted to its students continued to be recognized by industries all over the country in the form of offering employment opportunities to more than 800 students of the Institute, notwithstanding the fact that the actual number of offered exceeded 1000.

The Institute embarked upon a novel up-gradation of skill/re-training of existing senior level floor-professionals of TATA STEEL with a structured 4-Semester programme. TATA STEEL has desired that about 200 of its employees would undergo formal instructional exercises spanning 2-Years (4-Semesters) at BIT Mesra. The first batch of 46 students started their programme in September 2005. Three more batches of similar strength are expected to join in 2006, 2007 and 2008 respectively.

The Institute extended financial support to 121 of its faculty members to attend seminar, symposia, workshop and short-term courses held within India and supported six faculty members to attend similar programmes abroad. Further, six faculty members have been allowed to pursue Ph. D. at different institutions of the country including IIT's.

The Institute continued to find its place amongst the top category of institutions ranging from a position to 9 to 17 in the all-India scenario and was always within the top three of the institutions not fully supported/funded either by the Central Government or the State Government, as well as being always within the top three of the institutions of the eastern part of our country. The Institute community is, however, sensitive to this rating and shall put in every effort to improve this standing.

The Institute's reputation expanded to another dimension after being recognized as one of the 50 leading institutions in India by the Ministry of HRD under the Technical Education Quality Improvement Programme (TEQIP). A project of Rs. 1700 crores has been initiated by the Government of India with assistance from the World Bank. The Institute has been sanctioned a sum of Rs. 20.00 crores for supporting activities like procurement of high end testing/characterisation instruments, equipments, software learning materials, resources & staff development programme etc. The programme will continue up to 31-12-2007. The Institute has been able to spend Rs. 3.50 crores by 31-3-2005. Two Government Polytechnics located at

Ranchi and Dumka respectively have been attached as Net-Work institution. These institutions are required to be supported by BIT to improve their quality of teaching and training by allowing their teachers to participate in post-graduate and doctoral level programmes for reviewing/ revising their curriculum as well as guiding them to make the most effective use of the funds allocated to them.

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 resources and space by spending well over Rs. 1455.66 lakhs during the period under reference. In continuation with the trend of introducing new programmes, the Institute started Diploma programmes in Medical Laboratory Technology.

Pursuant to the policy of the Institute for a continued interaction with the industry, the Department of Electrical & Electronics Engineering has initiated collaborative programmes which include (a) Development of "Prepaid Slabbed Tariff Electronic Energy Meter" with Cypress Semiconductor India, Bangalore and (b) Joint research work with the University of Padova (Italy) on "Automation of Production systems using Power Electronics". Two memoranda of understanding signed with the leading IT Sector Companies Infosys Technologies Limited and Tata Consultancy Services cover several aspects of a healthy Industry-Institute Interaction.

The Department of Electronics & Communication Engineering has started a double degree programme on 'Software Defined Radio', in which two degrees one from BIT, Mesra and another from Aalborg University, Denmark, will be awarded. After successful completion of first semester, seven students under /Software Defined Radio' discipline have proceeded to Aalborg, Denmark, for pursuing the study for the remaining three semesters. Further, through a project of this department, proposed by the University of Ferrara and related to Institution of Tele-Doctorate platform Italy-India, has been approved by the Italian Ministry of Education, Universities and Research (MIUR), with a financial contribution of thirty thousand *Euros*.

The Department of Applied Mathematics has been approached by IRD-UR Great Ice Unit of the University of Montpellier, France, to be a partner of the Indo-French project in Himalayan Glacier studies starting from this year.

The Department of Pharmaceutical Sciences as well as the Department of Remote Sensing received a research grant of Rupees Thirty Eight lakhs each under the FIST programme of the Department of Science & Technology, Government of India, exclusively meant for procurement and modernisation of specified sophisticated instrument to widen the gamut of research activities.

The Department of Management is running a certified course in 'Information Technology Enabled Services', the first of its kind in the State of Jharkhand, in collaboration with the Department of Industries, Government of Jharkhand since August 2005. The course is mainly aimed for development of local youths in the IT enabled services like Networking Concepts, E-Commerce, Web Designing, Call Centre, Multimedia, Medical Transcription, Legal Transcription, Hardware Maintenance and Basic Computer Skills. We are planning to develop around 1000 youths from various parts of the state in the coming three years. The department has also submitted a Perspective Plan for Araria and Katihar districts of Bihar under the 'National Food for Work Programme' of the Government of India.

The Department of Hotel Management & Catering Technology with the support from the Department of Tourism, Government of Jharkhand, initiated publication of its “**Journal of Hospitality Application & Research (JOHAR)**”, a bi-annual research journal. The maiden issue of the journal was released on March 26, 2006.

The Institute has been identified as a State Resource Institution by the Ministry of Home Affairs, Government of India, to train practicing engineers of various Government and non-Government agencies in the state in order to build earthquake resistant structures. Under the above programme the Department of Civil Engineering and the Department of Architecture have jointly started a series of three training courses entitled “National Programme for Capacity Building of Engineers in Earthquake Risk Management (NPCBEERM)”. Three batches were trained under this programme in October 2005, December 2005 and February 2006. Various noted speakers from institutions like IIT, Kharagpur and BESU, Shibpur (Howrah) delivered their lectures during the programme.

A comprehensive survey on the water quality of Daltangang, Vihrampur, Bandu and Chainpur of Palamu District and Bhawanathpur, Ranko, Bhandaria, Kharannndhi and Nagar Maghiav of Garhwa district with focus on fluoride has been carried out by the Environmental Science and Engineering Group of the Institute. The project is going on in collaboration with UNICEF.

Dr. Ram Prakash of the Department of Applied Physics was awarded BOYSCAST Fellowship of the Department of Science & Technology, Government of India to conduct Post-Doctoral research work at the Max Planck Institute, Germany. Dr. P. K. Barhai, Dean (Sponsored & Collaborative Research) and Head of the Department of Applied Physics, was invited to the University of Duisburg, Essen, Germany, to explore cooperation and to deliver an invited talk. During the last one year the department has received three new projects from ARDB, DRDO and DST, Government of India.

Dr. Mohan Verma, Professor in the Department of Space Engineering & Rocketry and Dean (Post Graduate Studies) received the distinguished Alumni Award for 2005 from Bareilly College under Agra University. He was also selected as International Expert for Demilitarisation and Civil Application of High Energy Materials.

The campus placements touched a new high this year with several students getting more than one offer. The Training & Placement Division has established a ‘Competency Development Centre’ as its extended arm, which conducts training sessions in soft-skills.

The Institute continues to increase its number of Extension Centers by adding new location at Patna (under a MoU with the Government of Bihar) and at Deoghar (under a MoU with the Government of Jharkhand). In the two places *Foundation Stone Laying* ceremony was held on 24-12-2005 and 31-1-2006 respectively. The Institute has also initiated construction of buildings at both places. The Institute plans to build up a covered space of 5,00,000 sq.ft. (approx.) in a piece of land measuring 25 acres at Patna and another covered space of 5,00,000 sq.ft. (approx.) in a piece of land measuring 25 acres at Deoghar. The third International Centre of the Institute at Ras-al-Khaimah, UAE started functioning from this year and the response to the range of programmes being offered by the Centre has been quite satisfactory.

The Institute has entered into an Advanced Entry Agreement with the University of Leeds (U. K.) on 27th March, 2006 to develop a collaborative educational program between the two Universities allowing student transfer and grant of simultaneous BE degree from BIT and ME degree from University of Leeds.

During the year under review, several academic interaction programmes in the form of Seminar/Conference/Workshop were organized in the Institute. This year such activities started with a National Seminar on "Disaster Management : Role of Meteorology and Allied Disciplines" organised by the Department of Applied Mathematics during April 8 - 9, 2005. The seminar was attended by delegates from Government Departments as well as from several prestigious academic institutions. Aerospace Conclave and National Workshop on "Emerging Trends in Aerospace Engineering & Rocketry" was held in the Institute by the Department of Space Engineering & Rocketry during April 18 - 20, 2005. National Conference on "Emerging Trends in Biomedical Instrumentation" (BIOMED-2005) was hosted and organized by the Biomedical Group of our Institute between April 23 and 24, 2005. National Workshop on "Value Added Life Style Management" was organized by the Department of Production Engineering between May 21 and 22, 2005. The first Brainstorming Seminar conducted by the Department of Science and Technology, Government of India, on "Continental Tropical Convergence Zone" (CTCZ) was hosted by the Department of Applied Mathematics at our Institute premises during June 28 - 30, 2005. Delegates including topmost scientists in the area of Earth and Atmospheric Sciences attended the seminar. International Symposium on "Intelligence Based Materials and Manufacturing" was organized at the Institute Campus during Aug. 18 — 20, 2005. National Conference on "Role of Physical Education and Sports in Personality Development of Young Professionals" was organised in collaboration with the Association of Indian Universities between 8th and 9th Sept., 2005 by the Department of Physical Education. Workshop on University-Industry interaction was organized by the Department of Applied Chemistry in association with the Jharkhand Small Industries Association on Oct. 22, 2005 in which industries in and around Ranchi participated. The problems related to the product developments by small scale industries were discussed at length and faculty members were encouraged to foster the collaborative research work. 'World Year of Physics - 2005' was celebrated in the Institute along with the Department of Science & Technology, Government of Jharkhand during Nov. 21- 23, 2005. On this occasion a one-day Workshop on "Academic Reforms" was held on Dec. 15, 2005. Another one-day Workshop for Practicing Pharmacists was held by the Department of Pharmaceutical Sciences during Nov. 26, 2005. UGC-sponsored Refresher Course on "Automation in Manufacturing Engineering" was organised by the Department of Production Engineering from Nov. 28 to Dec. 17, 2005. All India Seminar on "CAD/ CAM, Robotics and Futuristic Factories" was held in the Institute premises jointly by the Jharkhand State Centre of The Institution of Engineers (India) and the Department of Production Engineering between Dec. 10 and 11, 2005. 25th ISRS Annual Convention and National Symposium on "Emergence of Geoinformatics for Development : Trends & Opportunities" was held by the Department of Remote Sensing during Dec. 6 - 9, 2005. More than 200 Scientists from all over India participated in this convention. 24th Annual Conference of the Indian Council of Chemists was organised by the Department of Applied Chemistry during Dec. 16 — 18, 2005. The theme of the Conference was 'Nano-Chemistry'. His Excellency Syed Sibtey Razi, Governor of the State, was the Chief Guest of the

programme and more than 300 chemists from all over India participated in this Conference. The inaugural programme of the "South Asia Energy Conservation Conclave" was hosted by the Institute on Feb. 16, 2006. National Seminar on "Effective Horticulture Marketing Through Inter-State Networking" held between March 3 and 4, 2006 by the Department of Management. Workshop & Exhibition on "Technology Development, Utilisation and Transfer" was organized jointly by the Institute and the Department of Scientific & Industrial Research, Ministry of Science & Technology, Government of India, on March 6, 2006 in the Institute premises.

The XVI Convocation of our Institute was held on 5th February, 2006, chaired by H.E. the Governor of Jharkhand and Chancellor of the Institute. Prof. D. Acharya, Chairman, All India Council for Technical Education, addressed the students as the Chief Guest. On this occasion a total of 2088 students were awarded several degrees and diplomas, out of which 71 students received Post-Matriculation 3-yr. Diploma, 1295 students were recipients of Under-graduate degrees, 714 students received Post-graduate degrees, 1 student received Post-graduate diploma while 7 students received Doctoral degrees.

This year the Institute has also been selected for the sixth consecutive session for grant of "GE Foundation Scholarship Programme" for the students of M.Sc. in Bio-medical Instrumentation.

Like previous year the Final year B.E. (Mech./Prod.) students of our Institute got HENNING AWARD for Technical Excellence (in cash and a certificate of merit), sponsored by the Larsen & Toubro Limited, for the best two technical papers related to the fields of L&T. Mr. Manish Piyush and Mr. Anish Sinha were jointly awarded the First Prize and Mr. Abhay Mishra of IRIMEE, Jamalpur bagged the Second Prize. Two pre-final year students of the Institute earned a wide reputation by designing a new conceptual model on vehicular steering mechanism at the 'Auto-Expo Exhibition' organized at New Delhi.

The two principal extra curricular events namely, 20th Annual Athletic Meet and Annual Cultural Event '*BITOTSAV*' were held during January 27-28, 2006 and February 12-15, 2006 respectively. The students from different extension centers also participated in these events. The students of the Institute also organised and participated in different cultural events and competitions. The students of the Architecture Department organised 'Zonal Convention of National Association of Students of Architecture' (ZONASA-2005) in October in which 400 students from the schools of eastern India participated.

Amongst the Games & Sports activities during the period under reference, the Institute organised the East Zone Inter University Football Tournament (Men) during Nov. 18—26, 2005, in which 18 teams participated. This programme was organised on behalf of the Association of Indian Universities. The Institute also organised 14th Chetan Devraj Memorial East Zone Inter Technical Institute/College Cricket Tournament during January 15—20, 2006, which was organised in memory of one of its ex-students and in which nine universities of the eastern zone participated and the team from BIT became the Champion. Besides these, individual sports events like Inter-hostel Football Tournament, Cricket Tournament, Tennis Tournament, Lawn Tennis, Table Tennis and Basketball Tournament were also organised by the Institute. More than 500 students participated in all these events.

Another all-India level event of the students, '*Samagam-2006*', was organised by the Management Department during February 24-26, 2006. The students of IEE Society organised an Inter College Technical Fest, '*Drishtant-2006*', during February 6-9, 2006. The programme was inaugurated by Dr. V. Rao Aiyagari, Head (SERC), Department of Science & Technology, Government of India, and seventy participants from twenty institutions took part in various events.

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 review.

○

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 achievements of the Institute both in terms of research and excellent academic programmes, 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 programmes 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. The Institute has completed the fiftieth 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-II**.

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-V**. The composition of various Departmental boards of study are given in **Annexure-VII**.

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 - III & IV**.

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-Auditurium	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 Theatre (Near completion)	1104
* Hotel Management Building (under construction)	
* Pharmacy Building	3500

Residential Complex

* Staff quarters in different categories	372
* 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 exists an Open Air Theatre of seating capacity 2500. This is being converted into Indoor Auditorium.

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. ICCU - 2 (Proposed)
2. No. of Doctors- 4

3. Facilities- X-ray machine, ECG machine, Ultrasound machine, 2 Ambulances.
4. Hospital remains open round the clock with Doctors, paramedical. OPD remains open from 8 A.M. to 11 A.M. & 3 P.M. to 7 P.M.
5. Supply of medicines per month about Rs. 1 Lakh.
6. Routine immunization is done every wed ness day for children for the employee s & near by villagers.
7. National Health Programme like Pulse Polio immunization, Leprosy control programme, Blindness Control Programme, TB Control Programmes are also carried out.
8. Annual Camps for Blood Donation, Eye checking are also organised by the Hospital.
9. Beside BIT Main Hospital, We run three more dispensaries. One for rural people, known as Rural Dispensary near village Nayatoli, one dispensary for University Polytechnic students & staff, one dispensary for BIT Extension Centre Lalpur for students and staff.
10. In case of any emergency patient is referred to specialist centre for Hospitalization.
11. All the staff members & students are covered by the medic lain Insurance.

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 girl 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 the 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 features 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. Main Campus

Programme	Year of Introduction the Course	Duration of the Course	Intake Capacity
<i>Bachelor of Engineering Degree Courses</i>			
Electrical & Electronics Engineering	1955	4 Years	60
Mechanical Engineering	1955	"	90
Civil Engineering	1957	"	60
Electronics & Communication Engineering	1964	"	120
Production Engineering	1964	"	30
Computer Science	1983	"	120
Polymer Engineering	1995	"	25
Information Technology	2001	"	60
Biotechnology	2002	"	60
Pharmacy	1972	"	60
Architecture	1993	5 Years	40
Hotel Management & Catering Technology	2002	4 Years	60

Master of Engineering Degree courses

Electrical	1964	2 Years	24
Specialization -			
1. Control system			
2. Power system			
Mechanical	1964	"	12
Specialization -			
1. Heat Power Engineering			
2. Design of Mech. Equipment			
Civil	1964	"	24
Specialization -			
1. Soil Mechanics			
2. Structural & Foundation Engineering			
Electronics & Communication	1965	"	24
Specialization -			
1. Instrumentation			
2. Microwave			
Space Engineering & Rocketry	1965	"	24
Specialization-			
1. Rocket Propulsion			
2. Aerodynamics			
Computer Aided Design & Drafting	1999	"	05
Specialization -			
1. Comp. Aided Analysis & Design			
2. Tribology			
Automated Manufacturing System		"	25
Software Engineering	2000	"	15
Quality Engineering & Management	2002	"	25
Polymer	2003	"	18
Master of Technology Programmes			
Remote Sensing		2 Years	18
Fuels & Combustion	2002	"	25

<i>Computer Science</i>		"	16
Scientific Computing	2002	"	16
New Material & Processing Technology	2002	"	18
Environmental Science & Engineering	2002	"	18
<i>Master of Pharmacy</i>	1983	2 Years	36

Specialization -

1. Pharm. Chemistry
2. Pharmaceutics
3. Pharmacology
4. Pharmacognosy
5. Pharm. Biotechnology

Master of Science Programme

Bio-Medical Instrumentation	1992	2 Years	20
Information Science	1993	"	30
Bio-informatics	2006	"	30
Geo-informatics	2006	"	10
<i>Business Management</i>	1980	2 Years	120

Specialization -

1. Marketing
2. Finance
3. System
4. Industrial Management

<i>Master of Computer Application</i>	1984	3 Years	60
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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 Centres

	Allahabad (U.P)	Jaipur (Rajasthan)	Lalpur, (Ranchi) (Jharkhand)	Kolkata (W.B.)	Noida (U.P.)	Chennai (T.N.)
Course						
B.E.		80				100
BCA	100	80	200	90	80	
BBA	40	80	200	90	80	
B. Sc. (A&M)		60			80	
B.Sc(Nautical Sc.)						100
MCA	45	45	105	45	60	
MBA		45	60		60	
MBA (PT)			30			
MCA (PT)			30			
*M.Tech (CS), PT			30			
*M.E. (P.T)						
M. Sc. (I.T.)			30			
M.Sc Bioinformatics		30		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 2005-2006***Student Enrollment.***

During the academic year 2005-2006, total of 8014 students were registered in various courses. The branch-wise enrolled is detailed below.

A. Course	No. of students
Bachelor of Engineering	2124
Bachelor of Engineering (Marine)	376
Bachelor of Architecture	100

A. Course	No. of students
Bachelor of Pharmacy	157
Bachelor of Hotel Management & Cat. Tech	115
Bachelor of Nautical Sciences	270
Bachelor of Computer Applications	1110
Bachelor of Business Administration	1344
Bachelor of Technology	56
BCA (Hons.)	2
B.Sc. (A & M)	55
Diploma in Technology	204
Master of Business Administration	539
Master of Computer Applications	1090
Master of Pharmacy	75
Master of Engineering	158
Master of Technology	130
M.Sc (Information Science)	51
M.Sc. (Biomedical Instrumentation)	38
M.Sc (IT)	20
Total	8014

New intake in 2005-2006

In the academic year 2005-2006, 2952 fresh students were admitted in various disciplines. The branch-wise backup is given below :

Courses	Total
B.E.	677
B. Pharm.	50
B. Architecture	36
B.H.M.C.T.	37
B.B.A	466

Courses	Total
B.C.A.	493
C.Com (E. Commerce)	18
B.Tech	10
B.Sc (Nautical Sci.)	95
B.Sc (A & M)	127
M.B.A.	277
M.C.A.	406
M.Sc. (BMI)	17
M.I.S.	23
ME-Civil	1
ME-Electrical	18
ME-Electronics	18
ME-CAAD	7
ME-AMS	4
ME-Polymer Engg.	7
ME-Mechanical	11
M.E-Software Engg.	11
ME-S.E.R.	12
M.Tech. (C.S.)	27
M.Tech. (R.S.)	13
M.Tech. (F.C.)	3
M.Tech. (S.C.)	5
M.Tech. (NMPT)	5
M.Tech. (Env.S & E)	16
M. Pharm.	42
M.Sc (IT)	20
Total	2952

B. Enrollment in Ph.D. Programme

Eighty nine new scholars registered for the Ph.D. Programme in the area of Engineering, Science, Pharmacy and Management during session 2005-2006. The details are given below :

Sl.No.	Name of the Scholar	Area of Research
01.	Mr. Yogender Aggarwal	"Circuit Simulation and Modeling of Biological Substrate"
02	Ms. Anjana Dwivedi	"Computational and Electronic Modeling of Biological System"
03.	Mr. Satish Kumar	"Spatial & Temporal variation of Water quality parameters in Subarnarekha River near Ranchi"
04.	Ms. Pallavika	"Finite Difference Modeling for seismic wave propagation in composite material"
05.	Ms. Roma Mitra Debnath	"Modeling Quality issues in Curriculum Development in Technical Education"
06.	Mr. Avinash Singh	"Study on Cost benefit analysis of Environmental Impact Assessment/ Environmental Management Plan For Infrastructure Projects in developing Countries"
07.	Mrs. Rachna Khare	"Designing Inclusive Educational Spaces in India : Rethinking built environment"
08.	Mrs. Rinku Srivastava	"Role of Infrastructure Facilities in Improvement of Urban Areas in City of Patna"
09.	Mrs. Anamika Nandan	"Symbiotic Housing : An Architectural Approach towards a new Environmentally Conscious Design"
10.	Mr. Achalesh Nandan	"Tourism, Recreation and Leisure Development : As Generalized of Economic Upgradation"
11.	Mr. S.P. Bhattacharya	"Modeling on Behavior of Building Structure due seismic Excitation : An Architectural Foretell"
12.	Md. Nazir Hussain	"Effect of low temperature on mechanical behavior of glass fiber composites"
13.	Mr. N. Sivaramaiah	"Proteomic analysis of lignolytic and cultures of White Rot Fungi"
14.	Mr. Binay Kumar Mishra	"Strategic Planning for Water Resource Management : A Techno-economic Study on Chhoti Narmada Watershed"

Sl.No.	Name of the Scholar	Area of Research
15.	Mr. Kirti Avishek	"Ecosystem Management & Audit through Geospatial Technology"
16.	Mrs. Sumeet Bindra	"Development of Colon Specific Drug Delivery Systems for Antineoplastic Drugs"
17.	Mr. Arshad H. Khuroo	"Influence of Different diets on the bioavailability of Amoxycillin Formulation in Healthy Male Human "
18.	Mr. Awadhesh Oraon	"Phytopharmacological Studies on Biophytum Species-an important Folk Medicine of Jharkhand"
19.	Mr. Sudhansu Ranjan Swain	"Phytochemical and Pharmacological Studies On Rungia Species-an important Folk medicine of Orissa"
20.	Ms. Mmata Farwan	"Effects of some Himalayan Plants in Experimentally induced diabetic models in rats"
21.	Mr. Prabir Kr. Sinhamahapatra	"Study of Antimicrobial and Phytopharmacological Evaluation of leaves, fruits and roots of Glinus Oppositifolius D.C."
22.	Mr. Arjun Patra	"Quality Control and Standardization of Hygrophila Spinosa"
23.	Mrs. Piyali Sanyal	"Product Development Studies on the Design and Evaluation of Gastroretentive Drug Delivery System"
24.	Mr. Dibya Sundar Panda	"Evaluation of Excipient Potentials of Gum of Moringa ofeifera for its application in Conventional and Advanced Drug Delivery System"
25.	Mr. Ramachandra Babu Rao	"Pharmacognostic and Pharmacological Investigation of some Parasitic Plants from Western Ghat Region of Maharashtra"
26.	Mr. Jayaprakasham R.	"Antitumour and Antioxidant Activity of Some Ethno-medicinal Plants"
27.	Mr. Deepak Kumar	"Comparison of Pharma - cognostical and Pharma - cological characteristics of Aerva lanata (Linn.) Juss. Ex. Schult and Aerva tomentosa Forsk Family Amaranthaceae"

Sl.No.	Name of the Scholar	Area of Research
28.	Mr. Dinesh Singla	"Development of Non-Parenteral Formulation of Existing Texane Group of Molecules"
29.	Mr. Kapileswar Swain	"Design & Development of Dry Powder Inhaler System for administration Of Drug through lung"
30.	Mr. Sandeep Kumar Singh	"Design, Development and Optimization of Self- Emulsifying Drug Delivery System"
31.	Mr. Umesh Kumar	"Modelling and Analysis of Micro-Optic-Electro-Mechanical Systems (MOEMS)"
32.	Mr. Partha Pal	"Studies on Establishment of Light Path in all Optical DWDM Network in presence Wave Length Conversion"
33.	Mr. Sanjeev Kumar Ranjan	"Study of intraspecific variation in Kerria lacca (Kerr.) through molecule technique"
34.	Mr. Rajeev Agrawal	"Advanced Planning & Scheduling Problem in E- manufacturing Environment and its Solution using evolutionary Algorithms".
35.	Mr. Sudhir Kumar Saw	"Studies on Nano-filler Natural fiber Reinforced Polymeric Hybrid Composites"
36.	Mrs. Anubha Singh	"Studies on Polymeric Artificial Limbs and Microbial Effects on them"
37.	Ms. Bhaswati Saha	"Development of Indigenous Technology for Production of Recombinant Therapeutic Protein"
38.	Mr. Nadeem Ahmed	"Data Security & Computer Communication Network Study & Improvement"
39.	Mr. Punya Prasanna Paltani	"Investigation of Light Beam Propagation in Nonlinear Media for All-optical devices"
40.	Mr. Vinod Kumar V.H.	"Micro level Water Resource Planning & Spatial decision Support System for Pondicherry Region"
41.	Mrs. R.N.K. Sharma	"Analysis of forest cover change and its drives in mine Induced landscape of Chhotanagpur Plateau, harkhand using Remote Sensing and Geographic Information System"
42.	Mr. S.C. Mishra	"Productivity Enhancement in Health Care Sector"
43.	Mr. Anurag Bhatnagar	"Management of Globalisation and Domestic and International Contract Farming"

Sl.No.	Name of the Scholar	Area of Research
44.	Mr. Pranam Goyal	"Knowledge Management Technology in IT Industries"
45.	Mr. V.M. Mathur	"Managerial Issues in E-Governance with special reference to Telecom Infra- Structure and Bandwidth and social issues- a study of selected projects in India"
46.	Ms. Shobha Mishra	"Evaluation of Labour Welfare Activities in Coal India Limited"
47.	Ms. Ritanjali Majhi	"Application of Soft-computing techniques for financial forecasting."
48.	Mr. Abdul Hannan Akhtar	"Studies of High Quality Chirped Fibre Bragg grating (CFBG) and its response to external perturbations"
49.	Mrs. Soumya Sidhishwari	"Phase Extraction in Optical Fiber Interferometry based on DDS (Data Development System) Method"
50.	Mr. Abhijit Mustafi	"Blind Source Separation of Stationary and Non-Stationary Sensor Images Based on Fractional Fourier Transform"
51.	Mr. V. S. Chauhan	"Some Basic Aspects of Electromagnetic Radiation Characteristics during Plastic Deformation and Fracture in Titanium"
52.	Md. Javed Qasim Mohanvi	"BPR in Banking sector (Business Process Re: Engineering)"
53.	Mr. Ajay Kumar Singh	"Process Optimization & design of the best feasible Method for treatment of oil & grease from workshop effluent of Coal Mines"
54.	Mr. N.K. Nag	"Soft Computing Approach to Multiple Stakeholder Facility Location Problems"
55.	Ms. Smitha Mishra	"Designing Algorithms for a Class of Computational Problems : DNA Computing Approach"
56.	Mr. Manish Goswami	"Multi Channel Nerve Signal Recording System with Off-chip Cancellation of Interference using DSP"
57.	Mr. Rishi Sharma	"Growth and study of nano-structured diamond like carbon films using Plasma enhanced chemical vapour deposition method"

Sl.No.	Name of the Scholar	Area of Research
58.	Mr. Ajeet Kr. Srivastava	"Growth and study of microcrystalline and amorphous silicon thin Film using Co-Sputtering method"
59.	Mr. Inamul Haque	"Development of molecular markers and biodiversity study of Guggul (Commiphora wightii)"
60.	Mr. Londhe Sunil Lalsaheb	"Integrated Approach of Remote Sensing and GIS in Characterization and Evaluation of Land Resources in Subernarekha Sub Catchment, Jharkhand for Agricultural Planning"
61.	Mr. Sabin Kumar Mishra	"Development of 3D CAD model of Elliptical gear and its manufacturing by RP Method"
62.	Ms. Manisha Kumari	"Organic IT Infrastructure Planning and Implementation"
63.	Ms. J. Jenila	"Iterative Channel Estimation Data Decoding for OFDM"
64.	Mrs. Anupam Sharma	"Consumer Perception and the emergence of retailing in the new challenging Marketing Environment"
65.	Mohd. Iftekhar Ahmad	"Electronic Commerce: Problems, prospects & potentials of implementing E-commerce in commodity and distributive sectors in the economies of GCC countries"
66.	Mr. K. Venkatesh Kumar	"Design, Development and Evaluation of Solid Dispersion of Antipsychotic Drugs"
67.	Mr. R.N. Thakur	"Clinical Study of some Ayurvedic Drugs in case of Rheumatoid and Degenerative Arthritis"
68.	Mr. A.V. Patil	"Synthesis and Study of some Novel Benzimidazole Analogs as Potential Anti-ulcer Agents"
69.	Mr. S. Murugesan	"Synthesis and Study of some Novel Quinoline and Isoquinoline Analogs"
70.	Mr. M. Ganesh	"Synthesis and Studies on Novel Imidazoline Derivatives"
71.	Mrs. Anchal Amitabh,	"Consumer Buying Trends towards Branded Jewellery - A Study of Meerut market for Export Potential"

Sl.No.	Name of the Scholar	Area of Research
72.	Mr.Jaya Bharata Reddy M.	"Detection, Classification and Localization of Power System Transmission Line Faults using wavelet Neurofuzzy Combined Approach"
73.	Mr. Debdatta Mukherjee	"A study of financing pattern of the auto ancillary industrial units situated in the state of Jharkhand"
74.	Mr. Debabrata Chatterjee	"Corporate governance for effective financial management of business enterprises in India with special reference to National Hydro-Electric Power Corpn. Ltd. (NHPCL)"
75.	Mr. Harvinder Singh	"Management of Shopping Malls : Improving the total shopping experience"
76.	Mr. Pranav Naithani	"Reference Framework for Human Resource Management in Process Oriented Organizational Environment"
77.	Mr. Ajay Kumar Verma	"Multi-criteria facility location problems in Fuzzy environment"
78.	Mr. M. Sathiyamoorthy	"Finite Element analysis of Convective Heat Transfer Problems"
79.	Ms. Hasina Khatun	"Study of Electrical Phenomena for the Design of Dielectric Barrier Discharge (DBD) based VUV/UV Source"
80.	Mr. Jayanta Ghosh	"Designing of Broadband and Multifrequency Microtrip Antenna for Wireless Communication"
81.	Ms. Juhi R. Shrivastava	"Design of Efficient Routing and Broadcasting Algorithms for Guaranteed Quality of Service in Sensor Networks"
82.	Mr. Nagendra Sah	"Propagation Modeling using CSPs (Constraint Satisfaction Problems)"
83.	Mr. Anand Kumar	"Studies on Three Dimensional Natural Convection in a Porous Medium"
84.	Mr. Debdas B. Lata	"Investigations on the Effect of Hydrogen Addition on the Performance of Dual-Fuel Engine"
85.	Mr. Sudipta Chakraborty	"Rationalization of Building Design for achieving optimum environmental Efficacy"
86.	Mr. Manuj Darbari	"Application of Unified Theory and Activity Theory for Software Modeling"

Sl.No.	Name of the Scholar	Area of Research
87.	Ms. Shruti Gupta	"Adopting & Optimizing Japanese HRM practices to suit Indian Environment for improvising productivity & quality with reference to Automobile sector"
88.	Mr. Rajesh K. Rattan	"A Study of customer based brand equity and performance of selected brands in the Indian market"
89.	Mr. M.B. Joshi	"Development of a frame work for Corporate Social Responsibility (CSR) : A Case of Indian ICT companies"

A. Ph.D. Thesis Submission

The following scholars have submitted the Ph.D. Thesis for evaluation during the year 2005-2006 :

Sl.No.	Name of Scholar	Discipline	Title of the Thesis
1.	Amitava Ray	Engineering	Study on the Influence of Microstructural Characteristics on the Spalling Behaviour and Performance of Hot and Cold-strip Mill Works-Rolls Used in Integrated Steel Plants
2.	Arup Choudhury	Engineering	Recycling of Post Use Oil and Milk Pouch Polymers
3.	B. Srilakshmi	Engineering	Investigations on the Electromagnetic Radiation during Plastic Deformation and Crack Propagation in Metals
4.	Birendra Kumar Singh	Engineering	Hydraulic Jump Properties over Rough Bed in Composite and Non-Composite Channel
5.	Manish Kumar Jha	Engineering	Design and Simulation of 3-state close Switching Network for Enhanced QoS
6.	Mayank Agarwal	Engineering	Mechanical Processing of Sintered Preforms under Different Tribological Conditions"
7.	R.C. Jha	Engineering	Solution of Unit Commitment Considering Uncertainties of Unit Availability and Deregulation of Power Industry
8.	R.K. Gangopadhyay	Engineering	Study of some Accidents in Chemical Industries
9.	Saranjit Singh	Engineering	Investigations into Dynamic Effects during Mechanical Processing of Sintered Materials

Sl.No.	Name of Scholar	Discipline	Title of the Thesis
10.	Vijay Pandey	Engineering	Development of Feature Recognition System : A Link between Design and Manufacturing
11.	M.S. Sanjita	Pharmacy	The Phytopharmacological Studies of Ethanolic Extracts of Flowers, Barks and Seeds of Nyctanthes Arborescens Linn
12.	Ramesh Chandra	Pharmacy	Production of L-Asparaginase by wild strain of Alcaligenes faecalis
13.	Subir Samanta	Pharmacy	Synthesis and Studies of Piperidine Analogues
14.	Laxmikanta	Science	Synthesis of some Dye based Polymers
15.	Vineeta Arora	Science	Investigating the Relationship Between the Raw Coal Characteristics and Effluent Quality in a Given Beneficiation Process and Developing A cause -effect Paradigm

Convocation, Results, Degree/Diploma Awarded

Upon the recommendation of the Board, the following scholars who have cleared the programme during 2005-2006 were awarded Degree/Diploma in the convocation 2005-2006 held in February 2006.

A. Ph.D. Degree

Sl.No.	Name of Scholar	Discipline	Title of Thesis
1.	Mr. Ram Pal Singh	Engineering	"Vibration of Non- uniform Plates"
2.	Mr. Ranjan Rajesh Kumar	Engineering	"Formability Criteria of Sintered-Preform"
3.	Mr. Ashish Kumar Chakraborty	Engineering	"Studies on some distance Measurement algorithm using stereovision and pattern recognition software and gyroscopic"
4.	Mr. Kalyan Chatterjee	Engineering	"Development of Dual Mode and Soft Computing Based Control Techniques for Load Frequency Controller of Interconnected Thermal Power Systems"
5.	Ms. Rupa Mahanti	Engineering	"Simulation & Management of Environment Pollution Foundry Industries"
6.	Ms. Asha Prasad	Management	"Electricity Sector Reforms in India on Human Resource and Labour Management Relations"
7.	Mr. K. Jayaram Kumar	Pharmacy	"Standardization of some Herbal Formulations"

B. Other Degrees/ Diplomas

I. Doctor of Philosophy	Total				7
	Branch	Division			Total
II. Post-Graduate		I	II		
Master of Engineering	AMS	6	-		6
	CAAD	5	-		5
	Civil	4	-		4
	Electrical	10	-		10
	E.C.E.	12	2		14
	Mechanical	5	-		5
	Q.E.& M	8	-		8
	S.E. & R.	3	-		3
	Software	8	1		9
Master of Pharmacy		15	2		17
Master of Technology	Computer Science	12	4		16
	E.S.& E.	12	-		12
	Fuels & Combustion	7	-		7
	N.M. & P. Tech.	5	-		5
	Remote Sensing	11	-		11
	Scientific Computing	3	1		4
Master of Science	B. M. I.	6	15		21
	Information Science	28	11		39
	Information Tech.	14	3		17
Master of Business Administration		47	144		191
Master of Computer Application		188	122		310

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	6	21	-	27
	Computer Sc.	53	94	1	148
	E.E.E.	22	30	-	52
	E.C.E.	48	67	1	116
	Mechanical	34	69	-	103
	Polymer	5	4	-	9
	Production	3	7	-	10
	Information Technology	13	19	-	32
	Marine	33	5	-	38
Bachelor of Pharmacy	B. Pharm.	15	17	-	32
Bachelor of Architecture	B. Arch.	18	6	-	24
Bachelor of Technology	Civil	-	1	-	1
	Electrical & Electronics	-	1	-	1
Bachelor of Business Administration		119	196	-	315
Bachelor of Computer Application		242	143	-	385
Bachelor of Computer Application (Honours)		2			2

IV. University Diplomas	Automobile Engg.	11	8	-	19
	Electronics Engg.	12	16	-	28
	Computer Science	15	3	-	18
	Manufacturing Engg.	4	2	-	6

Faculty position (including extension center)

A. Summary of the faculty position :

Category	Sanctioned
Professor	60
Associate Professor	20
Reader	47
Lecturer (Selection Grade)	12

Senior Lecturer	35
Lecturer	225
Associate Lecturer	51
Senior Sport Officer	1
Other R A Cum Tutor, Programmer, Univ. Teacher, Teach. Asstt., Chef. etc.	23
AMET Faculty	68
Jaipur Ext. Centre	
Total No. of Faculty	50
Total	592

B. Department wise details of faculty position: Main Campus

** Department of Architecture*

Sl.No.	Faculty Name	Designation	Qualification
1.	Dr. Ajay Khare	Professor	Ph. D, M. Arch.
2.	Mr. D. J. Biswas	Reader	MCP
3.	Mr. N. R. Mandal	Reader	MUP
4.	Mrs. Manjari Chakraborty	Senior Architect	M. Tech, PGDEE
5.	Mrs. Rachna Khare	Lecturer (Sel. Gr)	PGDEE
6.	Mrs. Ritu Kumari	Senior Lecturer	MURP
7.	Mr. S. P. Bhattacharya	Lecturer	M. Tech.
8.	Mrs. Harshit Lakra	Lecturer	P.G. Dip
9.	Mr. Sanmarga Mitra	Lecturer	MCP
10.	Mr. Satyaki Sarkar	Lecturer	MCP
11.	Mrs. Parama Mitra	Lecturer	MCP
12.	Mrs. Smriti Mishra	Lecturer	MCP
13.	Mrs. Jayeeta Dey	CAD Programmer	B Arch

** Department of Applied Chemistry*

Sl.No	Faculty Name	Designation	Qualification
1.	Dr. (Mrs.) Usha Jha	Professor	Ph.D.
2.	Dr. R. P. Bhatnagar	Senior Scientific Officer	Ph.D.
3.	Dr. P. K. Srivastava	Reader	Ph.D.

4.	Dr. R. K. Dey	Reader	Ph.D.
5.	Dr. Bimal Verma	Lecturer (Sel. Gr.)	Ph.D.
6.	Dr. J. P. Pandey	Lecturer (Sel. Gr.)	Ph.D.
7.	Mr. G. K. Agarwal	Assoc. Lecturer	M.Phil.
8.	Mrs. Sumit Mishra	Assoc. Lecturer	M.Phil.

**** Department of Applied Mathematics***

Sl.No.	Faculty Name	Designation	Qualification
1.	Dr. N.C. Mahanti	Professor	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	Reader	Ph.D.
7.	Dr. Manish Trevedi	Lecturer	Ph.D.
8.	Dr. S. Padhi (On leave)	Lecturer	Ph.D.
9.	Dr. (Mrs.) A. Pradhan Ghorai	Lecturer	Ph.D.
10.	Dr. (Ms.) T. Pal	Lecturer	Ph.D.
11.	Dr. A. Jaiswal	Lecturer	Ph.D.
12.	Dr. S. Roy	Lecturer	Ph.D.
13.	Mr. Prabal Datta	Asso. Lecturer	M. Sc., M. Tech.
14.	Mr. M. Sathiyamurthy	Asso. Lecturer	M. Sc., M. Tech.
15.	Dr. Manoj Kumar	Scientific Officer	M.Sc.(Tech.), Ph.D.
16.	Dr. Rajesh Kumar	Scientific Officer	M.Sc.(Tech.), Ph.D.
17.	Sri. Ranjan Chatteraj	RA-Cum-Tutor	M.Sc.
18.	Mrs. Swati Pande	RA-Cum-Tutor	M.Sc.

**** Department of Applied Mechanics***

Sl.No.	Faculty Name	Designation	Qualifications
1.	Mr. A. K. Ray	Professor	B.E., M.Tech, M.S.
2.	Dr. R.P. Singh	Professor	B.E., M.E., Ph.D.
3.	Mr. K. R. Roychaudhury	Professor	B.E., M.E.
4.	Mr. U. S. Prasad	Lecturer	B.E., ME
5.	Mr. Alok Kumar	Lecturer	B.E., M.E.

6.	Mr. Kishan Choudhuri	Lecturer	B.E., M.Tech
7.	Mr. S. Bhaduri	Lecturer	B.E., M.E
8.	Dr. P. Topdar	Lecturer	B.E., M.E, PhD.

*** Department of Applied Physics**

Sl.No.	Faculty Name	Designation	Qualification
1.	Dr P K Barhai	Professor	MSc, Ph.D
2.	Dr D Jairath	Professor	M.Sc, Ph.D
3.	Dr R K Popli	Professor	MSc, Ph.D
4.	Dr A K Shrivastava	Professor	MSc , Ph.D
5.	Dr G G Sarkar	Principal Scientific Officer	M.Sc, Ph.D
6.	Dr S Konar	Professor	MSc,MPhil,MTech,Ph.D
7.	Dr J T Andrews	Reader	M.Sc, Ph.D
8.	Dr S Medhekar	Reader	MSc, PhD
9.	Dr (Mrs) S.Keshri	Reader	MSc, PhD
10.	Dr S K Sinha-I	Lecturer Sel. Gr.	MSc, PhD
11.	Dr R K Paul	Lecturer Sel. Gr.	MSc, PhD
12.	Dr A K Sarma	Lecturer	MSc, PhD
13.	Dr S K Sinha-II	Lecturer	MSc, PhD
14.	Dr. A. Roy	Lecturer	MSc, PhD
15.	Dr. Rajeev Kumar	Lecturer	MSc, PhD
16.	Mr M K Sinha	Assoc. Lecturer	MSc
17.	Dr (Mrs) B Sarma	Sr. Scientific Officer	MSc, PhD

*** Department of Bio-Medical Instrumentation**

Sl.No.	Faculty Name	Designation	Qualification
1.	Dr. B. N. Das	Professor	Ph.D.
2.	Dr. Rakesh Kumar Sinha	Lecturer	Ph.D
3.	Mr. Surendra Kumar	Lecturer	M.E
4.	Mr. Suprio Kumar Das	Asso. Lecturer	B. Sc. Engg.

*** Department of Biotechnology**

Sl.No.	Faculty Name	Designation	Qualification
1.	Dr. Ambarish S. Vidyarthi	Professor	M.Tech, Ph.D.
2.	Dr. Manoj K. Rout	Reader	M. Sc., Ph.D.

3.	Dr. Kunal Mukhopadhyay	Reader	M. Sc., Ph.D.
4.	Dr. Pratyosh Shukla	Sr. Lecturer	M. Sc., Ph.D.
5.	Dr. Rajib Bandopadhyay	Lecturer	M. Sc., Ph.D.
6.	Ms Bashwati Saha	Lecturer	BE, M. Tech.
7.	Dr. Sanjay Ghosh *	Lecturer	M. Sc., Ph.D.
8.	Dr. Pankaj K. Mishra *	Lecturer	M. Tech, Ph. D
9.	Dr. Kanchan Phadwal *	Lecturer	M. Sc., Ph.D.
10.	Dr. Manoj K. Singh	Lecturer	M. Sc., Ph.D.
11.	Mr. Kamal Kumar	Lecturer	BE, M.Tech.
12.	Mr. Raju Poddar	Assoc. Lecturer	M. Sc, M. Tech
13.	Mr. Harmeet Singh *	Assoc. Lecturer	M. Sc
14.	Ms. Supreet Kaur *	Assoc. Lecturer	M. Sc

* On Study leave

*** Department of Civil Engineering**

Sl.No.	Faculty Name	Designation	Qualification
1.	Dr. K. V. Krishnamurthy	Professor	Ph. D.
2.	Mr. K. R. Roychowdhury	Professor	M. E.
3.	Mr. S. Sengupta	Professor	M. E.
4.	Dr. Gopal Pathak	Professor	Ph. D.
5.	Dr. Balram Singh	Assoc. Professor	Ph. D.
6.	Dr. Anand Kr. Sinha	Assoc. Professor	Ph. D.
7.	Dr. R.R. Sahay	Reader	Ph. D.
8.	Dr. S. Chakrabarty	Reader	Ph. D.
9.	Dr. Mainak Mallik	Reader	Ph. D.
10.	Mr. Arun Kumar	Sr. Lecturer	M. E.
11.	Mrs. Bindu Lal	Sr. Lecturer	M. E.
12.	Dr. Siddhartha Sengupta	Sr. Lecturer	Ph. D.
13.	Mr. Birendra Kr. Singh	Lecturer	M. E.
14.	Mr. Suresh Kumar	Lecturer	M. E.
15.	Mr. U. C. Sahoo*	Lecturer	M. Tech.
16.	Mr. Jitu Kujur	Lecturer	M. E.

* On Study leave for Ph. D. at I. I. T. Khargapur

** Department of Computer Science & Engineering*

Sl.No.	Name	Designation	Qualification
1.	Dr. G. Sahoo	Professor	Ph.D.
2.	Mr. S. Dutta	Reader	MCA, MBA
3.	Mr. P. K. Sharma	Sr. Lecturer	M.Sc , M.Tech
4.	Mrs. A. Jain	Lecturer	M.Sc., M.Tech.
5.	Mr. K. Lal	Lecturer	M.Tech., BE
6.	Mr. D K Mallick	Lecturer	M.Tech.
7.	Mr. V.K. Jha	Lecturer	B.E.
8.	Mr. I. Mukherjee	Lecturer	M.Sc. MCA
9.	Mr. A. Srivastava	Lecturer	BE, M.E.
10.	Mr. R. Jha	Lecturer	M.Sc.
11.	Mr. A K Keshri	Lecturer	BE, ME
12.	Mr. S K Chatterjee	Lecturer	MCA
13.	Mr. S Paul	Lecturer	MCA
14.	Mr. B K Sarkar	Lecturer	MCA, M.Sc.
15.	Mr. P Paul	Lecturer	BE, M. Tech
16.	Mr. K.S Patnaik	Lecturer	BE , ME
17.	Mr. V.S.S Sriram	Lecturer	MCA, M.E
18.	Mr. S Vijayvargiya	Lecturer	M. Tech
19.	Mr. K K Senapati	Lecturer	M. Tech
20.	Ms. S Mishra	Lecturer	M. Tech , BE
21.	Mr. K K Patnaik	Lecturer	Diploma, B.E, M. Tech.
22.	Mr. K.T. Lucas	Lecturer	M. Tech
23.	Mr. I.D.Ram	Lecturer	M. Tech
24.	Mrs. S Ghosh	Lecturer	M.Sc., M. Tech
25.	Mrs. I Snigdh	Lecturer	ME, BE
26.	Mr. A. Mustafi	Lecturer	MCA
27.	Mr. B.K. Chanda	Assoc. Lecturer	MCA
28.	Mr. B K Panjiyar	Assoc. Lecturer	MCA
29.	Ms. R Sahay	Assoc. Lecturer	BE, M. Tech
30.	Mr. A Joshi	Research Asso.	BE

**** Department of Electrical & Electronics Engineering***

Sl.No.	Faculty Name	Designation	Qualification
1.	Mr. D. Bhagat	Professor	M.Sc. (Engg.)
2.	Dr. B. M. Karan	Professor	Ph.D.
3.	Dr. R. C. Prasad	Professor	Ph.D.
4.	Mr. B.P. Roy	Professor	M.Sc. (Engg.)
5.	Mr. R.K. Narayan	Professor	M.S
6.	Dr. B.N. Das	Professor	Ph.D.
7.	Mr. N. Pathak	Reader	M.Sc. (Engg.)
8.	Dr. T. Ghose	Reader	Ph.D.
9.	Dr. N.L. Nath	Reader	Ph.D.
10.	Dr. D.K. Mohanta	Reader	Ph.D.
11.	Mr. R.C. Jha	Lecturer (Sel. Gr.)	ME
12.	Mr. P.R. Thkura	Lecturer	ME
13.	Mr. P.K. Upadhyay	Lecturer	M.Sc.
14.	Ms. Vijaya Laxmi	Lecturer	ME
15.	Mr. S. Ghose	Lecturer	ME
16.	Mr. P. Prakash	Lecturer	ME
17.	Mr. K.C. Jana	Lecturer	M.Tech
18.	Mr. S.G. Kadwane	Lecturer	ME
19.	Mr. S. Samanta	Lecturer	ME
20.	Mr. Avinash Kishore	Lecturer	M.Tech.
21.	Mr. J.B. Reddy	Lecturer	ME
22.	Mrs. Sarbani Ray (Chakraborty)	Lecturer	M. Tech.
23.	Mr. Pulak Purkait	Lecturer	M. Tech.
24.	Mr. Aman Kr. Jha	Lecturer	M. Tech.
25.	Mr. A. Prasad	Lecturer	BE
26.	Mrs. A. Mahapatra	Associate Lecturer	BE

**** Department of Electronics & Communication Engineering***

Sl.No.	Faculty Name	Designation	Qualification
1.	Mr. S. C. Goel	Professor	M.E.
2.	Mr. R. Suresh Kumar	Professor	M.E.

3.	Dr. (Mrs.) N. Gupta	Professor	Ph.D.
4.	Dr. D. Pal	Professor	Ph.D
5.	Dr. S. K. Ghorai	Professor	Ph.D.
6.	Dr. J. S. Roy	Professor	Ph.D.
7.	Mr. M. Puri	Reader	M.E.
8.	Mr. K. K. Masand	Reader	M.A.Sc.
9.	Mr. B. B. Pal	Reader	M.E.
10.	Mr. N. Poddar	Reader	M.E.
11.	Dr. (Mrs.) V. R. Gupta	Lecturer (Sel. Gr.)	M.E.
12.	Mr. S. S. Solanki	Lecturer (Sel. Gr.)	M.E.
13.	Mr. Sanjay Kumar	Lecturer (Sel. Gr.)	M.Tech.
14.	Mr. P. Kumar*	Sr. Lecturer	M.E.
15.	Mr. M. C. Shrotriya	Lecturer	M.Tech
16.	Mr. V. K. Singh*	Lecturer	M.E.
17.	Mr. M. Goswami	Lecturer	M.E.
18.	Dr. S. Srivastava	Lecturer	Ph.D.
19.	Mr. K. Mahto	Lecturer	M.E.
20.	Mr. P. K. Upadhyaya	Lecturer	M.E.
21.	Mr. Sanjeet Kumar*	Lecturer	M.E.
22.	Mr. J. Sahay*	Lecturer	M.E.
23.	Mr. Bharat Gupta	Lecturer	M.Tech
24.	Mr. S. K. Dash	Lecturer	M.E.
25.	Mr. R. K. Lal	Lecturer	M.Sc.
26.	Mr. M. K. Jha	Lecturer	B.E.
27.	Mrs. N. Chattoraj	Lecturer	B.E
28.	Mr. D.D. Seth	Lecturer	M.Tech.
29.	Mr. A. K. Tiwari	Asso. Lecturer	B.Sc.(Engg)

* Mr. P. Kumar, Mr. Sanjeet Kumar, and Mr. J. Sahay are presently pursuing their Ph.D. Programs in G. S. Sanyal School of Telecommunication, I.I.T. Kharagpur and Mr. V. K. Singh is pursuing his Ph.D. Programs in IIT, Kanpur.

*** Department of Hotel Management & Catering Technology**

Sl.No.	Name	Designation	Qualifications
1.	Dr. (Mrs.) Sonia Gupta	Sr. Lecturer	PhD, M.Sc.-H.Mgmt, DTD
2.	Mr. Atul Gupta	Sr. Lecturer	B.A., Hotel Mgmt
3.	Mr. Ashish Dahiya	Lecturer	PGDTHM, B.A. Hotel Mgmt
4.	Mr.Priti Ranjan Sahoo	Lecturer	M.T.M, Hotel Mgmt.
5.	Mr. Praveen Srivastava	Lecturer	M.A., Hotel Mgmt.
6.	Mr. Abhinav Shandilya	Lecturer	B.Sc. Hotel Mgmt.
7.	Mr. Roshan Prasad	Associate Lecturer	Bachelor of Hotel Mgmt.
8.	Mr. Sanjay Kumar	Associate Lecturer	M.A, M.T.M
9.	Mrs. Snigdha Priya	Associate Lecturer	M.B.A, Hotel Mgmt

*** Department of Information Science**

Sl.No.	Name	Designation	Qualifications
1.	Dr. Bhaskar Karan	Lecturer	Ph.D.
2.	Mr. Arindam Dutta	Assoc. Lecturer	M.Sc.

* On study leave

*** Department of Management**

Sl.No.	Name	Designation	Qualification
1.	Mr. S.C.Mishra	Reader	ME (IE&M), B.Sc. (Engg.)
2.	Mr. Utpal Baul	Reader	MBA, B.Sc (Engg.) Ph.D (submitted)
3.	Dr. S.K. Bose	Reader	Ph.D., MBA, M.Com, LLB
4.	Dr. (Mrs.) Manju Bhagat	Reader	Ph.D., M.A. (L.S.W), LLB
5.	Dr. R.N. Bhagat	Reader	Ph.D.,MBA, M.Com
6.	Dr. (Mrs.) S. Shivani	Reader	Ph.D., MBA
7.	Mr. Vijay Agrawal	Sr. Lecturer	MBA , B.Sc
8.	Mr. Anand Kumar	Lecturer	MMS, B.Sc, M.Sc
9.	Mr. A.R. Srivastava	Lecturer	PGDBM, BE
10.	Dr. P.C. Jha	Lecturer	Ph.D., M.A.
11.	Mr. Niraj Mishra	Lecturer	MBA
12.	Mr. Amitabh Verma	Lecturer	MCA, MSc. (Electro.)
13.	Mr. Rohit Kr. Pandey	Lecturer	MBA, PGDPM, MA

*** Department of Mechanical Engineering**

Sl.No.	Name of the Teacher	Designation	Qualification
1.	Dr. Ashok Misra	Professor	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. Arbind Kumar	Reader	Ph.D.
6.	Dr. Kumar Arbind	Reader	Ph.D.
7.	Dr. R.P. Sharma	Reader	Ph.D.
8.	Dr. A.K.Roy	Lecturer (Sel. Gr.)	Ph.D.
9.	Mr. D.B. Lata	Sr. Lecturer	M.E
10.	Mr. Girish Pathak	Sr. Lecturer	M.E.
11.	Mr. S.K. Sinha	Sr. Lecturer	M.E.,MBA
12.	Mr. B.S. Choudhary	Lecturer	M.Tech.
13.	Mr. Rajeev Kumar	Lecturer	M.E.
14.	Mrs. Richa Pandey	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. Anand Kumar	Lecturer	M.E.
24.	Mr. B.K. Prabhakar	Lecturer	M.E.
25.	Mr. Ullekh Pandey	Lecturer	M.E.
26.	Mr. Sujeet Kr. Mishra	Lecturer	M.E.

*** Department of Pharmaceutical Sciences**

Sl.No.	Name of the Faculty	Designation	Qualification
1.	Mr. S.P. Bhatnagar	Professor	M.Pharm.
2.	Dr. D. Sasmal	Professor	Ph.D.
3.	Dr. G.M.Panpalia	Professor	Ph.D.
4.	Mr. C.M.Prasad	Professor	M.Pharm

5.	Dr. P.R.P. Verma	Professor	Ph.D.
6.	Dr. B.N. Sinha	Assoc. Professor	Ph.D.
7.	Dr. S. Bhattacharya	Assoc. Professor	Ph.D.
8.	Mrs. S. G. Panpalia	Reader	M.Pharm.
9.	Mr. S. Samanta	Reader	M.Pharm.
10.	Dr. S.Jha	Reader	Ph.D.
11.	Dr. R.N.Gupta	Reader	Ph.D.
12.	Mrs. S. M. Verma	Sr. Lecturer	M.Pharm
13.	Dr. (Mrs.) R. Mazumder	Sr. Lecturer	Ph.D.
14.	Dr. A. Mazumder	Sr. Lecturer	Ph.D. MBA
15.	Dr. (Ms.) S.Ganguly	Sr. Lecturer	Ph.D.
16.	Mr.R. Chandra	Lecturer	M.Tech
17.	Dr. JayaramKumar	Lecturer	Ph.D.
18.	Dr. (Mrs.) P.M. Mazumder	Lecturer	Ph.D.
19.	Mr. A.K. Patnaik	Lecturer	M.Pharm.
20.	Mr. Awdesha Oraon	Lecturer	M.Pharm.
21.	Mr. Venkatesan J.	Lecturer	M.Pharm.
22.	Mrs. Anima Pandey	Assoc. Lecturer	M.Pharm
23.	Ms. Subrata Ghosh	Assoc. Lecturer	M.Pharm

**** Department of Polymer Engineering***

Sl.No.	Name of the faculty	Designation	Qualification
1.	Dr. (Mrs.) M. Mukherjee	Professor	Ph.D.
2.	Dr. A.K. Sen	Sr. Lecturer	Ph.D.
3.	Sri C.Guria	Sr. Lecturer	M.E.
4.	Dr. P. Mukhopadhyay	Lecturer	Ph.D.
5.	Sri G. Sarkhel	Lecturer	M.Tech.
6.	Dr. C. Datta	Lecturer	Ph.D.
7.	Sri. S. Kumar	Lecturer	M.Tech.
8.	Sri. K. Kumar	Sci. Officer	M.B.A.
9.	Sri. S. Kumar Prasad	Asstt. Sci. Officer	B.E.

**** Department of Production Engineering***

Sl.No.	Name of Faculty	Designation	Qualification
1.	Dr. Surender Kumar	Prof.	ME, PhD
2.	Sri Atul Anand	Reader	BE, MBA
3.	Sri A. K. Thakur	Reader	M.Tech
4.	Dr. Alok Varma	Reader	M.Tech., PhD
5.	Dr. B.K. Singh	Reader	ME, PhD
6.	Sri S. P. Lal	Reader	ME
7.	Sri Vinay Sharma	Lecturer (Sel. Gr.)	ME
8.	Sri Sanjay Kumar Jha	Sr. Lecturer	ME
9.	Sri Saranjit Singh	Sr. Lecturer	M.Tech
10.	Sri Ritesh Kumar Singh	Sr. Lecturer	ME
11.	Sri S. Muthukumaran	Sr. Lecturer	ME
12.	Sri S. C. Srivastava	Lecturer	ME
13.	Sri Vijay Pandey	Lecturer	ME
14.	Sri Rajeev Agrawal	Lecturer	ME
15.	Dr. A. N. Sinha	Lecturer	PhD
16.	Dr. R.K. Ranjan	Lecturer	PhD
17.	Dr. L.N. Patnaik	Lecturer	PhD
18.	Sri Joyjeet Ghose	Lecturer	ME

**** Department of Remote Sensing***

Sl.No.	Name of Faculty	Designation	Qualification
1.	Dr. M.S. Nathawat	Professor	Ph.D.
2.	Dr. Nilanchal Patel	Professor	Ph.D.
3.	Dr. Krishna A.P.	Scientific officer	Ph.D.
4.	Dr. A.K. Singh	Reader	Ph.D.
5.	Dr. R. Sivakumar	Reader	Ph.D.
6.	Dr. A.C.Pandey	Sr. Lecturer	Ph.D.
7.	Mr. Subhas Chelliah	Lecturer	M.Tech.
8.	Mrs. Richa N.K. Sharma	Lecturer	M.Sc.
9.	Mr. Roheet Bhatnagar	Lecturer	M.Tech.
10.	Mr. V.S. Rathore	Assoc. Lecturer	M.Sc.

*** Department of Space Engineering and Rocketry**

Sl.No.	Name of the Faculty	Designation	Qualification
1.	Dr. A. K. Chatterjee	Professor	Ph. D.
2.	Dr. P. C. Joshi	Professor	Ph. D.
3.	Dr. Mohan Varma	Professor	Ph. D.
4.	Dr. J. K. Prasad	Professor	Ph. D.
5.	Dr. Arnab Roy	Lecturer	Ph. D.
6.	Dr. P. K. Dash	Lecturer	Ph. D.
7.	Shri Sudip Das	Lecturer	M. E.
8.	Shri C. R. Chodankar	Lecturer	M. Tech.

*** Environment Science and Engineering Group**

Sl.No.	Name of the faculty	Designation	Qualification
1.	Dr. Gopal Pathak	Professor (Civil Engg.)	Ph.D
2.	Dr. Usha Jha	Professor (Chemistry)	Ph.D
3.	Dr. M.S. Nathawat	Professor (Remote Sensing)	Ph.D
4.	Dr. Arvind Kumar	Reader (Mech. Engg.)	Ph.D
5.	Dr. P.K. Shrivastava	Reader (Chemistry)	Ph.D
6.	Dr. R.K. Dey	Reader (Chemistry)	Ph.D
7.	Dr. A.C. Pandey	Senior Lecturer (Remote Sensing)	Ph.D
8.	Mr. Chandan Guria	Sr. Lecturer (Polymer)	M.Tech
9.	Mr. R. Chattoraj	Lecturer (Mathematics)	M.Sc
10.	Mr. Kirti Avishek	Assoc. Lecturer	M.Sc, M.Tech

*** Extension Centre Allahabad (UP)**

Department of Computer Science

Sl.No.	Name	Designation	Qualification
1.	Mr. S. Kanungo	Senior Lecturer	M.Sc., PGDCA, M.Tech
2.	Mr. R.S. Pandey	Senior Lecturer	M.Sc , M.Tech
3.	Anita Kushwaha	Lecturer	MCA
4.	Mr. Ajit Kumar Keshri	Assoc. Lecturer	BE, M.Tech.
5.	Mr. P.C. Srivastava	Assoc. Lecturer	M.A.

Department of Management

Sl.No.	Name of the Faculty	Designation	Qualification
1.	Mr. Santanu Das	Assoc. Lecturer	M.B.A
2.	Dr. Adhip Kr. Mahanty	Assoc. Lecturer	Ph.D.
3.	Mr. Sunil Kumar Pandey	Assoc. Lecturer	MBA , LLB
4.	Mr. Pradeep Munda	Tutor	M.B.A

Department of Civil Engineering

1.	Dr. R.N. Sahi	Professor	Ph.D.
2.	Dr. V.C. Agarwal	Retd. Professor	Ph.D.
3.	Mr. B.K. Singh	Senior Lecturer	B.Sc, Engg., ME
4.	Mr. B.N. Singh	Assoc. Lecturer	BE, MFT

Department of Mechanical Engineering

1.	Dr. K.M. Gupta	Professor	M.Tech., Ph.D.
2.	Dr. Triloki Nath	Professor	M.Tech., Ph.D.
3.	Suraj Singh	Professor	B.E., M.Tech.
4.	Mr. Anil Kr. Singh	Lecturer	BE, M.E.
5.	Mr. Dhaneshwar Mahto	Lecturer	BE, M.E.,

Department of Electrical & Electronics Engineering

1.	Prof. A.K. Jaiswal	Professor	M.E.
2.	Dr. C.P. Gupta	Retd. Professor	Ph.D
3.	Prof. Kumar Nikhil	Assoc. Lecturer	BE

**** Extension Centre Chennai***

Sl.No.	Name of Faculty	Designation	Qualifications
1.	Capt. S.Bhardwaj	CEO & Director	Master (F.G)
2.	Mr. K. Seyadu	Training Coordinator	M.Sc.
3.	Capt. Yeshwanth Raj	H.O.D - Ns	Master (F.G)
4.	Mr. A. Venugopal	H.O.D - Me	First Class (Motor)
5.	Mr. J.P. Thiagarajan	H.O.D - Mba	M.A., Caiib., MBA, B.L.
6.	Mr. N. Srinivasan	Dean - Management Studies	M.B.A.
7.	Mr. M. Rajasekaran	Asst Professor	B.E., First Class (Motor)
8.	Mr. Bhoopathy Bhasker	Asst Professor	B.E, First Class (Motor)
9.	Mr. G.Mohan Dass	Asst Professor	Dme,First Class (Motor)

Sl.No.	Name of Faculty	Designation	Qualifications
10.	Capt. R.Krishnamurthy Kumar	Asst Professor	Master (F.G)
11.	Cdr. A.S.Perumal	Asst Professor	BE,(Naval Architecture)
12.	Mr. John J Panampunna	Asst Professor	B.E., (Elec)
13.	Mr. N.A. Kamath	Asst Professor	First Class (Motor)
14.	Prof.G.Kanagasabapathy	Asst Professor	M.Sc., M.Phil.
15.	Mr. D.P. Santhanam	O.I.C Gmdss	II Class Cop
16.	Mr. A.K.K. Raju	Radio Officer	R.T.G
17.	Mr. C. Emrose	Radio Officer	R.T.G
18.	Dr. S. Balasubramanian	Medical Officer	M.B.B.S., M.D.
19.	Mr. P. Manickam	Lecturer	Five Years Appre. Millwright Trade
20.	Mr. C. Mohanrangan	Lecturer	Five Year Appre. Machinist & Turner
21.	Mr. A.P. Narayanan	Lecturer	Craft Instructor s Trg. in Welding Trade
22.	Mr. G.Selvaraj	Lecturer	Dme / Appre. for 3 Years Welding Trade
23.	Prof. K. Swami	Professor	M.Sc., M.Phil., Pgdc.
24.	Prof. G. Selvarkumar	Professor	M.Sc., M.Phil.
25.	Prof. D. Balasubramanian	Professor	M.Sc., M.Phil.
26.	Dr. V.Balasubramaniam	Professor	M.Sc., M.Phil., Ph.D
27.	Mr. J. Gopinath	Lecturer	M.E., (Mech)
28.	Mr. D.Arivazhagan	Lecturer	B.E., M.B.A.
29.	Ms. Sree Naaga Kumari	Lecturer	M.Sc., B.Ed.
30.	Ms. Marion Patricia Gomes	Lecturer	M.A., (English)
31.	Mr. M.S.Lingam	Lecturer	Marine Electrical Officer
32.	Mr. R. Sundar	Lecturer	M.E., (Electrical & Electronics)
33.	Mr. A. Veeramani	Lecturer	M.E., (Mech)
34.	Mr. P.R. Ayyappan	Lecturer	M.E., (Mech)
35.	Mr. A. Nedunchezhiyan	Lecturer	M.E., (Mech)
36.	Mr. P. Suresh Kumar	Lecturer	M.Sc., M.Phil.

Sl.No.	Name of Faculty	Designation	Qualifications
37.	Mr. P. Madhusoodhanan	Lecturer	M.Sc., M.Phil., B.Ed.
38.	Mr. S. Parthasarathy	Lecturer	M.E., (Mech)
39.	Mr. R. Srinivasan	Lecturer	M.B.A., M.Phil
40.	Mr. J. Rengamani	Lecturer	M.B.A., M.Phil
41.	Ms. S.Priya	Lecturer	M.B.A.
42.	Capt. V.K. Haridas Nair	Asst Professor	Master (F.G)
43.	Mr. R. Mohan	Asst Professor	First Class (Motor)
44.	Capt. Kumud Kumar	Asst Professor	Master (F.G)
45.	Mr. B. Ramachandran	Asst Professor	First Class (Motor)
46.	Mr. M. Shankar Raj	Seamanship Instructor	Ex. Indian Navy
47.	Mr. K. Babu	Seamanship Instructor	Ex. Indian Navy
48.	Mr. K. Sambantham	Seamanship Instructor	Ex. Indian Navy
49.	Mr. J.N. Thakur	Seamanship Instructor	Ex. Indian Navy
50.	Mr. M.John Sagayaraj	Workshop Instructor	Dme / ITI (Fitter), Cit (Instructor Course)
51.	Mr. T. Swaminathan	Workshop Instructor	Iti (Turner)
52.	Mr. U. Tamilarasan	Librarian	B.Lib., M.Lib
53.	Mr. S. Girishankar	Workshop Instructor	B.E., (Mech)
54.	Mr. N. Karithikeyan	Workshop Instructor	I.T.I
55.	Mr. M. Sudhakar	Lecturer	M.C.A.
56.	Mr. N. Kumar	Workshop Instructor	Iti (Welder), Cit (Instructor Course)
57.	Mr. M. Narendrakumar	Workshop Instructor	ITI (Welder), Cit (Instructor Course)
58.	Mr. P. Ramani	Workshop Instructor	Iti, Cti (Instructor Course)
59.	Mr. N.R. Ramkumar	Lecturer	MPES, M.Com., M.Phil.
60.	Mr. K. Sambath	Workshop Instructor	ITI (Welder), Cti (Instructor Course)
61.	Mr. S. Sankaran	Workshop Instructor	D.M.E.
62.	Mr. R. Krishnakumar	Workshop Instructor	Act/App/Welder, Cti (Instructor Course)
63.	Mr. S. Yuvaraj	Workshop Instructor	D.M.E.

Sl.No.	Name of the Faculty	Designation	Qualification
64.	Mr. V. Srinivasan	Workshop Instructor	Dme., Ctii
65.	Mr. Velayudham	Marine Supervisor	B.E.
66.	Mr. K.P. Haran	Marine Workshop Instructor	D.M.E., M.O.T IVth Engineer
67.	Mr. C.V. Paulose	Marine Electrical Demonstrator	Electric Sup. Certificate
68.	Mr. K. Laksminarayanan	Electrical Instructor	Dme.

List of Visiting Faculty at AMET

Sl.No.	Name of Faculty	Designation	Qualifications
1.	Capt. S.Gangaram	Visiting Faculty	Master (F.G)
2.	Capt. V.V. Nair	Visiting Faculty	Master (F.G)
3.	Cmde. D. Krishnamurthy	Visiting Faculty	Ma, Nd, Psc, Mba
4.	Mr. A.D. Ravishankar	Visiting Faculty	M.Sc.
5.	Cdr. S.P. Ilangovan	Visiting Faculty	B.Sc, Ptsc, Amie, Mba, Ml.
6.	Capt. Vinod Naveen	Visiting Faculty	Master (F.G)
7.	Dr. T.R. Sivaramakrishnan	Visiting Faculty	M.Sc., Ph.D
8.	Mr. G. Balaganesan	Visiting Faculty	M.E., (Mech)
9.	Mr. A. Stephen	Visiting Faculty	M.E.
10.	Mr. A. Sridharan	Visiting Faculty	B.Sc., B.L ., Fics (Uk)
11.	Prof. N. Palaniandavar	Visiting Faculty	M.Sc., M.Phil
12.	Mr. S. Sukumar	Visiting Faculty	M.E., (Mech)
13.	Mrs. S. Kalavalli	Visiting Faculty	M.Sc., M.Phil

* Extension Centre Jaipur

Sl.No.	Name of Faculty	Designation	Qualification
1.	Major Narpat Singh	Director	
2.	Mr. S. Banerjee		B.E.
3.	Mr. O.P. Rishi		M.Sc. , M.Tech
4.	Mr. B. Pathak		M.C.A, P.G.D.C.A.
5.	Ms. Archana Bhatnagar		MCA
6.	Mr. S.K. Sharma		B.Sc., I.E
7.	Mrs. Anju Sharma		M.Sc., M.Tech
8.	Dr. A nuj Jhankal		M.Sc., M/Phil & Ph.D

Sl.No.	Name of Faculty	Designation	Qualification
9.	Mr. Gurminder Singh		M.Sc., Ph.D
10.	Mr. Indra Kr. Dadheech		M.Sc., Ph.D
11.	Mrs Neerja Sharma		M.Sc.
12.	Mrs. Seema Gaur		M.Sc., M.Tech
13.	Mr. Subhash Gupta		B.E., M.Tech
14.	Mr. V ivek Gaur		M.Sc., M.E.
15.	Mr.V. Pathak		MCA
16.	Ms. Sweta Mehlawat		M.Sc., MCA
17.	Mr. G.P. Mishra		B.E., MBA
18.	Ms Kajal Jain		M.Sc., Diploma in Multimedia
19.	Mrs. Kiran Patni		M.A.
20.	Mrs Pankaj Sharma		I.C.W.A., C.I.M.A.
21.	Mr. PradeepKr. Gupta		M.Com , MBA
22.	Mr. P.N Gupta		Bsc.Engg. Diploma in Management
23.	Dr. Pramod Bubna		PGDCA, M.Com.Ph.D.
24.	Ms Reshu Gupta		B.Com, A level
25.	Mr. Ashok Sharma		B.Com, M.A, & PGDBM
26.	Mr. S.P. Sarkar		M.Tech.
27.	Mr. Rajeev Ranjan		B.E., M.E.
28.	Mr. P.S. Rathore		B.E. M.E.
29.	Mrs. Aparajita Pandey		B.E., PG Diploma in Marketing Mgt., MCSE, PG Diploma In Bioinformatics), Diploma in E-Comm.
30.	Mr. Steven Mcwan		M.Sc.
31.	Dr. R.K. Popli		PhD.
32.	Dr. Ramprakash		M.Sc., Ph.D.
33.	Dr. Anuj Kumar Agarwal		M.Sc., Ph.D., IPR
34.	Dr. S.K. Sharma		M.Sc., Ph.D.
35.	Mrs. Rajni Agarwal		M.Sc., NABL Training
36.	Dr. Archana Srivastava		Ph.D.
37.	Dr. Vassanda Coumar		M.Sc., Ph.D.
38.	Mr. Anil Kumar Sharma		B.E. , M.E.
39.	Mr. Abinash Pankaj		B.E., M.Tech.

Sl.No.	Name of Faculty	Designation	Qualification
40.	Mr. Niket Mehta		MCA, M.A., DACA, Diploma in Non Linear editing
41.	Dr. Vibhuti Pandya		Ph.D.
42.	Mr. Lalit Tiwari		B.A., G.Tech Diploma
43.	Mr. Rishi Pandey		M.A., E-Commerce
44.	Mr. Santosh Kr. Agarwal		MCA, Economics, PGDCA, DISM
45.	Mrs. Anindita Banerjee		M.Sc., Diploma in Multimedia
46.	Mr. Tiju Thomas		O level, A level
47.	Mr. Purushottam Sharma		B.A., A.D.C.S.T.
48.	Mr. Amit Kumar		B.Com., A level, O level
49.	Mr. Alok Pandey		B.E, MCSE, IBM certified e-Commerce, Certificate course in project Management
50.	Dr. Taruna		M.B.A, Ph.D

*** Extension Centre Kolkata**

Sl.No.	Name of Faculty	Designation	Qualification
1.	Mr. R. T. Goswami	Faculty In Charge	MCA
2.	Mrs. Jayasri Ray	Lecturer	MCA
3.	Mr. Ambar Dutta	Lecturer	MCA
4.	Dr. Debangshu Chakraborty	Lecturer	Ph. D
5.	Mr. Subho Chaudhuri	Reader	M.E
6.	Dr. Sandip Kumar Sengupta	Lecturer	Ph. D
7.	Mrs. Sraboni Dutta	Lecturer	MBA
8.	Mr. Soumendra Bhattacharyaa	Assoc. Lecturer	M.phil
9.	Mr. Rohit Kamal Chatterjee	Assoc. Lecturer	MCA

*** Extension Centre Lalpur**

Department of Management Sciences

Sl.No.	Name	Designation	Qualification
1.	Dr. A.N. Jha	Incharge	M.Com, Ph.D
2.	Mrs. G.S. Vijaya	Lecturer	B.E., PGDMM, MBA
3.	Mr. T.K. Banerjee	Lecturer	MBA, M.Sc.
4.	Ms. Anupma Sahai	Lecturer	MBA, MIS-IT
5.	Mr. Arun Kr. Singh	Lecturer	M.Tech.
6.	Mr. Somnath Mukherjee	Lecturer	MBA, M.Sc.

7.	Ms. Sunita Dixit	Lecturer	MBA, DCA
8.	Mr. Sushil Kumar	Lecturer	PGDBM
9.	Mr. S.N. Shahdeo	Teaching Assistant	PGDMM, MBA
10.	Mr. J. Bhagat	Teaching Assistant	M.Com.

Department of Computer Science & Engineering

Sl.No.	Name	Designation	Qualification
1.	Dr.(Mrs.) Vandana Bhattacharjee	Reader	B.E., M.Tech, Ph.D
2.	Mrs. Amrita Priyam	Lecturer	M.Sc., M.Tech
3.	Mr. A.K. Choudhary	Lecturer	B.E., M. Tech
4.	Mr. N.P. Tiwari	Lecturer	MCA
5.	Mr. Kumar Rajnish	Lecturer	MCA
6.	Mrs. O.Tirkey	Lecturer	M.Tech, MCA
7.	Ms. Jaya Pal	Lecturer	M.Sc., MCA
8.	Mr. Sanjay Kumar	Lecturer	MCA
9.	Mr. Amar Kumar	Lecturer	BE
10.	Mr. Kuntal Mukherjee	Lecturer	MCA
11.	Mr. P.S. Bishnu	Assoc. Lecturer	B.E., M.Tech
12.	Mr. B.K. Sharma	Teaching Asstt.	M.Sc, M.Tech
13.	Mr. D.K. Mishra	Teaching Asstt.	M.Sc, M.Tech
14.	Ms. Swati Shalini	Assoc. Lecturer	B.Sc. M.Sc.(I.T)
15.	Ms. Lipika Jha	Assoc. Lecturer	B.C.A. M.Sc.(I.T.)

**** Extension Centre Noida***

Computer Science

Sl.No.	Name	Designation	Qualifications
1.	Mr. BP Joshi	Director	ME, PGDBM
2.	Dr. S.Mallika	Sr. Lecturer	ME, PGDM, Dip
3.	Mr. KN Mishra	Sr. Lecturer	M.Tech,MCA
4.	Mr.CS Suryanarayan	Lecturer	MCA, M.Tech. (IT)
5.	Ms. Mrinalini Mehta	Lecturer	M.Tech. (IT)
6.	Ms. Vibha Kaw	Lecturer	MCM, PGDCA
7.	Ms. Soma Sircar	Lecturer	M.Sc.

8.	Mr. SP Singh	Lecturer	M.Sc., M.Tech
9.	Dr. Ila Sahay	Lecturer	M.Sc,Ph.D.
10.	Dr. Peeyush Tewari	Lecturer(Sel.Gr.)	M.Sc, PGDCA, PGDIM, Ph.D.
11.	Mr. Santosh Kr. Ray	Lecturer	M.Tech
12.	Mr. Aruna Malik	Lecturer	M.Tech
13.	Mr. Anil Kumar	Lecturer	MCA
14.	Mr. Pankaj Gupta	Lecturer	M.Sc.,M.Tech.
15.	Mr. Rayees Ahmed	Lecturer	MCA, B.Sc., PGDCA, CIC
16.	Mr. BK Joshi	Assoc. Lecturer	MCA
17.	Ms. S.Vijaylakshmi	Assoc. Lecturer	M.Sc.
18.	Ms. Pramila Joshi	Assoc. Lecturer	MCA
19.	Ms. Muntaha Ahmad	Assoc. Lecturer	MCA,PGDCA
20.	Mr. Neeraj Pathak	Assoc. Lecturer	M.Sc. (IT)

Management

1.	Dr. BK Jha	Professor	B.Sc.-Engg, DIM (AIMA), Ph.D.
2.	Mr. Sanjeev Bahadur	Assoc. Professor	M.Tech.,MBA
3.	Dr. Asha Prasad	Reader	MBA,Dip.(T&D),Ph.D.
4.	Dr. Kanhaiya Singh	Sr.Lecturer	MA, M.Com., CAIIB, Ph.D.
5.	Dr. Tarun Pandeya	Sr.Lecturer	MBA, MMS, PGDBM, Ph.D.
6.	Ms. Suparna Dutta	Lecturer	MA(Eng.)
7.	Mr. Pranab Kumar	Lecturer	MA(IR&PM), D.C.O, LL.B.
8.	Ms. Rachna Prateek	Lecturer	MBA
9.	Ms. Harpreet Charanjit	Lecturer	MBA
10.	Mr. Pushpendra Singh	Lecturer	M.Com.,PGDBM
11.	Ms. Ritu Jain	Lecturer	M.Com.,MBA
12.	Ms. Preety Bajaj	Assoc. Lecturer	BA ,PGDBM

Animation & Multimedia

1.	Mr. Kiran A. Shetty	Faculty	B.Fine Arts, Dip(2D Animation)
2.	Mr. Kapil Sharma	Faculty	MA,PGDCA
3.	Mr. Das Mohan Singh	Faculty	B.F.A.
4.	Mr. Makarand Joshi	Faculty	B.F.A.
5.	Mr. E. Jayanth Chandra	Faculty	B.Com., Dips
6.	Mr. Lalit Mohan Bhatt	Faculty	B.Com.
7.	Mr. Kamaljeet S. Pawar	Faculty	BA, Dips

**** Extension Centre Bahrain***

Sl.No.	Name of the Faculty	Designation	Qualification
1.	Mr. T.R. Ranganath	Director	B.Tech. Ed, M.E. Fellow (I.E.)
2.	Mr. Surya Lal Mishra	Professor	B.Sc., M.B.A., B.Tech., Fellow (I.E.T.E.)
3.	Mr. Prateek Sharma	Assoc. Professor	B.Sc., M.C.A.
4.	Mr. Niloy Bhattacharya	Assoc. Professor	B.Com (Hons.), M.C.A.
5.	Mr. N. Saravanan	Lecturer	M.Sc., M.Phil., M.Ed. Tech., MS
6.	Dr. Gagan Kukreja	Lecturer	B.Com., M.Com., Ph.D
7.	Dr. Vivek Singh	Lecturer	B.Sc., MBA., Ph.D
8.	Mr. Pranav Nathani	Lecturer	B.Com. (Hons.), MBA
9.	Mr. Sultan Khan	Lecturer	B. Com., MBA
10.	Mrs. D. Shanthi	Assoc. Lecturer	BE, ME
11.	Mr. Aparajit Nandi*	University Education Teacher	B.Com., M.Com., M.D.B.A.
12.	Mr. A. Rajendran*	University Education Teacher	B.Sc.
13.	Mr. Soofi Anwar*	University Education Teacher	BBA, MBA
14.	Mr. A.M. Susai*	University Education Teacher	B.Sc., M. Sc, B. Ed.
15.	Mrs. Kaveri Mukherjee*	University Education Teacher	B.E.
16.	Mrs. Sandhya V.S. *	University Education Teacher	M.Sc., M.Tech.
17.	Ms. Sreeja Rajendran*	University Education Teacher	BE
18.	Mr. Girish Mhatre*	Workshop Trainer	D.M.E.(Mech.)

Sl.No	Name of the Faculty	Designation	Qualification
19.	Mr. S.D. Sharma	Senior Mechanic	Industrial Training Certificate
20.	Ms. Amal A. Hasan Nasser*	Technical Asstt.	D. Tech.
21.	Ms. Zahra Mahdi Mohammed Al Tublani	Computer Technician	D. Tech.
22.	Zainab Abdulla Salman Al Afoo*	Technical Asstt.	D. Tech
23.	Ms. Ahlam Abdulla Khalifa*	Technical Asstt.	D. Tech.

* Local Appointments

** Extension Centre Ras Al Khaimah*

Sl.No.	Name	Designation	Qualification
1.	Dr. Praveen Dhyani	Director	M.Sc., Ph.D.
2.	Mr. Arshad Mallik	Reader	B.Sc., B.Arch., M.Sc., MCA, AIIA, MISTE
3.	Mr. Avnish Vijay	Lecturer	M.E., MBA
4.	Mr. S.P. Bhattacharya	Lecturer	M.E.
5.	Dr. Nalini Raja	Sr. Lecturer	Ph.D.
6.	Dr. P. Eugene Prakash	Sr. Lecturer	MBA, M.Com., MCA, HDSE, Ph.D.
7.	Mr. Anish John	Lecturer	Mechanics
8.	Ms. Sreelatha Sudhir	Lecturer	M.Tech.
9.	Ms. A.S. Padmashree	Lecturer	M.Sc., M.Phil.
10.	Ms. Mallika Natarajan	Lecturer	M.Sc., M.Phil.
11.	Mr. Rubon L	Sr. Lecturer	M.Sc.
12.	Mr. Abhilash Abraham	Lecturer	MCA
13.	Ms. Sivasankari. S	Lecturer	MCA
14.	Ms. Abhirami	Lecturer	MFM, PGDIB, PGDCA, MBA
15.	Ms. Rekha Jayakumar	Lecturer	Management
16.	Ms. Beena Vinod	Lecturer	Management
17.	Ms. Anjali Rajan	Lecturer	M.A., B.Ed.
18.	Dr. Ravikumar	Lecturer	M.A., M.Ed., Ph.D.
19.	Mr. Harshit Arora	Lecturer	MCA
20.	Ms. Shyaba. S	Lecturer	M.Tech.
21.	Ms. Indu Nair	Lecturer	M.E. Commercial System
22.	Mr. Ranjit Rajan	Lecturer	M.E.

** Extension Centre Muscat*

Sl.No.	Name of Faculty	Designation	Qualification
1.	Dr. A.M. Agrawal	Dean	B.Sc. (Engg), MBA, Ph.D.
2.	Dr. Munish Makkad	Reader/HoD Management	M.Com, Ph.D
3.	Dr. K.A. Goyal	Sr. Lecturer - Management	M.Com, M. Phil, Ph.D
5.	Mr. Syed Aulia	Lecturer - Management	MBA, LLB
6.	Mr. Mohd Iftekhar	Lecturer - Management	B.Sc(H), MBA, DWT
7.	Mr. Mithun Shrivastava	Lecturer - Management	B.Sc.(H), MBA
8.	Mr. Jyoti K Chandel	Lecturer- Management, Examination Incharge	B.SC., PGDC, MIBM, MBA
9.	Mrs. Shashi Dua	Lecturer - Management	M.Com. B.Ed
10.	Mrs. Shagufta Shaikh	Asst. Lecturer - Management	B.Com, MBA
11.	Mrs. Ramani Mabel	Lecturer - Management	MBA, MBM, MPM
12.	Mrs. Anupam Sharma	Lecturer - Management	MBA, MPhil, B.Ed
13.	Mr. Akhilesh Roy	Lecturer- HoD Electronics & Communication	M.Tech
14.	Dr. Alexander Kocian	Associate Professor/ Reader - Electronics	Ph.D
15.	Mrs. Anasuya Patel	Lecturer - Electronics & Communications	B.E.
16.	Mr. Vikash Sharma	Sr. Lecturer- Electronics & Communications	M.IM, M.E.
17.	Mr. Piyush Gupta	Lecture, HoD Computer Science	MCA, M.A. PGDIM
18.	Mr. Sanjay Kumar	Lecturer - Computer Science	M.Tech, MCA, B.Sc
19.	Mr. Satish Chander	Lecturer - Computer Science	MCA
20.	Mr. Shahid Ali Khan	Lecturer - Computer Science	MSc., M.C.A.
21.	Mrs. Vijaya P	Lecturer - Computer Science	M.Tech

Sl.No.	Name	Designation	Qualification
22.	Mrs. Sinymol	Asst. Lecturer-Computer Science	M.Sc Computer Science
23.	Mr. Sivakumar	Lecturer - Incharge - Mechanical Engg	M.E. PGDBA
24.	Ms. Atiya Tabassum	Associate Lecturer - Biotechnology	M.Sc.
25.	Mrs. Pooja Chaturvedi	Asst. Lecturer - Biotechnology	M.Sc.
26.	Mr. Mohd Mohatram	Lecturer- Incharge - Electrical	M.Tech
27.	Mrs. Kalaivani N	Asst. Lecturer - Mathematics	M.Sc., M. Phil
28.	Mr. David Manohar	Lecturer - English	M.A. B.Ed, PGDTE
29.	Mr. Kenneth McGowan	Lecturer - English	M.A., B.Ed, TTC
30.	Mrs. Helen Daniel	Lecturer - English	B.Sc, M.A., M.Ed, PGD. ELT
31.	Mrs. Mona Saha	Lecturer - English	M.A., B.Ed. TEFLA
32.	Mr. El Amin El Nur	Lecturer - English	B.A.
33.	Mrs. Indrani Basu	Lecturer - English	B.A. CEELT
34.	Mrs. Linus Noronha	Lecturer - English	B.A., B.Ed, TEFL
35.	Mrs. Smita Prasad	Lecturer - English	M.A. Dip. In Higher Edu.
36.	Mrs. Merin Alex	Asst. Lecturer - English	M.A. B.Ed
37.	Mrs. Sreedevi K	Lecturer - Physics	M.Sc

*** University Polytechnic**

Sl.No.	Name	Designation	Qualification
1.	Mr. A. K. Thakur	Director	M. Tech.
2.	Mr. D. K. Jain	Senior Lecturer	B.Sc. Engg. (Electronics)
3.	Mr. N. K. Singh	Lecturer	M.C.A.
4.	Mr. Ramkesh	Lecturer	M.E.
5.	Mr. Shambhu Saran Kumar	Lecturer	M. Tech
6.	Mr. N. K. Mukherjee	Assoc. Lecturer	B. E. (Electrical)
7.	Mr. Manish Kr. Roy	Assoc. Lecturer	B. E. (Mechanical)

Sl.No.	Name	Designation	Qualification
8.	Mr. Rakesh	Assoc. Lecturer	B. E. (Mechanical)
9.	Dr. B. N. Sanyal	Assoc. Lecturer	Ph. D.
10.	Mr. Ramnish Sinha	Assoc. Lecturer	M.C.A.
11.	Ms. Tanushree Bose	Assoc. Lecturer	M.Sc. (Electronics)
12.	Ms. Sumana Kumari	Assoc. Lecturer	M. Sc. (Electronics)
13.	Mr. Rajan Kumar	Assoc. Lecturer	B. E. (Mechanical)
14.	Mr. Subodh Kumar	Assoc. Lecturer	B. E. (Production)
15.	Mr. Vikash Verma	Assoc. Lecturer	B. E. (E&T)
16.	Mr. Abhay Kumar	Assoc. Lecturer	M.C.A.
17.	Mr. T. K. Baug	Scientific Officer	B.Sc. Engg. (Mechanical)
18.	Mr. G. M. Ansari	Jr. System Analyst	M.C.A.
19.	Ms. Sushila Ekka	Tutor	B.Sc (Comp. Sc & Engg.)
20.	Mr. R. K. Prasad	Jr. Superintendent	B.E. (Production)

ACTIVITIES OF ACADEMIC DEPARTMENTS

DEPARTMENT OF ARCHITECTURE

Architecture is primarily the art and science of designing spaces for serving the multifarious activities of human beings and for meeting their specific needs in a meaningful built environment. Architecture uses the philosophic wholesomeness of Humanities, the logical rationalism of Science, the passionate imagination of Art and the inexhaustible resources of Technology. It calls for originality, creativity, conceptualization, perception, aesthetic values and a holistic judgment of people places, objects and events.

The department of architecture was established in BIT Mesra keeping the needs of the profession in mind in the year 1993 and offers a 5-year degree course in Architecture designed to fulfill above requirements of the profession. Eight batches of students have graduated till now and the students have found gainful employment in planning, design and construction sector. Many of our students have opted for higher studies in India and abroad in the disciplines of Urban Design, City Planning, Landscape architecture, Conservation and Construction Management. Our students have also opted for diversified fields such as Visual Design, Product design, fashion design, management and software development related with architecture. The passed out architects of our department are well established and keep a close association with various activities of the department.

The intake of the B. Arch. Degree course was increased from 20 to 40 from the session 2005-2006. BIT is the Resource Institute for the State of Jharkhand for Disaster Management Programmes. The architecture department jointly organized with Department of Civil engineering of the Institute three short-term courses for National Capacity Building Programme for Engineers in Earthquake Risk Management (NCBPEERM) in 2005-06.

The Department of Architecture signed an MOU with INTACH for the conservation and upkeep of heritage properties of Jharkhand. The department is closely cooperating with the State Government in the field of Urban Development in revising building bye-laws, finalizing consultants and in founding an 'Institute of Architecture Planning and Urban Management' to be set-up by the State Government in 2006.

The department organized One National Workshop and Three Training Programmes (under National Programme for Capacity Building of Engineers in Earthquake Risk Management). All faculty members took active part in these events and presented papers.

The students of the department organised the Zonal Convention of NASA (ZONASA 05 named UDGAM REVISITED) in October 2005 successfully. 400 students of architecture from seven institutions of eastern zone attended this event, which comprised of various competitions related to academic pursuits, extra-curricular activities as well as cultural activities of the participants.

Degree/Diploma offered

- * 5-Years B. Arch degree course in Architecture
- * Doctorate degree in Architecture

Faculty position

Professor: 1,

Reader: 3;

Lecturer (Selection Grade): 1,

Senior Lecturer: 1

Lecturer: 6.

Number of Student enrolled/registered with Department : (as on February 2006)

Programme : B. Arch		No. of student
Xth semester	:	17
VIIIth semester	:	18
VIth semester	:	18
IVth semester	:	12
IIInd semester	:	23
Total	:	88

Academic Innovations, Research & Development activities

Ongoing Project (Mention Project title, funding agency, Date of sanction, sanctioned amount and duration of project):

External Consultancy Work

- * Interior design for Birsa Munda Airport, Ranchi In House Consultancy work
- * Deoghar Extension Centre of B.I.T. Mesra
Project sanctioned during the year 2005-2006 (Project title, funding agency, sanctioned amount, and date of sanction and duration of project)
- * Revision of Planning Standards and Building Byelaws for RRDA Ranchi

External Consultancy Work

- * Design of Proposed Community Centre for Birsa Munda Airport, Ranchi
- * Development of an Ecological Park at an abandoned quarry of Arra Colliery (Kujju Area) of Central Coalfields Ltd., India
- * Science College in the Campus of Ramgarh College at Ramgarh funded by the Science and Technology Department, Govt. of Jharkhand
- * State Polytechnic Institute for Govt. of Jharkhand at Bhaga, Sindri Chaibasa Engineering College for Govt. of Jharkhand
- * Development of Sutiamba as Heritage Tourism spot for Art and Culture Department, Jharkhand Government.

Project completed during the year 2005-2006

Research project sponsored by All India Council for Technical Education on 'Prototype

Architectural Design and Design Guidelines of Special Schools for Autistic Pupil in April 2005
by Mrs. Rachna Khare

A. Project submitted during the year 2005-2006

1. Applied for Research project under the research promotion scheme (RPS) 2005-06 of AICTE. PI- Mrs. Rachna Khare
2. Applied for project under the scheme of 'IEI-RESEARCH AND DEVELOPMENT GRANT 2006-07 by Institution of Engineers. PI- Mrs. Rachna Khare

B. Seminar/conference/short term course conducted by the Department. Number of delegates, Name of dignitaries.

The department organized the following events in the year :

1. Three numbers of State-level Programmes under the aegis of “**National Programme for Capacity Building of Engineers in Earthquake Risk Management**”, organized in association with the Department of Civil Engineering, BIT Mesra during
October 25th - 29th, 2005 - attended by 18 participants,
December 12th - 17th, 2005 - attended by 20 participants,
February 13th - 18th, 2006 - attended by 26 participants
and was sponsored by the Disaster Management Department, Govt. of Jharkhand. The first of this series of workshops was inaugurated by Mr. J. Munigala, IAS, Secretary, Dept. of Disaster Management, Govt. of Jharkhand. Course Coordinator- Mr. S.P. Bhattacharya.
1. Workshop on “**Modern Buildings and Sustainable Building Practices in Jharkhand**”, organized in collaboration with Building Construction Department, Govt. of Jharkhand during January 9th - 10th, 2006.
2. All India Seminar in Architectural Engineering on “**The Co-ordination of Various Engineering Wings in Architectural Planning for Building Construction**”, organized in association with the Institute of Engineers (India), Jharkhand State Centre during March 8th - 9th, 2006.

F. Books / Monograph Publications by faculty:

Book Chapter

Khare, Ajay, *Princely Terrain- Amber, Jaipur & Shekhawati*, ed. S. Jain, “Ghat Ki Guni: The Gateway to Dhoondhar Empire”, pp. 12-29, Shubhi Publications, Gurgaon, 2005. ISBN: 81-8290-051-4.

Publications by faculty in Journals

International Journals

- * “**Design Interventions in the Urban Areas of Jharkhand : Urban Transformations**”
Context : Built, Living and Natural - Journal of the Development and Research Organization

for Nature, Arts and Heritage, Vol II Issue 1; Spring / Summer 2005; pp 35 - 38; ISBN: 81 - 902313 - 0 - 8 - authored by Dr. Ajay Khare

- * **"The Historic Urban Core of Kolkata - another approach"**; Context: Built, Living and Natural - Journal of the Development and Research Organization for Nature, Arts and Heritage, Vol II Issue 2; Autumn / Winter 2005; pp 59 - 64; ISBN: 81 - 902313 - 0 - 8 - authored by Mr. S. Sarkar

National Journals

- * **"Access Facilities for Physically Handicapped"**; Architecture + Design [A+D], Vol. XXII No. 7; July 2005; pp 38 - 42 - *authored by Mr. S. Sarkar*
- * **"Methodology for Conservation of Historic Urban Cores"**; ITPI Journal, Vol. 2 No. 2; April - June 2005; pp 69 - 72 - *authored by Mr. S. Sarkar*
- * **"Prospects of Replacement and Reuse of Timber in Construction Industry"**, NICMAR - Journal of Construction Management, Vol. XXI No. 1; January - March 2006; pp 18 - 22 - *authored by Mr. S. Sarkar*

Publications by faculty in Seminar Proceedings

International Events

- * **"Use of Valabhi Aedicule in Temple Architecture of Bengal"** Proceedings of EASAA Conference held at The British Museum, London; organized by European Association of South Asian Archaeologists; July 4th - 8th, 2005 - *authored by Dr. Ajay Khare*
- * **"Towards a Contemporary Concept of Curriculum Development for Engineering Education"**; ICEEE 2006 (International Conference on Engineering Education); Qassim University College of Engineering, Kingdom of Saudi Arabia; March, 2006 - *authored by Mrs. Manjari Chakraborty*

National Events

- * **"Evaluation of Cultural Resources for their Conservation and Addaptive Reuse"**; Proceedings of Eastern Zonal Convention off National Association for Students of Architecture, 2005 (ZONASA); BIT, Mesra; Ranchi; Oct 18th - 20th, 2005 - *authored by Dr. A. Khare*
- * **"Adaptive Re-use of Historic Buildings"**; Workshop on Modern Buildings and Sustainable Building Practices in Jharkhand; Building Construction Department, Jharkhand, Ranchi; January 9th - 10th, 2006 - *authored by Dr. A. Khare*
- * **"Augmentation of Ranchi City Region and The role of Ethnic Population to the Development Process - A Geoinformatics Approach"**; 25th. ISRS Annual Convention & National Symposium on "Emergence of Geoinformatics for Development: Trends & Opportunities"; Ranchi; December 6th - 9th, 2005 - *authored by Mr. D. J. Biswas*
- * **"Iron & Steel - The wings for Imagination of Modern Tall Buildings"**; Workshop on Modern Buildings and Sustainable Building Practices in Jharkhand; Building Construction

Department, Jharkhand, Ranchi; January 9th - 10th, 2006 - *authored by Mr. D. J. Biswas*

- * **“Managing Urban Growth for the new state capital - Ranchi”**; National Seminar of Indian Institute of Town Planners, India; Amritsar; January 15th - 16th, 2006 - *authored by Mr. D. J. Biswas*
- * **“Earthquake Resistance considerations for Masonry Buildings”**; National Programme for Capacity Building of Engineers in Earthquake Risk Management; BIT Mesra, Ranchi; February 13th - 18th, 2006 - *authored by Mr. D. J. Biswas*
- * **“Participatory Design and Planning in Urban Development Context”**; Young Architects Festival 05: Dimensions in Architecture; Indian Institute of Architects, Bihar & Jharkhand Chapter; Patna; September 30th - October 2nd, 2005 - *authored by Mr. N. R. Mandal*
- * **“Effects Of Disaster & Basics Of Disaster Management”**; Workshop under NPCBEERM; BIT, Mesra, Ranchi; October 25th - 29th, 2005 - *authored by Mr. N. R. Mandal*
- * **“Behaviour of Brick Masonry Walls and appropriate Measures for an Earthquake”**; Workshop under NPCBEERM; BIT, Mesra, Ranchi; December 12th - 17th, 2005 - *authored by Mr. N. R. Mandal*
- * **“Water Management in Urban areas: Need for a Paradigm Shift”**; Workshop on Modern Buildings and Sustainable Building Practices in Jharkhand; Building Construction Department, Jharkhand, Ranchi; January 9th - 10th, 2006 - *authored by Mr. N. R. Mandal*
- * **“Elderly in the Society & their Shelter Issues”**; All India Seminar on 'The Co-ordination of various Engineering Wings in Architectural Planning for Building Construction ; The Institution of Engineers (India), Jharkhand State Centre, Ranchi, March 8th - 9th, 2006 - *authored by Mr. N. R. Mandal*
- * **“Social Values in Housing and Community Planning”**; All India Seminar on 'The Co-ordination of various Engineering Wings in Architectural Planning for Building Construction ; The Institution of Engineers (India), Jharkhand State Centre, Ranchi, March 8th - 9th, 2006 - *authored by Mr. N. R. Mandal*
- * **“Participatory Design and Urban Development”**; Proceedings of Eastern Zonal Convention off National Association for Students of Architecture, 2005 (ZONASA); BIT, Mesra; Ranchi; Oct 18th - 20th, 2005 - *authored by Mr. N. R. Mandal*
- * **“Redefining the architectural design requirements for better accessibility”**; Proceedings of Eastern Zonal Convention off National Association for Students of Architecture, 2005 (ZONASA); BIT, Mesra; Ranchi; Oct 18th - 20th, 2005 - *authored by Mrs. R. Khare*
- * **“Role of barrier Free Environment in Disaster Management”**; National Programme for Capacity Building of Engineers in Earthquake Risk Management; B.I.T. Mesra; February 13th - 18th , 2006 - *authored by Mrs. R. Khare*
- * **“Redefining the architectural design requirements for better accessibility”**; Workshop on Modern Buildings and Sustainable Building Practices in Jharkhand; Building Construction Department, Government of Jharkhand; 9th - 10th, 2006 - *authored by Mrs. R. Khare*

- * **"Take the Green Tech to the People"**; Proceedings of Eastern Zonal Convention off National Association for Students of Architecture, 2005 (ZONASA); BIT, Mesra; Ranchi; Oct 18th - 20th, 2005 - *authored by Mrs. R. Agarwal*
- * **"Green Buildings: An Approach Towards Sustainable Development"**; Workshop on Modern Buildings and Sustainable Building Practices in Jharkhand; Building Construction Department, Government of Jharkhand; 9th - 10th, 2006 - *authored by Mrs. R. Agarwal, Mrs. H. S. Lakra and Mrs. S. Mishra*
- * **"Indicator Identification for Energy Efficient Urban Growth"**; All India Seminar on 'The Co-ordination of various Engineering Wings in Architectural Planning for Building Construction ; The Institution of Engineers (India), Jharkhand State Centre, Ranchi, March 8th - 9th, 2006 - *authored by Mrs. R. Agarwal and Mrs. H. S. Lakra*
- * **"Bamboo : Natural, Resource: Utilization and Conservation"**; National Conference on Recent Advances in Environmental Biotechnology for Forest and Bio-Diversity Management; Inter Disciplinary Forum, Ranchi Women s College, Ranchi and Council for Vocational Studies (CVS), Ranchi University; Sponsored by: NAEB, Ministry of Environment and Forestry, Government of India; Ranchi; March 7th - 8th, 2006 - *authored by Mrs. R. Agarwal and Mrs. H. S. Lakra*
- * **"Natural Resource Management"**; 25th ISRS Annual Convention & National Symposium on "Emergence of Geoinformatics for Development: Trends & Opportunities; ISRO and BIT Mesra; Ranchi; December 6th - 9th, 2005 - *authored by Mrs. H. S. Lakra*
- * **"New Solutions for an Age-old Problem : Before or Aftermath of an Earthquake"**; National Programme for Capacity Building of Engineers in Earthquake Risk Management; B.I.T. Mesra; October 24th - 29th, 2005; December 12th - 17th, 2005; February 13th - 18th, 2006 - *authored by Mr. S. Mitra*
- * **"Heritage Information System - A Tool for Heritage Preservation"**; Workshop on Modern Buildings and Sustainable Building Practices in Jharkhand; Building Construction Department, Jharkhand, Ranchi; January 9th - 10th, 2006 - *authored by Mr. S. Mitra*
- * **"Philosophies of Landscape Design in Architecture"**; All India Seminar on 'The Co-ordination of various Engineering Wings in Architectural Planning for Building Construction ; The Institution of Engineers (India), Jharkhand State Centre, Ranchi, March 8th - 9th, 2006 - *authored by Mr. S. Mitra*
- * **"Architectural Design - Absolutism or Optimisation!"**; Proceedings of Eastern Zonal Convention off National Association for Students of Architecture, 2005 (ZONASA); BIT, Mesra; Ranchi; Oct 18th - 20th, 2005 - *authored by Mr. S. Mitra*
- * **"Management of Post-earthquake Scenario"**; National Programme for Capacity Building of Engineers in Earthquake Risk Management; B.I.T. Mesra; October 24th - 29th, 2005; December 12th - 17th, 2005; February 13th - 18th , 2006 - *authored by Mr. S. Sarkar*
- * **"Post earthquake assessment, repair and retrofitting of damaged component"**; National Workshop on Earthquake Resistant Design for the Built Environment; Bengal

Engineering and Science University, Shibpur; January 6th - 7th, 2006 - *authored by Mr. S. Sarkar*

- * **"Parks and city greens: a protagonist for urban existence"**; NATCON, National Seminar of Indian Institute of Architects; Bhopal; December 23rd - 24th, 2005 - *authored by Mr. S. Sarkar*
- * **"Managing Urban Growth for the new state capital - Ranchi"**; National Seminar of Indian Institute of Town Planners, India; Amritsar; January 15th - 16th, 2006 - *authored by Mr. S. Sarkar*
- * **"A Technological Paradigm of the Yores: The Hanging Gardens of Babylon"**; Proceedings of Eastern Zonal Convention off National Association for Students of Architecture, 2005 (ZONASA); BIT, Mesra; Ranchi; Oct 18th - 20th, 2005 - *authored by Mr. S. Sarkar*
- * **"Climate Responsive Buildings for Composite Climate (Ranchi District) - A Step Towards Green Architecture"**; Workshop on Modern Buildings and Sustainable Building Practices in Jharkhand; Building Construction Department, Jharkhand, Ranchi; January 9th - 10th, 2006 - *authored by Mrs. P. Mitra*
- * **"Architecture is Frozen Music: the Philosophy of Rabindranath Tagore"**; Proceedings of Eastern Zonal Convention off National Association for Students of Architecture, 2005 (ZONASA); BIT, Mesra; Ranchi; Oct 18th - 20th, 2005 - *authored by Mrs. P. Mitra*

Seminar/Symposium/Short-term Course Attended by faculty members

International Events

- * **"EASAA Conference at the British Museum, London"**; European Association of South Asian Archaeologists; July 4th - 8th, 2005 - *attended by Dr. A. Khare*
- * **"GREEN BUILDING CONGRESS - International Conference-cum- Exhibition on Green Buildings"**; Confederation of Indian Industry (CII - Sohrabji Godrej Green Business Centre), Hyderabad; Hotel Taj Palace, New Delhi; September 14th - 17th, 2005 - *attended by Smt. Ritu Agarwal*
- * **"International Conference on The Role of Socio-Economic & Spatial Planning in National Development"**; University of New South Wales, Australia, School of Planning & Architecture, India, Housing & Urban Development Corporation Limited, India, CEPT University, India Australian Habitat Studies , Australia; India Habitat Centre, New Delhi; April 14th - 15th, 2006 - *attended by Mrs. H. S. Lakra and Mrs. S. Mishra*

National Events

- * **"Young Architects Festival 05: Dimensions in Architecture"**; Indian Institute of Architects, Bihar & Jharkhand Chapter; Patna; September 30th - October 2nd, 2005 - *attended by Dr. A. Khare and Mr. N. R. Mandal*
- * **"25th ISRS Annual Convention & National Symposium on "Emergence of Geoinformatics for Development : Trends & Opportunities"**; BIT Mesra; Ranchi; December 6th - 9th, 2005 - *attended by Mr. D. J. Biswas and Mrs. H. S. Lakra*

- * **“South Asia Energy Conservation Conclave”**; RDCIS SAIL and BIT Mesra; February 17th - 19th, 2006 - *attended by Smt. M. Chakraborty*
- * **“One Day Workshop on Academic Reforms”**; Technical Education Quality Improvement Programme (TEQIP) and BIT Mesra; December 15th, 2005 - *coordinated by Smt. M. Chakraborty and attended by Smt. P. Mitra*
- * **“Training Programme for Faculties and Architects of State Resource Institutions (SRI) in the Eastern Region under National Programme for Capacity Building of Architects in Earthquake Risk Management”**; Department of Architecture and Regional Planning of Indian Institute of Technology, Kharagpur (as National Resource Institution / NRI); March 13th - 19th, 2006 - *attended by Sri. N. R. Mandal, Sri. S. P. Bhattacharya, Sri. S. Mitra and Smt. P. Mitra*
- * **“Workshop on Implementation of VAMBAY Schemes in Jharkhand”**; HUDCO State Centre, Ranchi; March 24th, 2006 - *attended by Sri. N. R. Mandal and Sri. S. Mitra*
- * **“Workshop on Architectural Education”**; Council of Architecture; CEPT University, Ahmedabad; February 13th - 14th, 2006 - *attended by Sri. N. R. Mandal*
- * **“Workshop on Technology Development, Utilisation and Transfer”**; Dept. of Science and Industrial Research, Ministry of S&T, Gol and BIT Mesra; Ranchi; March 6th, 2006 - *attended by Sri N. R. Mandal and Sri S. Mitra*
- * **“Two days Workshop on Content Development in e-Learning under Technical Education Quality Improvement Programme (TEQIP)”**; BIT Mesra; Ranchi; April 3rd - 4th, 2006 - *organized by Mrs. H. L. Lakra and attended by Mrs. R. Khare and Mrs. R. Agarwal*
- * **“National Conference Role of Physical Education and Sports in Personality Development of Young Professional”**; Department of Physical Education & Sports, BIT, Mesra and Association of Indian Universities, New Delhi; September 8th - 9th, 2005 - *attended by Mrs. H. S. Lakra*
- * **“Special training on Teacher Training on E-Learning”** Department of Information Technology, Ministry of Communication & Information Technology, Govt of India and DOEACC Centre, Kolkata; May 30th - June 29th, 2005 - *attended by Mrs. H. S. Lakra*
- * **“Short Term Training Programme on Earthquake Resistant Structures for Architecture”**; NPEEE, Ministry of Human Resource and Development, India; I.I.T. Roorkee; August 8th - 12th, 2005 - *attended by Sri S. Sarkar*
- * **“National Workshop on Earthquake Resistant Design for the Built Environment”**; Bengal Engineering and Science University, Shibpur; January 6th - 7th, 2005 - *attended by Sri S. Sarkar*

Student Activities

The students of the department organized the Zonal Convention of NASA (ZONASA 05 named UDGAM REVISITED) in October 2005 successfully. 300 students of architecture from seven institutions of eastern zone attended this event, which comprised of various competitions

related to academic pursuits, extra-curricular activities as well as cultural activities of the participants.

Infrastructural Facilities during the year 2005-06

- * Architectural Graphics Lab has been shifted to the new room made by partitioning room no. 264
- * 9 (nine) no. of new computers has been procured for the Architectural Graphics Lab
- * The Department has received a new software named ArchiCAD 9

Lectures presented in other academic institutions

- * Dr. Ajay Khare presented lecture on **“Housing Redefined”** (*Workshop on Development of Urban Areas in Jharkhand*) in Sri Krishna Institute of Public Administration, Ranchi on April 24th, 2005
- * Ar. N. R. Mandal presented lecture on **“Cost Effective Technology Options for Housing in Slum Up-gradation”** (*Workshop on Development of Urban Areas in Jharkhand*) in Sri Krishna Institute of Public Administration, Ranchi on April 24th, 2005
- * Ar. N. R. Mandal presented lecture on **“Housing Issues In Slum Areas”** (*Workshop on Development of Urban Areas in Jharkhand*) in Sri Krishna Institute of Public Administration, Ranchi on April 24th, 2005
- * Ar. N. R. Mandal presented lecture on **“Considerations for Designing Layout, Form and other elements of Buildings to increase Seismic Resistance”** (*Workshop on Housing & Urban Development in Jharkhand*) in Sri Krishna Institute of Public Administration, Ranchi on March 2nd, 2006
- * Ar. Sanmarga Mitra presented lecture on **“Traffic and Transport Management”** in Sri Krishna Institute of Public Administration, Ranchi on February, 2006
- * Ar. Sanmarga Mitra presented lecture on **“Role of Geographic Information”**
- * **“System in Urban Planning”** in Sri Krishna Institute of Public Administration, Ranchi on February, 2006
- * Ar. Sanmarga Mitra presented lecture on **“New Materials for Earthquake Surviving Structures”** (*Workshop on Housing & Urban Development in Jharkhand*) in Sri Krishna Institute of Public Administration, Ranchi on March 2nd, 2006
- * Ar. Satyaki Sarkar presented lecture on **“Disaster Mitigation in Settlements”** in Sri Krishna Institute of Public Administration, Ranchi on February, 2006
- * Ar. Parama Mitra presented lecture on **“Rain Water Harvesting - Additional Water for Tomorrow s Need”** in Sri Krishna Institute of Public Administration, Ranchi on February, 2006

DEPARTMENT OF APPLIED CHEMISTRY

The department has been involved in imparting pure and applied chemistry courses to undergraduate as well as postgraduate students. It is actively involved in running multidisciplinary postgraduate programme in Environmental Science and Engineering. The department houses well established fuel technology and water quality monitoring and testing laboratories. The faculty of the department engages in some of the areas of current research such as synthesis and characterization of polymeric biomaterials, ground and surface water quality assessment, waste water treatment, dye-based polymers, oscillation reactions, bio-diesel, non-conventional energy sources, computational chemistry and nanochemistry. The department has been promoting interdisciplinary environmental research, teaching and service activities within the organization. The department has been actively involved in promoting environmental awareness amongst the tribal and rural population in and around Ranchi.

Degree/Diploma offered

- * M.Tech in Environmental Science & Engineering,
- * Ph.D. in Pure & Applied Chemistry

Faculty Position

Professor - 1	Senior Scientific Officer - 1	Reader - 2
Lecturer (Sel. Gr.) - 2	Associate Lecturer - 2	

Academic Innovations, Research & Development activities

A. Ongoing Projects : (Sponsored)

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: 2.08 lakhs, 3 years.
5. "Introduction of semi-micro and micro techniques in engineering chemistry laboratory" World Bank project Budget: 20.0 lakhs, (2005-2007).
6. "Water Quality Assessment for fluoride, iron, nitrate and arsenic in Garhwa and Palamau district of Jharkhand" UNICEF project, Budget 10 lakhs, 2 years.

Research Projects

1. "Investigating the relationship between coal, coal characteristics and effluent quality in a given beneficiation process and developing a cause effect paradigm", submitted in Dec

2005 for the award of Ph.D. by Mrs. Vineeta Arora under the supervision of Dr. Usha Jha as Guide.

2. "Synthesis of some Polymeric Dyes" pre-submission seminar held in March for the work of Mrs. Lakshmikanta under the supervision of Dr. Bimal Verma as Guide.
3. "Environmental Tobacco Smoke & its impact on the respiratory health of adult" work of Mr. Gyan Agarwal under the supervision of Dr. Usha Jha as Guide.
4. "Synthesis and Characterization of High Temperature Polymers" work of Mr. S. S. Majhi under the supervision of Dr. P. K. Srivastava as Guide.
5. "Evolution of Sequential Oscillation in single organic system in chemical system" work of Mr. Narendra Yadav under the supervision of Dr. P. K. Srivastava as guide.
6. "Processing and Application of Non-Edible Oils as Bio-diesel and soap" work of Mr. R. V. Singh under the supervision of Dr. P. K. Srivastava as Guide.
7. "Effect of Nitrogen Implantation on Biomaterial Alumina" Synthesis and implantation of nitrogen under progress by Mrs. Deepshikha under the guidance of Dr. Usha Jha.
8. "Process optimization and design of the best feasible method for treatment of oils and grease from workshop effluents of coal mines." work of Mr. A. K. Singh is in progress under the guidance of Dr. Usha Jha.
9. "Synthesis, characterization and controlled drug release application of some polymeric biomaterials" work of Mr. G. S. Tiwari is in progress under the supervision of Dr. R. K. Dey.
10. "Studies of some metal ion uptake behaviour of some newly synthesized chelating materials" work of Mr. A. C. Singh is in progress under the supervision of Dr. R. K. Dey.
11. "Spatial and temporal variation of water quality parameters and electro chemical degradation of organic waste in Subarnarekha river near Ranchi" work of Mr. Satish Kumar is in progress under the guidance of Dr. J. P. Pandey.
12. "Environmental assessment of coal combustion residues of few thermal power plants in India" work of Mrs. Sumit Mishra under the supervision of Dr. Gurdeep Singh, Indian School of Mines, Dhanbad.

B. Projects sanctioned during the year 2005-2006

Introduction of semi-micro and micro techniques in Engineering Chemistry Laboratory, TEQIP sponsored by the World Bank.

C. Projects completed during the year 2005-2006

"Removal of toxic metal ions by inorganic particulates"- University Grants Commission, New Delhi, 2003-2005.

D. Projects submitted during the year 2005-2006:

1. "Impact of Environmental Tobacco Smoke and its effect on respiratory health of adult in Ranchi district", G. K. Agarwal and U. Jha, University Grants Commission, New Delhi, 5.0 lakhs.

2. "Synthesis of polyamidoamine-based polymeric materials for the controlled delivery of drugs", R. K. Dey and U. Jha, Department of Science and Technology, New Delhi.

E. Seminar/Conference /Short term courses conducted by the Department

1. The department hosted the 24th Annual Conference of the Indian Council of Chemists between 16th - 18th December 2005. The conference was attended by 300 delegates from across India and abroad. The conference was inaugurated by His Excellency Hon ble Chancellor Sri Syed Sibtey Razi, Governor, state of Jharkhand. The scope of the conference was to provide opportunity for wide ranging discussions and critical debate on recent experimental and theoretical ideas in emerging areas of Chemistry. A one-day symposium on Nano-Science and Technology was also organized under the chairmanship of Professor N. S. Gajbhiye, Department of Chemistry, Indian Institute of Technology, Kanpur.
2. A one-day workshop on Industry-Institute interaction was organized on 22nd October 2005. It was well attended by entrepreneurs of a number of small scale chemical industries in and around Ranchi city. A number of projects pertaining to the problems faced by these industries have been taken up by the faculties as student research projects.

Seminar/Conference/Workshop/short term course attended by faculty members

1. Dr. P. K. Srivastava and Dr. R. P. Bhatnagar attended the workshop cum exhibition on "Technology Development, Utilization and Transfer" organized jointly by the Department of Scientific & Industrial Research, New Delhi and Birla Institute of Technology, Mesra, at BIT Mesra on 06 March 2006.
2. Dr. R. P. Bhatnagar participated in the National Seminar on "Frontiers in Chemistry" organized by the Cochin University of Science and Technology in March 2006.
3. Dr. R. P. Bhatnagar participated in the South Asia Energy Conservation Conclave, MECON, Ranchi in February 2006.
4. Dr. R. P. Bhatnagar attended the "WIPO National Symposium on intellectual property education, training and research, organized by the World Intellectual Property Organization (WIPO), Geneva and Indian Institute of Technology (IIT), Delhi, in co-operation with the Ministry of Human Resource Development, Government of India, New Delhi, 17-18 August 2005.
5. Mr. G. K. Agarwal participated and gave oral presentation of the paper titled "Study of the impacts of Environmental Tobacco Smoke and Respirable Suspended Particulate matter on Respiratory health of adult" at the First International Conference on Environmental Exposure and Health 2005, Atlanta, U.S.A., 5-7 October 2005.
6. Mr. G. K. Agarwal participated in a National School on "A New Dimension to NMR: From Molecules to Human Behaviour" organized and conducted by Indian Institute of Science, Bangalore, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow and GB Pant Institute of Social Sciences, Allahabad, held at the North Eastern Hill University, Shillong, Meghalaya, 23 May - 03 June 2005.
7. Mr. G. K. Agarwal, Dr. J. P. Pandey and Mrs. Sumit Mishra attended a one-day workshop

on "Know Yourself as a Good Teacher" at BIT Mesra, 26 April 2005. (Dr. Usha Jha was among one of the panel members)

8. Mr. G. K. Agarwal and Dr. J. P. Pandey attended an Aerospace Conclave and National Workshop on "Emerging Trends in Aerospace Engineering and Rocketary" organized by the Department of Aerospace Engineering and Rocketary, BIT Mesra, Ranchi, 18 - 20 April 2005.

Publications

1. U. Jha : "Investigating the relationship between raw coal characteristics and the effluent quality of Kedla & Rajrappa Washeries", J. Environmental Management, 78(4): 392-404, (2006).
2. U. Jha : "Analytical Evaluation of Potential Pollution from Trace Elements in Various Fractions of Washed Coal of Kedla and Rajrappa Washery", J. Institution Engineers, 86, 21-25, (2006).
3. U. Jha : "Risk Assessment of Household Hazardous Waste", Proceedings of the National Seminar on Green Productivity and Sustainable Development, BIT Mesra, (March 2005).
4. U. Jha : "Coal beneficiation and its impact on the environment", Proceedings of the 24th Annual Conference of the Indian Council of Chemists, (December 2005).
5. R. P. Bhatnagar : "Potential of Microbial Fuel Cell as Environmentally benign technology", Proceedings of the South Asia Energy Conservation Conclave, (February, 2006).
6. R. K. Dey : "Extraction of metal ions using chemically modified silica gel covalently bonded with 4,4'-diaminodiphenylether and 4,4'-diaminodiphenylsulfone-salicylaldehyde Schiff Base", Proceedings of the 24th Annual Conference of the Indian Council of Chemists, (December 2005).
7. R. K. Dey : "Synthesis of some silica gel modified complexes using Schiff s Bases as ligands", Analytical Sciences, (accepted, 2006).
8. B. Verma : "Synthesis and characterization of dye-based coloured co-polyesters", J. Indian Chemical Society, 82: 718-722, (August, 2005).
9. G. K. Agarwal : "Study of the impacts of Environmental Tobacco Smoke and Respirable Suspended Particulate matter on respiratory health of adult", Proceedings of the First International Conference on Environmental Exposure & Health 2005, Atlanta, U.S.A., 75-81, (October 2005).
10. S. Mishra : "Environmental implications of Coal combustion residues", Proceedings of the 24th Annual Conference of the Indian Council of Chemists, BIT Mesra, (December 2005).

Award/Nomination of faculty by important organizations

1. Dr. R. K. Dey, Reader, has received the "TWAS scholarship" for a one-year training programme in nano-chemistry at the University of Brazil, (2006).
2. Mr. G. K. Agarwal, Associate Lecturer, was honoured as the Best Participant for all-round

- participation at the National School on "A New Dimension to NMR: From Molecules to Human Behaviour", at the National Level of thirty participants from across India (2005).
3. Mr. G. K. Agarwal, Associate Lecturer, was selected as the member of the Royal Society of Chemistry, U.K., (2005).

Student Activities

1. The department has initiated an interactive and purposeful student activity at the undergraduate level by way of introducing study-oriented projects based on vivid themes related to "Emerging areas of Applied Chemistry" as suggested by the faculty. At the end of the term, these projects are evaluated and scope of further improvements is suggested.
2. The students of M.Tech. Environmental Science and Engineering have been actively involved in sampling and analysis of various ground and surface water resources in and around BIT as a part of community development programme activity under TEQIP sponsored by the World Bank.

DEPARTMENT OF APPLIED MATHEMATICS

Department of Applied Mathematics is one of the oldest departments of the Institute. The department had 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**” since 2002-03 session. 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 modelling; fuzzy optimisation, seismology, differential equation, vibration and finite element application in engineering problems.

The department is getting involved step by step in research in Meteorology and Glaciology (Himalayan Glaciers) and Water Resources Management problems.

Department of Science and Technology (ESS Division), Govt. of India has involved this department in the CTCZ (Continental Tropical Convergence Zone) campaign, which will commence from the year 2007. The campaign involves modelling as well as field studies. Prof. N.C. Mahanti, head of the department (P.I.), and Dr. Manoj Kumar, Scientific Officer (Co-P.I.) were invited to attend the first meeting of Science Plan of CTCZ held at Indian Institute of Tropical Meteorology, Pune during January 20-21, 2006 and presented the project proposal before PAMC for its final approval. In the meeting, BIT has been asked to set up an Agro meteorological observatory and install micrometeorological tower at BIT campus and the final approval is expected soon.

Prof. Mahanti was also invited to participate in the brainstorming meeting on **Severe Thunderstorms** : observations and regional modelling (STORM) held during March 21-22, 2006 organised by IIT, Kharagpur. BIT, Mesra has been chosen as resource Institution in the field campaign and modelling studies of STORM.

A group of French Scientists comprising of Prof. Pierre Chevallier and Dr. Anne Coudrain of Great Ice, IRD, University of Montpellier, France visited the Institute during March 19-20, 2006 and met the Vice chancellor in connection with the Indo-French collaboration in the study of Himalayan Glacier (Chhota Shigri, Himachal Pradesh) and management of water resources.

After that visit of BIT, a meeting was convened at WWF India, Lodhi Estate, New Delhi during March 22-23, 2006 in which JNU, New Delhi, Aligarh Muslim University, BIT, Mesra, NCMRWF, DST and Wadia Institute of Himalayan Geology, IRD, France; University of Montpellier, France; French Embassy in India participated. Prof. Mahanti and Dr. Rajesh Kumar from BIT attended the meeting. In the meeting, it was decided that BIT, Mesra would act as Principal Collaborator in the Indo-French Collaborative Project and Dr. Rajesh Kumar will serve the role of Principal Investigator from India. MoU between BIT and IRD, France in this regard will be signed before the commencement of the project.

Degree/Diploma offered

M.Tech. in Scientific Computing.

Faculty Position

Professor - 1

Reader - 5

Lecturer - 6

Assoc. Lecturer - 2

Scientific Officer - 2

RA-Cum-Tutor - 2

Number of students enrolled/registered with the Department (as on Feb. 06)

Course	Semester	No. of Student
M.Tech (Scientific Computing)	Sem. I	05
M.Tech (Scientific Computing)	Sem. III	06
Total		11

Academic Innovations, Research and Development Activities

A. Project submitted during the year 2005-06

Mass, Energy and Hydrological balances of Chhota Shigri Glacier (Himachal Pradesh)
- Submitted to Indo-French cell under Indo-French collaboration (PI: Dr. Rajesh Kumar)

Development of a forest fire forecasting system for eastern region of India using statistical forecasting techniques and Web-Based Geographical Information System (GIS), submitted to NDRMS, DST, New Delhi (PI : Dr. Manish Trivedi Co-PIs : Dr. Rajesh Kumar, Dr. Manoj Kumar & Prof. NC Mahanti)

Hydrological modelling of land surface processes over the Subarnarekha River Basin, submitted to DST (PI : Dr. N.C. Mahanti and Co-PI : Dr. Manoj Kumar) and presented before PAMC for the final approval.

B. Seminars/Conferences/Short-term courses conducted by the Department

1. Brainstorming seminar on continental tropical convergence zone (CTCZ), June 28-30, 2005, sponsored by DST, New Delhi. Experts from organizations notably those involved of DST, IITM, IMD, ISRO, IISc, Bangalore, Jadavpur University, IIT, Delhi were attended the seminar.

C. Publications by Faculty

International Journal

1. Effect of non-uniform slot injection (suction) on a forced flow over a slender cylinder, P.Datta, D. Anil Kumar, S. Roy and N.C. Mahanti, International Journal of Heat and Mass Transfer, UK (Published on line on 24th Jan, 2006).
2. Non-linear solution of an unsteady mixed convection flow over a vertical cone with suction or injection, S. Roy, P. Datta and N.C. Mahanti, International Journal of Heat and Mass Transfer, UK (submitted after minor revision)
3. Existing stability of variability ratio with application in post-stratification. D. Shukla and Manish Trivedi, Int. Journal of Hydrology. (Accepted for publication).

National Journal

An estimator under post-stratified cluster sampling, D. Shukla, Manish Trivedi, Applied Science Periodical, Vol. VII, No. 2, pp.130-133, 2005.

Estimation of natural frequency and storey shear of building due to mass and stiffness variations under seismic excitation, Institute of Engineers Magazine, March issue, 2006.

D. Seminar/Symposium/Short term course attended by Faculty members

1. M. Sathiamoorthy

- I. National conference on Computational 'Methods in continuum Mechanics, Anna University, Chennai, 2006.
- II. All India seminar on Advances in Computer and Information Technology, March 11-12, 2006, CMRI Dhanbad.

2. Ranjan Chattoraj

- I. National seminar on Advances in Computer and information Technology, March 11-12, 2006, CMRI, Dhanbad.
- II. National seminar on Recent advances in Theoretical and applied Seismology, March 20-21, 2006, ISM, Dhanbad.

3. Dr. S.K. Samal

- (i) National seminar on Recent advances in theoretical and applied seismology, March 20-21, 2006, ISM, Dhanbad.

4. Manoj Kumar

- (i) National seminar on Current Trends in Mathematics and computations, BIT, NOIDA Centre, Dec, 2005.
- (ii) International conference on Mesoscale processes in atmosphere, ocean and environmental systems, IIT Delhi, February 14-17, 2006.

5. Dr. Manish Trivedi

- (i) Short term course on Forecasting Techniques in Business and Industry, Dec. 12-18, 2005, Organised by IIT, Kharagpur.

6. Dr. S. K. Chakraborty

- (i) Short-term course on Forecasting Techniques in Business and Industry, Dec. 12-18, 2005, Organised by IIT, Kharagpur.

7. Ms. Pallavika

- (i) National seminar on Recent advances in theoretical and applied seismology, March 20-21, 2006, ISM, Dhanbad.

E. Award/Nomination of faculty by important organizations

Dr. S. Padhi has been awarded BOYSCAST fellowship of DST, Govt. of India.

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 only 5 students for the programme. The programme got the AICTE approval in September 2004 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 were 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 has a teacher student ratio about 1:3. Therefore, all the students get individual attention in their academic progress and in case of difficulties if any.

The department is active in the following 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 And Hydraulic Controls

Degree/ Diploma offered

UG : The Department does not offer any undergraduate programme as a whole. However it offers subjects like **Engineering Mechanics**, which is a compulsory subject for all the branches of engineering students.

PG : 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 - 5

Number of students enrolled/registered with the Department : (as on Feb. 2006)

Course	No. of Student
ME (CAAD)	8

Academic Innovations, Research and Development activities

(A) Publications by faculty

Journals

National

1. 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 sciences - (India)
2. 1. R. P. Singh and S. K. Jain, 'Study of free asymmetric transverse vibration of linearly varying thickness polar orthotropic annular plate with flexible edge conditions revised paper accepted for publication in the journal of structural engineering (India)

International

1. 1. 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 accepted for publication in Tamkang Journal of science and engineering (Taiwan).
2. 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.)
3. P. Topdar, A.H. Sheikh and N. Dhang. "Response and Control of Smart laminates using a Refined Hybrid Plate Model." AIAA Journal (Revised manuscript communicated).

(B) Seminar / Symposium / short term course attended by faculty members

1. Mr. Kishan Chowdhury and Mr. Alok Kumar attended a workshop on "**Value-added life style management**" organized by the Department of Production Engineering, BIT Mesra in May, 2005.

- II. Mr. Kishan Chowdhury attended a workshop on “Value-added time management” organized by the Department of Production Engineering, BIT Mesra and Institute of Engineers, India (Jharkhand chapter) in September, 2005.
- III. Mr. Sankha Bhaduri participated in the workshop on “Advanced ANSYS” held at the ANSYS Bangalore during Nov. 29-Dec. 2, 2005.
- IV. Mr. Kishan Chowdhury, Mr. Alok Kumar and Mr. Sankha Bhaduri participated in a short term course on “Mechatronics, Robotics and Automation” held at the Bengal Engineering and Science University, Howrah during January 1-7, 2006.

Infrastructural facilities during the year 2004-2005

The computational facility includes a reasonable number of networked workstations with Pentium machines and an extensive array of software for engineering analysis. Recently ANSYS 5.4 a user friendly software for structural analysis in various field and ADAMS 9.1 for analysis of rigid body dynamics as well as kinematic analysis have been introduced.

The central CAAD laboratory has a Wipro Pentium system, Acermate 920 and 486/G with at least thirty terminals for the use of students. This laboratory has many software packages. A central mainframe computer facility PARAM 10000 is available for the students and faculty members for extensive computational work.

DEPARTMENT OF APPLIED PHYSICS

Brief description of the Department

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 emerging 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 nano science and technologies, plasma science & technologies and laser applications. At present 16 faculty members and 14 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, development of nano level hard coatings (DLC) etc. At present, research activities are carried out in the following areas (i) Plasma Technology, (ii) Material science, (iii) Applied Optics, (iv) Composite Materials, (v) Photonics and Optical Communications. Different research groups are working in close collaboration, on both theoretical and experimental programs, with organizations of national

importance such as 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 and Delaware State University, USA.

Two landmarks of last year (2005-2006) which could be mentioned specially are

- (i) Graduation of second batch M.Tech (New Materials and Processing Technology) students. Three of them are pursuing their Ph. D and two have joined as faculty in Engineering Institution.
- (ii) The Department has obtained four New R&D Projects from DST, DRDO, AR&DB and UGC.

Other important developmental activities which have taken place during last year are

- I. Modernization of Applied Optics Laboratory to carry out R&D work on Bio-Medical imaging and image processing.
- II. Modernization of Material Science Laboratory by adding Metallurgical Microscope (Leica), a salt Spray Chamber and a Cryostat.

The faculty members of the department are actively engaged in Research and Developmental activities. During last one year many Research papers of the department have been accepted in International Conferences in different countries. During last one year 30 research papers have been published in international journals and 1 research paper has been published in national journals. In addition, more than 16 research papers have been presented in seminars/conference/seminar proceedings. Dr. P. K. Barhai Visited University of Duisburg, Essen, Germany, along with Vice Chancellor Dr. S.K. Mukherjee and delivered an Invited Talk

Degree/Diploma offered

UG : Physics Courses offered to BE students.

PG : M.Tech (Specialization : New Materials and Processing Technology).

Faculty Position

Professor - 5

Reader - 3

Lecturer - 4

Lecturer (Sel. Gr.) - 2

Assoc. Lecturer - 1

Scientific Officer - 2

No of students enrolled/registered with Department (as on Feb. 2005)

Name of Course	No. of Student
B.E. - Physics-II	480
M.Tech - NMPT	5
Total	485

Academic Innovations, Research & Development activities

A. Ongoing Project : Mention Project title, funding agency, date of sanction, sanction amount and duration of the project.

Sl. No.	Principal Investigator	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount in Lacs Rs.	Duration in Years
1.	Dr. P.K. Barhai	Fund for Infrastructure in Science and Technology (FIST)	DST		25.00	3
2.	Dr. A. K. Shirivastava	Effect of low temperature on mechanical properties of composites	ARDB	26.05.04	7.68	2
3.	Dr. S. Konar	Simulation and Analytical Investigation of Nonlinear Optical Pulse Propagation in Photorefractive Crystals	DRDO	21/11/05	14.84	3
4.	Dr. S. Konar	FDTD Modeling of Photonic Crystal Fibers : Fundamental Properties and Device Applications	DST	01/02/06	15.97	3
5.	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	22.00	3
6.	Dr. S. Medhekar & P.K.Barhai	Theoretical Investigation of Induced Nonlinear Optical Fiber Waveguides and Devices	UGC	1.7.2003	3.10	3
7.	Dr. A. K. Sarma	Some Basic Research on Experimental Dusty Plasma	DST	21.08.03	4.14	3
8.	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	8.87	3
9.	M. K. Sinha & Dr. (Mrs) S. Kesari	Studies on thin film thermocouples for aerospace applications	ISRO	1/5/2004	10.86	2
10.	Dr. S. K. Sinha - I	Oxidation resistance studies of titanium alloys in the temperature range 500-700°C : the effect of coating and trace element addition	AR&DB	20/9/2005	4.68	3
11.	Dr. (Mrs) S. Kesari	ESR study of magnetic homogeneity in thin films of colossal magnetoresistive manganites	UGC	18/3/06	4.89	3

B. Project Completed During the year 2005-2006

Sl. No.	Principal Investigator	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount in Lacs Rs.	Duration in Years
1.	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	14.34	3

C. Project Submitted during the year 2005-2006

Sl. No.	Principal Investigator	Project Title	Funding Agency	Duration in Years
1.	Dr. J. T. Andrews	Thermal damage monitoring in Tissue using OCT	AICTE-RPS	2
2.	Dr. S. K. Sinha - II	Conversion of Coal fly ash into Geolite for Agricultural Soil Modification	Ministry of	2
3.	Dr. S. K. Sinha - I	Growth and characterization of metallic nitrides	UGC-DAE	3

Seminar/conference/short term course conducted by the Department. Number of Delegates, Name of Dignitaries

- (i) Dr. P.K.Barhai jointly with Dr. J.T.Andrews organised a Workshop on "World year of Physics-WYP-2005". The Workshop was sponsored by DST, Government of Jharkhand.

Details of participants

Total Number of participants	:	344
Total number of students	:	220
Total Number of teachers	:	073
Number of senior scientists attended	:	051
Number of Schools participated	:	028
Number Colleges participated	:	006
Number of speakers	:	012

Names of dignitaries

Mr. Saryu Rai, Dy. Chairman, Planning Comm. (JH)

Mrs. Mridula Sinha, Secretary, DST(JH)

Dr. Loic Villain, Paris 2 University, France

Dr. H. C. Pant, BARC, Mumbai

Dr. S. Mukherjee, IPR, Gandhu Nagar

- (ii) Dr. P.K. Barhai jointly with Dr. J.T.Andrews organised a one day Workshop on "Academic Reforms". The Workshop was sponsored by TEQIP, Government of India

Number of participants : 105

Names of dignitaries

Mrs. Mridula Sinha, Secretary, DST(JH)

Dr. R. K. Singh, Chairman IETE, Ranchi

Dr. Rajakumar, Dean Academics, IIT-Kgp

Publication by the faculty

Journals

International Journals

1. Gajendra Prasad Singh, J. Alphonsa, P.K.Barhai, P.A.Rayjada, P.M.Raole, S. Mukherjee; Effect of Surface Roughness on the Properties of the Layer Formed on AISI 304 Stainless Steel After Plasma Nitriding; *Surface and Coating Technology* (in Press)
2. S.G. Rakesh, P.K.Barhai, A.Sasoh, G.Jagadeesh; Presence of Shock Wave Like Structures in Pedestrian Motion; *Shock Waves*, Z. Jiang (Ed), Springer (2005) , pp 1297-1305
3. R. K .Paul, J.T. Andrews, K Bose and P. K. Barhai, Reconstruction Errors in Abel Inversion; *Plasma Devices and Operations* 13, 282-289 (2005)
4. Amitava Ray, M.S.Prasad, P.K.Barhai and S.K.Mukherjee; Micro structural Characteristics of Prematurely Failed Cold Strip Mill Work-Rolls: Some Observations on Spalling Susceptibility; *Journal of Materials Engineering and Performance* 14, 194-202 (2005)
5. I. A. Akimov, J. T. Andrews & F. Henneberger (2006) Stimulated emission from the biexciton in a single quantum dot, *Phys. Rev. Lett.*, 96, 067401.
6. R. Poddar, S. R. Sharma, K. Bose, P. Sen & J. T. Andrews (2006) Understanding laser modes using Optical Coherence Tomography, *Am. J. Physics*, 74 (2006).
7. A. Sarma, S.Saitau, R. Schrittwieser & Y. Nakamura; *Plasma Physics & Cont. Fusion*, 47, 1415 (2005)
8. R. Schrittwieser, A. Sarma, G. Amarandei, C. Ionita, T. Klinger, O. Grukler, A. Vogelsang & T. Windisch; *Phys. Scripta* T 123, 94 (2006)
9. A. Biswas, Swetansumala and S. Konar; Dynamically Stable Dispersion Managed Solitons in Parabolic law Nonlinearity; *Journal of Electromagnetic Waves and Applications* 20, No: 9, 1249-1258 (2006)

10. Swetansumala, A. Biswas and S. Konar; Dynamically Stable Super Gaussian Solitons in Semiconductor Doped Glass Fibers; *Journal of Electromagnetic Waves and Applications* 20 (7), 901-912 (2006)
11. A. Biswas and Swapan Konar; Quasi Particle Theory of Optical Soliton Interaction; *Communications in Nonlinear Sciences and Numerical Simulations* (in Press)
12. A. Biswas and Swapan Konar and Essaid Zerrad; Soliton Soliton Interaction With Parabolic Law Nonlinearity; *Journal of Electromagnetic Waves and Applications* 20, No: 7, 926-939 (2006)
13. A. Biswas and Swapan Konar and Essaid Zerrad; Intrachannel Collision of non Kerr law Optical Solitons; *Dynamics of Continuous, Discrete and Impulsive Systems; Series A* (in press)
14. A. Biswas and Swapan Konar; Soliton Soliton Interaction With Hamiltonian Perturbation *Dynamics of Continuous, Discrete and Impulsive Systems; Series A* 13, 117-146 (2006)
15. S. Konar, Soumendu Jana and Manoj Mishra; Induced Focusing and All Optical Switching in Cubic Quintic Nonlinear Media; *Optics Communications* 255, 114-129 (2005)
16. S. Konar and Manoj Mishra; Effect of Higher Order Nonlinearities on Induced Focusing and On the Conversion of Circular Gaussian laser beams into Elliptic Gaussian Laser Beam; *J. Optics A: Pure & Appl. Optics* 7, 576-584 (2005), UK
17. Shwetanshumala, Soumendu Jana, and S. Konar ; Propagation of a mixture of modes of a laser beam in a medium with saturable nonlinearity; *J. Electromagnetic Waves and Applications* 20, N. 01, 2193-2205 (2006) USA
18. S. Konar, Manoj Mishra and S. Jana; Dispersion Managed Optical Solitons With Higher Order Nonlinearity; *Fiber and Integrated Optics* 24, No.6, 537-548 (2005) USA
19. S. Konar and A. Biswas; Soliton-Soliton Interactions With Power Law Nonlinearity *Progress in Electromagnetic Research* 54, 95-108 (2005), USA
20. S. Konar and S. Jana; Nonlinear Propagation of a Mixture of TEM₀₀ and TEM₀₁ Modes of a Laser Beam in a Cubic Quintic Medium; *Physica Scripta* 71, 198-203 (2005), Sweeden
21. S. Konar, Manoj Mishra and S. Jana; The Effect of Quintic Nonlinearity on the Propagation Characteristics of Dispersion Managed Optical Solitons; *Chaos Soliton and Fractals* 29 (4), 823(2006)
22. S. Konar and A. Biswas ; Intra Channel Collision of Kerr Law Optical Solitons *Progress in Electromagnetic Research* 53, 55-67 (2005), USA
23. Anjan Biswas and Swapan Konar; The nonlinear Schrödinger's Equation and Soliton- Soliton Interaction; *Int. J. of Pure & Applied Mathematics* 20, No 2, 159-207 (2005), Bulgaria
24. J. Thomas Andrews, P. K .Mohanty and P. K. Gupta; New Design for Optical Coherence Tomography; *Optic Express* (2005)
25. 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).

26. S Medhekar, R. K. Sarkar and P. P. Paltani, Coupled Spatial-Soliton Pairs in Saturating Medium, *Optics Letters* vol. 31, No. 1 Jan. 2006, pp-77-79.
27. S Medhekar and Ram Krishna Sarkar, All-optical bistable and astable multivibrators" *Nonlinear Optics, Quantum Optics* (in press).
28. "Passive, 'Self-Trapped Family All-Optical Half Adder using All-Optical X-OR, and AND Gate" S Medhekar and Ram Krishna Sarkar *Czechoslovak J. Physics*, Vol. 56, No. (2006)
29. Ram Krishna Sarkar and S Medhekar; "Propagation of Doughnut mode in Nonlinear Media" *Nonlinear Optics, Quantum Optics* (in Press).
30. S Medhekar and Punya Prasanna Paltani; "All-Optical Switching and Tunable Wavelength Filtering in Grating Assisted Directional Coupler" *Nonlinear Optics, Quantum Optics* (in press)

National Journals

1. Manoj Mishra and Swapan Konar; Induced Focusing and Conversion of a Gaussian Beam into an Elliptic Gaussian Beam ; *Pramana* 65, No. 3, 425-436 (2005) India

Proceedings

International Proceedings

1. P.K.Barhai, G.P.Singh, S.Mukherjee and J. Alphonsa; Effect of Surface Roughness and Post Sputtering on Plasma Nitriding of AISI 304 Steel; "*International Workshop on Plasma assisted Surface Modification*" April 20-22, 2005, University of Duisburg, Essen, Germany.
2. N. Kumari, P.K.Barhai and S.K.Mukherjee; Development and Applications of Corrosion Resistant Coating of Alluminium- Bronze Using Anodic vacuum Arc Deposition Technique; "*International Workshop on Plasma assisted Surface Modification*" April 20-22, 2005, University of Duisburg, Essen, Germany
3. P.K. Barhai, H. Gaur and S.K.Mishra; SiCN hard Coatings by Magnetron Sputtering; "*International Workshop on Plasma assisted Surface Modification*" April 20-22, 2005, University of Duisburg, Essen, Germany.
4. P.K. Barhai and R. Sarma; Diamond Like Carbon Films as Protective Coating For Soft Surfaces. "*International Workshop on Plasma assisted Surface Modification*" April 20-22, 2005, University of Duisburg, Essen, Germany.
5. A. Sarma, P. Balan, C. Ionita, R. Schrittwieser and P.K. Barhai; Existence of Different Plasma Modes in Presence of A Fire ball in a Beam Plasma System; The 2nd International Conference on The Frontiers of Plasma Science and Technology, Sponsored by IAEA, DST India & IUPAP, Feb 21-25, 2005, Goa, India
6. A. Sarma, G. Amarandei, T. Klinger, O. Grulke, A. Vogelsang, T. Windisch, C. Ionita, R. Schrittwieser; Laser Heated Emissive Probe - a new Diagnostic Tool for Direct Measurements of the Plasma Potential, *The 6th International Workshop on Electrical Probes in Magnetized Plasmas* (IWEP 2005), Hanyang University, Seoul, South Korea.
7. A. Sarma, P. Balan, C. Ionita, R. Schrittwieser & P. K. Barhai; Existence of Different Plasma modes in presence of a Fire - ball in a Beam Plasma System, Presented in *Frontiers in Plasma Physics*, Goa, India during 23rd to 26th Feb. 2005

8. S. Keshri and V. Dayal, Synthesis and Characterization of Pure Phase Bi-2223 Superconducting Sample, *International Meeting on Frontiers of Physics*, Kuala Lumpur, Malaysia; 25-28 July, 2005.

National Proceedings

1. P.K. Barhai, Anodic vacuum Arc Coating for Corrosion Resistance; 1st PSSI national Workshop on "Plasma Science & Technology: Industrial Applications & Diagnostics" August 30- September 2, 2005, Birla Institute of Technology, Mesra, Extension Centre, 27, Malviya Industrial Area, Malviya Nagar, Jaipur, India
2. A. Sarma, G. Amarandei, T. Klinger, O. Grulke, A. Vogelsang, T. Windisch, C. Ionita & R. Schrittwieser, A Novel Technique for Measuring Direct Plasma Potential in any Plasma Devices *20th National Symposium on Plasma Science & Technology, "Plasma 2005"* International School of Photonics, Cochin University of Science & Technology, Cochin 2005.
3. A. Sarma, C. Datta, Sudhir K. Saw, R. K. Paul and P. K. Barhai,; Functionality Studies of Jute Fiber Polymer in Glow Discharge Plasma *20th National Symposium on Plasma Science & Technology, "Plasma 2005"* International School of Photonics, Cochin University of Science & Technology, Cochin 2005.
4. S. Keshri and V. Dayal, Thermoelectric power of Bi-2223 superconducting samples, *National Conference on Recent Advances on Materials Science. (NCRAMS)*; Nagpur, 21-22 January 2006.
5. "Synchronous Couplers : Symmetric and Asymmetric Directional Coupler". Accepted in 'Seminar on Optics of Photonic Band gap Materials' held on 28-30 Oct 2005 at IIT Kharagpur, INDIA.
6. B. Sarma "Study of Grating Assisted Directional Couplers" Accepted in the *National Laser Symposium "NLS-5"* held on 7-10 Dec. 2005 at Vallore Institute of Technology, Vallore, INDIA.
7. B. Sarma; Magnetic Presheath behaviour adjacent to a rough surface.
8. G.G. Sarkar, Laser based measurement- A perfect Solution for Feedback Signal in Process Automation : Proceedings of the Seminar on Applications of Laser in Material Processing 110-115, Feb 3-4 (2006), Jadavpur University.

Seminar/ Symposium/Short term course attended by faculty members

International Conference

1. Dr. P. K. Barhai visited University of Duisburg, Essen, Germany, to deliver an Invited Talk.
2. Dr. A. K. Shrivastava has attended International Conference at LesDiablerets, Switzerland.
3. Dr. S. Konar has attended 10th International Symposium on Microwave and Optical Technologies at Fukuoka Institute of Technology, Japan.
4. Dr. (Mrs) S. Keshari has attended International Meeting on Frontiers of Physics, Kuala Lumpur, Malaysia

5. Dr. Arun Sarma, attended 6th International Workshop on Electrical Probes in Magnetized Plasma at Hanyang University, Seoul, South Korea, and delivered Invited talk.
6. Mr. Manish Sinha visited University of Duisburg, Essen, Germany.

National Conference

1. Dr. P. K. Barhai organized (Co Chairman) the First National Workshop of Industrial Plasma Applications & Diagnostics, Jaipur
2. Dr. P. K. Barhai chaired a session in the First National Workshop of Industrial Plasma Applications & Diagnostics, Jaipur.
3. Dr. G. G. Sarkar has attended the Sixth Biennial Workshop on Applications of Lasers in Mechanical Industries, Jadavpur University, Kolkata, and delivered Invited Lecture.
4. Dr. S. Konar attended Seminar on Optics of Photonic Bandgap Materials, IIT Kharagpur.
5. Dr. A. Sarma attended First National Workshop of Industrial Plasma Applications & Diagnostics, Jaipur.
6. Dr. (Mrs) B. Sarma attended 20th National Symposium on Plasma Science and Technology, Plasma -2005, Kochin
7. Dr. R.K. Pal attended 20th National Symposium on Plasma Science and Technology, Plasma -2005, Kochin
8. Dr. A. Sarma attended 20th National Symposium on Plasma Science and Technology, Plasma -2005, Kochin
9. Dr. S. K. Sinha-II has attended National Conference on Utilization of Fly Ash, Allahabad
10. Dr. (Mrs) S. Keshri has attended International Symposium on Intelligence Based Materials and Manufacturing, BIT, Mesra, Ranchi; 18-20 Aug., 2005.
11. Dr. (Mrs) S. Keshri has attended National Conference on Recent Advances on Materials Sciences. (NCRAMS), Nagpur, 21-22 January 2006.

Award/Nomination of faculty by important organizations

1. Dr. Ram Prakash has been awarded **BOYSCAST** Fellowship to conduct Post-Doctoral research work at the Max Planck Institute, Germany.
2. Mrs. S. Keshri, Best oral presentation of *National Conference on Recent Advances on Materials Sciences (NCRAMS)*, Nagpur, 21-22 January 2006.
3. Dr. S. Konar has been selected as reviewer of reputed international journals (i) Optics Communications, (ii) Journal of Electromagnetic Waves and Applications (USA), (iii) Dynamics of Continuous, Discrete and Impulsive Systems; Series A (CANADA), (iv) Indian Journal of Physics.

Student Activities

Information Regarding Patents

1. A safe Laser-Line Projection System (Dr. G.G. Sarkar) : Patent Sealed in 2006; 609/CAL/2001(198129)- MECON

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, this institute has running a postgraduate programme in Biomedical Instrumentation that 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 Instrumentation, its technology, its use and intelligent operation to assist physicians and surgeons. Apart from the above mentioned medical institutions, the department has continued interaction with different other hospitals such as 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 also has a strong collaboration with G.E. Medical Systems (India). One G.E. fund scholarship amounting to Rs. 2 lacs is being currently awarded to eligible students of M.Sc. Biomedical Instrumentation, to meet total expenses for five semesters. The G.E. Medical Systems (India) has now also given their consent to provide training to ten other students during their fifth semester. The department is trying to continue the collaborative works with different other organizations in the area of Biomedical Instruments.

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 are enthusiastically involved to continue the ongoing research in the area of Biomedical Signal Processing, Biomedical Instrumentation, Biomedical 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. (Biomedical Instrumentation)

Ph.D.

Faculty Position

Professor - 1

Lecturer - 2

Assoc. Lecturer - 1

Number of students enrolled with department : 38

Academic Innovation, Research and Development activities

1. The course structure and the syllabus for the M.Sc. BMI course have been revised and put to practice from session 2005-2006.

2. A research fellow is working on "Electronic and computational modeling of biological substrates" - a project under TEQIP.

Project completed during the year 2005-2006

Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of Project in Years
Control of multifunctional prosthesis through simulation of myoelectric signals	UGC	March 2001	2,77,500.00	3

Project submitted during the Year 2005-2006 (details as B)

Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of Project in Years
Design of Computerized Automatic Detection System for changes in Sleep-EEG in an Animal Model of Psycho-physiological Stress	AICTE	Submitted in Sept. 2005	9.75	5
Design of a Computer based Thermoregulatory Mechanism and Automatic Detection System for changes in Sleep-EEG in an Animal Model of Heat Stress	UGC	Submitted in June 2006	11.86	3

Seminar/conference/short term course conducted by the Department. Number of delegates, Name of dignitaries

1. Organized BIOMED-2005, National Conference on "Emerging Trends in Biomedical Instrumentation" held on 29-30 April 2005 at Birla Institute of Technology, Mesra, Ranchi.

Number of Delegates : 70

Number of Dignitaries : 08

Name of the Dignitaries

Sl. No.	Name of Dignitaries	Designation	Organisation
1.	Prof. Sneha Anand	Professor Center for Biomedical Engineering	IIT, Delhi
2.	Dr. V. R. Singh	Scientist 'G' (Directors-grade Sci) and Head Division of Instrumentation, Sensors and Biomedical Measurements and Standards	NPL, Delhi
3.	Prof. A. K. Ray	Coordinator School of Biomedical Engineering	IT, BHU, Varanasi
4.	Prof. S. K. Pal	Head Machine Intelligence Unit	ISI, Kolkata
5.	Prof. D. N. Tebarewala	Professor & Director School of Bio Sc. & Engg	Jadavpur Univ., Kolkata
6.	Dr. S. N. Sarbadhikari	Associate Professor, Department of Biomedical Engineering	AVV, Coimbatore
7.	Dr. S. Haque Nizami	Director	CIP, Ranchi
8.	Prof. M. Arumugam	Professor, Department of Physics	Anna University, Chennai

Publication by faculty

International Journals

1. Sinha, R. K., Aggarwal, Y. and Das, B. N. **Automated recognition of synchro EEG power spectra by ANN**, Journal of Medical Engineering and Technology (Taylor & Francis). (Communicated)
2. Sinha, R. K. and Ray, A. K. **Sleep-wake study in an animal model of acute and chronic heat stress**, Physiology and Behavior. (Communicated)
3. Sinha, R. K. and Ray, A. K. **Exposure to high ambient heat alters frequency spectrum of Sleep-EEG in rats**, The Journal of Physiological Sciences. (Communicated)
4. Sinha, R. K. and Aggarwal, Y. **Depletion of serotonin synthesis with p-CPA pretreatment alters EEG in urethane anesthetized rats under whole body hyperthermia**, Iranian Biomedical Journal. (Communicated)
5. Sinha, R. K. **Wavelet based backpropagation artificial neural network to classify changes in heart sound due to mitral valve regurgitation**, Biomedical Signal Processing and Control. (Communicated)
6. Sinha, R. K. **An approach to estimate EEG power spectrum as an index of heat stress using backpropagation artificial neural network**, Medical Engineering and Physics. (Communicated)

7. Sinha, R. K. p-CPA pretreatment reverses the changes in sleep and behavior following acute immobilization stress, The Japanese Journal of Physiology. (Communicated)
8. R. K. Sinha, P. K. Upadhaya, Y. Aggarwal, B.N.Das, B.M. Karan and A.K. Ray. "Wavelet Based Neural Network to Classify Changes in Heart Sound Due to Mitral Valve Regurgitation". Medical and Biological Engineering Computing (Communicated)

National Journals

1. Sinha, R. K. and Aggarwal, Y. Design of a computerized human resource information system for hospitals, Journal of the Academy of Hospital Administration. (Communicated)
2. Sinha, R. K. and Gupta, R. N. Serotonin inhibition by p-CPA pretreatment alters the changes in sleep and behavior in an animal model of acute immobilization stress. Pharmbit, p30-38, 2006.

Books/Monographs

1. Emerging Trends in Biomedical Instrumentation, Edited by Rakesh Kumar Sinha and Barda Nand Das is in Press.

Seminar/ Symposium/Short term course attended by faculty members

1. Faculty members and students of Department of Biomedical Instrumentation attended one-day workshop on "Modern Medical Equipment" arranged specially for them by Advanced Diagnostic Centre, Ranchi on 2005.
2. Mr. Surendra Kumar (Lecturer) attended a National workshop on "Virtual Instrumentation and Digital System Design" at N.I.T. Kurukshetra on December 15-17, 2005.

Institute Industries Interaction Programme

Mr. Surendra Kumar, offered consultancy services to the following industries under the program.

Name of the Industry	Date	Problem	Status
Meditron, BIT, Mesra	05.01.06	Design a 33 KV vaccum circuit breaker and improvement in 11 KV vaccum circuit breaker currently they are manufacturing.	A Prototype has been designed after collecting the data from them.
Chotanagpur Wire Rope, Mahelong	12.01.06	Design and Development of a rope width Sensors.	A prototype design has been suggested and after manufacturing this prototype they will again call us for further testing.

Experts lecture by Prof. Amit Kumar Ray from Department of Biomedical Engineering, Institute of Technology, Banaras Hindu University, Varanasi.

National Institute of Mental Health and Neuro science, Bangalore Dr. R. K. Sinha, is doing training under TEQIP in NIHMANS, Bangalore.

1. B. B. Pal, D. Pal and B. N. Das, Optimized applicator with analog active filter for chemotherapy, **National conference on Emerging Trends in Biomedical Instrumentation, Biomed-2005**, BIT Mesra, Ranchi.
2. Jaiswal, S., Ray, A. K., Singh, S. P., Agrawal, N. K., and Sinha, R. K. (2005) Chronic exposure of non-ionizing, non-thermal 2450 MHz Microwave radiation alters the behaviour of rats, **National conference on Emerging Trends in Biomedical Instrumentation, Biomed-2005**, BIT Mesra, Ranchi.
3. Upadhyay, P. K. and Sinha, R. K. (2005) Classification of sleep-wake stages of rat EEG in hot environment using wavelet transform and self organizing feature map, **National conference on Emerging Trends in Biomedical Instrumentation, Biomed-2005**, BIT Mesra, Ranchi.
4. B. B. Pal, D. Pal and B. N. Das, A modern scanning filter useful for phonocardiography using single output port, **National conference on Biomedical Engineering, NCBME-2006**, Sardar Patel Institute of Technology, Mumbai.
5. B. B. Pal, D. Pal and B. N. Das, Optimized diagnostic applicators suitable for hospitals, **National Symposium on Mathematical Methods and Applications, NSMMA-2005**, IIT, Madras, Chennai.

Students Activities

1. Community Development Program

In addition to grant of GE Fund Scholarship of Rs. 2 lacs, Mr. Krishanu Bhattacharjee has been sanctioned Rs. 15,000 only by them to be spent for community development program. He has undertaken a project under **National Service Scheme (NSS)** to run a “**BAL SANSKAR KENDRA**” in Jamwari village outside BIT Campus, Mesra where little kids of the village shall be taught the basic etiquettes of life besides other extra curricular activities.

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 presently offers three academic programmes namely 4-Year B.E. in Biotechnology, 2 Year M. Sc. in Bioinformatics and one Year PG Diploma in Bioinformatics. The department is also planning to introduce a postgraduate course in Biotechnology and Biochemical Engineering. The department has a well-defined independent building of about 35000 sq. ft. with well-equipped laboratories of Molecular Biology, Genetic Engineering and Cell Biology, Plant Tissue Culture, Microbiology, Proteomics, Bioinformatics, Bioprocess Engineering Chemical Engineering. 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 included are MegaBACE Automated DNA sequencer, GC-Mass Spectrophotometer, GC (FID), Real Time PCR, HPLC, Typhoon Laser imager, Lypholizer, Thermal cyclers, Gene pulser, Microplate reader, 2D electrophoresis system, Chromatography system, Spectrophotometers, Fluorimeters, Modern microscope with digital imaging system, Leica microscope with colony counter, Leica fluorescence microscope, Lab and Pilot scale Bioreactors, Cross-flow filtration systems.

Degree/diploma offered

B.E. (Biotechnology)

M. Sc. (Bioinformatics)

P.G. Diploma in Bioinformatics

Faculty position

Professor - 1

Reader - 2

Sr. Lecturer - 1

Lecturer - 7

Assoc. Lecturer - 3

Number of students enrolled/ registered with the Department (as on Feb. 2006)

Course		
BE-Biotechnology	Semester	No. of Student
	Semester II	41
	Semester IV	45
	Semester VI	39
	Semester VII	43
	Total	168

Academic Innovations, Research and Development activities

(A) Ongoing Projects : mention project title, funding agency, date of sanction, sanctioned amount and duration of project

Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of Project in Years
Study of biodiversity and molecular documentation of Guggul (<i>Commiphora wightii</i>) plants using plant biotechnological approaches	Dept. of Biotechnology, Govt. of India	22.10.04	16.95 lacs	3

(B) Project sanctioned during the year 2005-2006 (details as A)

Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of Project in Years
Development of Probes for early detection of micro organisms responsible for food spoilage during food processing and preservation	Ministry of Food Processing Inds., Govt. of India	15.02.06	80 lacs	2

(C) Project submitted during the year 2005-2006 (details as A)

Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of Project in Years
Genomic analysis of Tasar Silk Food plants : DNA profiling of Terminalia species using molecular markers and development of mapping population.	Dept. of Biotechnology, Govt. of India	20.02.06	32.16 lacs	3
Analysis of host-pathogen interaction in leaf rust infection of wheat : A transcriptomic approach	DBT, Govt. of India	May 2005	43.40 lacs	3
Development of Molecular Targets for Genetic Engineering on Metabolic Map of Isoprenoid Biosynthesis in Tulsi (<i>Ocimum sanctum</i> L.) using functional Genomic Approach	DBT, Govt. of India	Sept. 2005	33.87 lacs	3
Development of Suitable Dehydration Technology for Locally Available Fruits and Vegetables through Multishelf Forced Convection Solar Dryer in Socio-Economic Conditions of Users (SHG)	National Horticulture Board Ministry of Agriculture	Sept. 2005	25.00 lacs	3

(D) Publications by faculty

Journals

International & National

[Name of the Paper, Authors name, Journal/Conference s name, Vol./No./page]

1. R. Poddar, S. R. Sharma, A. S. Vidyarthi and J. T. Andrews. (2006) Optical Coherence Tomography- Major Breakthrough in Biomedical Sciences (Communicated to Journal of Medical Research).
2. N. Sinha, A. K. Sinha and A. S. Vidyarthi. (2006). Studies on Restoration by Postacyclin of Impaired Insuline Induced Interferon-i Production in Human Neutrophils in Human Breast Cancer (Communicated to Cancer Research).
3. Raju Poddar, S. R. Sharma, K. Bose, P. Sen and J. T. Andrews,"(2006) A Study of Longitudinal Laser Modes of a Semiconductor Laser Using Optical Coherence Tomography", American Journal of Physics (AJP) [In Press]

Proceedings

International

1. Rout, M. K. Engineering plant protein composition for improved nutrition : A current understanding of candidate proteins "International conference on Biotechnology approaches for Alleviating Malnutrition and Human health" UAS, Bangalore Jan 9-11, 2006
2. Rout, M. K., and Shukla, P.: Structure-function relationships of some food proteins - An overview International conference on Plant Genomics and Biotechnology: Challenges and opportunities". IGAU, Raipur, India. October 26-28, 2005
3. Halder P., Kumari S., Renu I.K., and Mukhopadhyay K. Use of Real Time PCR as Biosensor to Study Differential Gene Expression under Drought Stress in Rice (*Oryza sativa* var indica) International Workshop on Biosensors for Environmental Analysis, BITS, Goa , February 14-16 ,2006
4. Shukla Pratyooosh. 'Environmental Biotechnology: Techniques for Bioremediation of pollutants in mining areas". International Conference on INNOBP-Urban, Ipoh, Malaysia, March 6-9, 2005 .

National

1. A. S. Vidyarthi. Biopharmaceutical Research in India: Challenges and Opportunities. National Seminar on Emerging Trends in Bioprocess & Food Processing Industries HBTI Kanpur, March 25-26, 2006.
2. A. S. Vidyarthi. Bioremediation of Contaminated Sites and Treatment of Wastewater Generated due to Mining and Mineral Processing Industries: An Integrated Biotechnological Approach. Recent advances in Environmental Biotechnology for Forest and biodiversity Management, Ranchi, India, March 7-8, 2006.

3. A. S. Vidyarthi. Jharkhand Potential to transform as an industry-friendly Biovillage. Workshop on Technology Development, Utilization and Transfer, Mar 6, 2006.
4. D. Prasad & A. S. Vidyarthi. Recent trends in identification of spoilage microorganism in fruit and vegetables. BIT Ranchi March 3-5, 2006
5. A. S. Vidyarthi. Biopharmaceutical Research: Challenges in translating From Lab to Market. National Science Day, ILRI, Ranchi, Feb.28, 2006.
6. A. S. Vidyarthi. Biopharmaceutical Research: From Lab to Market. Invited Lecture in QIP Session, Jadavpur University, Kolkata, Jan 16-17, 2006.
7. A. S. Vidyarthi. Biotechnology in Jharkhand: Challenges & Opportunities. Sensitization programme on Biotechnology. SISI, Ranchi, Dec.27, 2005.
8. P. Shukla. Fungal Community Diversity: The Future of Bioprospecting. Conference on Bioprocess Engineering & Biotechnology: Trends & Opportunities, BIT Mesra, Ranchi. India, March 17-19, 2005,
9. A. S. Vidyarthi. Journey from Waste to Wealth: A Biotechnological Road Map. A Conference on Bioprocess Engineering and Biotechnology: Trends and Opportunities BIT, Ranchi, March. 17-19, 2005.
10. R. Poddar, S. R. Sharma, A. S. Vidyarthi and J. T. Andrews. An Approach to Non-invasive Measurement of Blood Glucose level By Optical Coherence Tomography (OCT). A Conference on Bioprocess Engineering and Biotechnology: Trends and Opportunities BIT, Ranchi, March. 17-19, 2005.

(E) Seminar/ Symposium/ Short-term Course attended by faculty members

1. A.S. Vidyarthi. International Seminar on Recent Trends in Applied Bioinformatics & Medi Informatics at. IIIT, Allahabad, November 6-7, 2005
2. A.S. Vidyarthi & K. Mukhopadhyay. Seminar on Ultra Performance Liquid Chromatography , Kolkata Dec.14, 2005.
3. K. Mukhopadhyay. National Seminar on 'Emerging scenario of Patents Protection, Valuation and Commercialization , organized by National Research Development Corporation at Kolkata on March 24, 2005.
4. K. Mukhopadhyay. Seminar on Real Time PCR , organized by Applied Biosystems Inc. at Kolkata on Nov. 15, 2005
5. M. K. Rout. International conference on Biotechnology approaches for Alleviating Malnutrition and Human health" BAMH 2006, Jan 9-11 2006 at University of Agricultural Sciences, Bangalore, India, Jointly organized by Perdue University, USA; USAID and ALO.
6. M. K. Rout. and P. Shukla. International conference on Plant Genomics and Biotechnology: Challenges and opportunities. ICPGB 2005, Oct 26-28, 2005 at Indira Gandhi Agricultural University, Raipur, Chhattisgarh, India.
7. P. Shukla. International Conference on INNOBP-Urban, Ipoh, Malaysia 6-9 March, 2005

8. P. Shukla. Conference on Bioprocess Engineering & Biotechnology: Trends & Opportunities , Deptt. of Biotechnology, BIT Mesra, Ranchi. India 17-19 March, 2005
9. R. Poddar. Workshop on Knowledge Discovery in Life Sciences: Structure-based Bioinformatics Approaches 19 - 22 December 2005, Bioinformatics Center, Pune University, Pune, India
10. R. Bandopadhyay & R. Poddar. Workshop on Content Development in e-Learning" under Technical Education Quality Improvement Programme (TEQIP), BIT, Ranchi, April 3-4, 2006
11. R. Bandopadhyay. One Day Workshop on Academic Reforms: Technical Education Quality Improvement Programme (TEQIP), BIT, Ranchi, December 15, 2005.

(F) Award/Nomination of faculty by important organizations

The Department of Biotechnology has been selected by the Public Intellectual Property Resource for Agriculture (PIPRA), University of California, USA for signing MoU in order to develop guidelines for sponsored research and product development & exploring the possibility of bundling specific technologies for commercial use and humanitarian purposes. Moreover the department has also been identified by PIPRA to develop opportunities for collaboration in IPR and Patenting.

1. Dr. Pratyosh Shukla of Department of Biotechnology was nominated by Government of Perak State, Malaysia for partnership matching and joint task force programmes in environmental biotechnology (Year 2005).
2. Dr. Pratyosh Shukla was nominated by ACLIMA, Spain for co operational projects under Pro Eco programme & nominated by Orion Life Sciences Inc. USA for organizing virtual conference in bioinformatics (Year 2005)

(G) Student Activities

1. Mr. Amulya N. Shrivastava and Subhadeep Sarker jointly published a research article entitled "Molecular Biomarkers: Their significance and application in marine pollution monitoring" in Ecotoxicity journal (Springer Group DOI 10.1007/s 10646-006-0069-1)
2. Both the students Mr. Amulya N. Shrivastava and Mr. S. Sarker bag the national fellowship for their research work.
3. Mr. Satya Sinha and Mr. Shashi Ranjan, student of BE Biotechnology semester VI were ranked 9th and 10th (on all India basis) respectively in GATE Examination.
4. Ms. Tanima Dubey, a student of BE Biotechnology semester VI, was invited to work on Bioinformatics by a US organization.
5. The students of BE (VI & VII Sem) had undergone training sessions in different research laboratories in India & Abroad to learn various techniques in biotechnology.
6. Many students of BE (VI & VII Sem) are learning various sophisticated techniques in major research laboratories of the department and have completed their Departmental Project presentations during December, 2005 & May, 2006

(H) Infrastructural facilities during the year 2005-06

1. Tissue Culture Laboratory.
2. Proteomics Facilities.
3. DNA Sequencing Unit.
4. GCMS Facility.
5. Fluorescent Microscopy & Stereo Zoom Microscopy Facilities.
6. BTIS- Sub DIC Establishment by support from DBT, Govt of India.

DEPARTMENT OF CIVIL ENGINEERING

The Department offers besides undergraduate degree course, postgraduate degree course with areas of specialisation in Soil Mechanics & Foundation Engineering and in Structural Engineering and doctoral programmes. It has been upgrading its laboratory facilities in line with the research programmes. The faculty is actively involved in laboratory testing work and also in the field. The expertise gained in field helps in passing on practical knowledge to the students while tackling actual problems. Computer applications are given due importance in solving real situation problems in Civil Engineering applications.

The Laboratories in the Department have been tailor-made to impart all practical knowledge to the students, required as a follow-up of the respective theory courses. In the **Cement & Concrete** laboratory, they learn about the properties of the ingredients in cement concrete and concerned tests to monitor its quality; in the **Road Materials** laboratory, they conduct tests on the various components like bitumen, aggregates and as for the subgrade / sub-base, the CBR test (on soil) also, because if this is not taken care of, no amount of road repairs would justify its proper serviceability. The **Structural Engineering** laboratory provides the students to experiment with structural models as a follow up to the theories in Structural Analysis courses; The **Soil Mechanics** and the **Foundation Engineering** laboratories give them an insight to the complex nature, range and variety regarding the occurrence and behaviour of soil and provides facilities for model and field tests; the **Engineering Geology** and the **Rock Mechanics** laboratories : Rocks form the origin of soil and the structural features of the various formations have to be considered for various engineering applications, be it a site for a reservoir or a dam, formation for a hill road, tunnel for a railroad or a highway or for open quarry or underground mines; the **Hydraulics** laboratory facilitates studies of flow in channels and of hydraulic structures; the **Fluid Mechanics** laboratory where flow through conduits are studied and the **Hydraulic Machines** laboratory where the students study the operation of pumps and different turbines, are common with the Mechanical Engineering Department; the **Surveying** laboratory is equipped with instruments for land survey and provides for field sessional classes to students of Architecture as well; the **Environmental Engineering** laboratories to assess quality of water and various other tests concerning public health engineering are conducted under guidance of the Department of Applied Chemistry; the **Computational Laboratory** offers facility to work with general purpose programs. **Computer Aided Drafting** with the Mechanical Engineering Department is taken as a follow-up to manual drawing.

Degree / Diploma offered

The UG Programme

- B. E. (Bachelor of Engineering)
- B. Tech. (Bachelor of Technology)

The PG Programme

- M. E. (Master of Engineering) in
Soil Mechanics

Foundation Engineering

Structural Engineering

Faculty Position

Professor - 4

Assoc. Professor - 2

Reader - 3

Sr. Lecturer - 3

Lecturer - 4

Number of Students enrolled / registered with Department : (as on Feb. 2006)

Semester	No. of Students
III	03
IV	44
V	03
VI	21
VII	02
VIII	20
Total	93

Academic Innovation, Research & Development Activities

On going projects

The Department has several consultancy projects being executed for Government, Statutory Bodies and Other Organisations.

Development of the Department is in progress under TEQIP.

The Laboratories are being updated under the MODROBS programme.

Seminar / Workshop organised

Birla Institute of Technology, Mesra, Ranchi has been identified as one of the State Resource Institute by the Disaster Management Department, Government of Jharkhand to provide training to engineers in building 'earthquake resistant construction'. So far, three Training Programmes in October 2005, February and March, 2006 have been organised by the Department jointly with the Department of Architecture under NPCBEERM (National Programme for Capacity Building of Engineers in Earthquake Risk Management) in cooperation with the State Government. Training was imparted to Engineers of various Government and PSU's like Building Construction, Public Health Engineering, Drinking Water & Sanitation Departments, Ranchi Regional Development Authority, MECON, SAIL, CCL, etc. The course also involved at least a couple of Guest Lectures by Professors, especially from IIT, Kharagpur each time the programme was conducted. This series of Training programme is scheduled to continue up to 2007. This Program is the first of its kind to be conducted in the entire Eastern Region.

Publications by faculty

1. Sengupta Siddhartha (2005) : "Elements of Seismology & Seismic Hazards" and "Liquefaction Susceptibility of Soil" Proc. NPCBEERM, B. I. T., Mesra, Ranchi, October, 2005
2. Kumar Suresh (2005) : "Ground Improvement for Seismic Hazard Mitigation" Proc. NPCBEERM, B. I. T., Mesra, Ranchi, October, 2005.

Seminar / Symposium / Short Term course attended by the faculty members

As Head of the Department, Dr. K. V. Krishnamurthy participated in the National Workshop on "Disaster Management - Role of Scientific and Technical Institutions" organised by National Disaster Management Authority, New Delhi at Dr. MCR HRD Institute of Andhra Pradesh, Hyderabad, in which Heads from eighty six Institutions / Organisations of the country participated.

1. Prof. S. Sengupta delivered a lecture on "Cost effective Technology" in the Workshop on Implementation of VAMBAY Schemes in Jharkhand organised by HUDCO, Ranchi. Prof. Sengupta was also involved in the revision of IRC code: SP-20: Rural Road Manual as a member of Rural Roads Committee of the Indian Roads Congress.
2. Dr. Gopal Pathak was a member of Scientific Advisory Board for the 21st Annual Intl. Conf. on Contaminated Soils, Sediments and Water" held at Univ. of Massachusetts, AMHERST, USA, Oct.,2005.
3. Dr. R. R. Sahay participated in Training on Soft Computing sponsored by ISTE & AICTE, organised by Department of Computer Science, B. I. T., MESRA, Ranchi, Dec.,2005
4. Dr. Siddhartha Sengupta attended the National Programme for Capacity building of Engineers in Earthquake Risk Management, March 07- April 15, 2005 at I. I. T., Kgp. He participated in the "Workshop on Seismic Hazard and Risk Assessment under Indo-Norwegian Programme of Institutional Co-operation", organised by Dept. of Earthquake Engineering, I. I. T., Roorkee, during March 18-19, 2006.
5. Mr. Suresh Kumar participated in the Trainers workshop on "Training of Trainers for Dissemination of Road Safety Manual" held at Gurgaon from 10th to 13th May, 2005 organised by NHAI, ICT and MIST. He also delivered Lectures on "Ground Improvement and Seismic Hazard Mitigation Technique" in the NPCBEERM programmes at B.I.T. Mesra held in 2005 - 2006 and on "Road Safety" at Bengal Engineering. College, Howrah, Kolkata conducted by NHAI, ICT & MIST, in the month of Jan., 2006.
6. Mr. Jitu Kujur participated in the training programme on "Limit State design of Steel Structures" organised by Civil Engg. Dept., I. T., BHU during June 6-11, 2005.

Participation of Staff in various activities

Prof. Subrata Sengupta is monitoring the infrastructure development in Jharkhand, has been requested by NRRDA, Ministry of Rural Development, New Delhi to accept the responsibility

of a National Quality Monitor for the successful implementation of PMGSY. the Department representing the Ministry of Rural Development, Govt. of India as State Technical Agent on PMGSY (Pradhan Mantri Gram Sadak Yojana). He also provides technical help in implementing Rural Road connectivity as the Department is deeply involved with the infrastructure development of Jharkhand in capacity of S T A (State Technical Advisor) representing of Min. of Rural Development, New Delhi for technology transfer, training of engineers and scrutiny of details of projects report of every road project under PMGSY.

Prof. S. Sengupta is one of the Technical advisors of Ed. CIL Min. of Resource Development, Govt. of India. He is actively involved as resource person of Jharkhand Education project for infrastructure development of Primary Education.

As a member of National Evaluation team, Prof. Sengupta offered services for technical evaluation of the biddings for Special Zone in Adityapur in Jharkhand.

Dr. Siddhartha Sengupta has been nominated by Govt. of India to represent the State of Jharkhand in NPCBEERM (National Programme for Capacity Building of Engineers in Earthquake Risk Management).

Student Matters

Awards Instituted

An Award has been instituted by the Sinha Foundation in memory of Late Sri Nalin Kumar Sinha, a Civil Engineer, who served as District Engineer of Ranchi during the 1940 s. Following retirement from service, Sri Sinha was actively involved in design and construction of the Institute in the early 1950 s. The award for value of Rs.3000/- (Three thousand) is to be given annually to the overall top-ranking undergraduate student up to the VI Semester. The award, scheduled to be handed over sometime in March / April every year, was initiated this year, the Award being given by the Founder of the Foundation on April 12, 2006 in presence of the Vice - Chancellor, to Mr. Ajay Kumar (Roll No.169 / 02).

Educational Tour

The Department organised educational tour for the undergraduate and postgraduate students of Civil Engineering. Dr. C.K. Singh, Adjunct Professor, Civil Engineering with other faculty, guided the students through various sites where construction of roads and bridges were taking place / being planned.

DEPARTMENT OF COMPUTER SCIENCE

The Department of Computer Science in B.I.T started functioning in 1983 for Bachelor s degree course with bare minimum laboratory facilities, and sanction strength of the 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 Modelling & Simulation.

Computer Centre

The Computer Laboratory is equipped with nine High End Systems 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 GB Memory, 10 x 9.1 GB Ultra SCSI HDD, 32X CD ROM Drive per node, 1.44 MB FDD per node, 2 x 360W 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

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, 256/512MB SD RAM 40/80GB HDD, 15"/17" color monitors) and Thin Clients available
in the department is 400.

Degrees/ Diplomas offered

*** Undergraduate (UG)Programs**

B.E. (4 years) in Computer Science

B.E. (4 years) in Information Technology

*** Postgraduate (PG)Programs**

MCA (3 years) in Computer Science

M.E. (2 years) in Software Engineering

M.Tech. (2 years) in Computer Science

*** Ph.D**

Faculty Position : The department has a learned , dedicated and innovative faculty
comprising of

Professor - 1

Reader - 1

Senior Lecturer - 1

Lecturers - 22

Assoc. Lecturers - 3

Research Assoc. -1

Student Enrollment for 2005-06

The number of students who have enrolled for the various courses run by the Department
in the academic year 2005-06 are as follows :

Course		
BE (CS)	Semester	No. of Student
	Semester III	3
	Semester IV	92
	Semester V	10
	Semester VI	60
	Semester VII	7
	Semester VIII	101
	Total	273

Course		
BE (IT)	Semester	No. of Student
	Semester III	1
	Semester IV	42
	Semester V	8
	Semester VI	27
	Semester VII	9
	Semester VIII	28
	Total	115

Course		
MCA	Semester	No. of Student
	Semester II	70
	Semester IV	66
	Semester VII	70
	Semester VIII	7
	Semester IX	2
	Total	215

Course		
ME (SE)	Semester	No. of Student
	Semester II	11
	Semester IV	7
	Total	18

Course		
M. Tech (CS)	Semester	No. of Student
	Semester II	27
	Semester IV	24
	Total	51

Grand Total - 672

Seminars/Conferences/STTP courses

Ritesh Jha and Abhijit Mustafi attended a 3 day workshop from 27th of March -29th of March, 2005 conducted by Infosys at their Bhubaneshwar Developmental Center, on "Software Engineering : A Practitioner s Perspective"

Publications by Faculty

Journals/ Conference Proceedings

1. G. Sahoo & Manisha Kumari, "**A Case Study on Wipro Technologies**", Proceedings of All India Seminar on Advances in Computer and Information Technology, 11-12 March, 2006, Dhanbad, India.
2. G. Sahoo & K.K. Patnaik, "**Resource Trading in Extra Grids - A Grid Economy Frame Work**", Proceedings of All India Seminar on Advances in Computer and Information Technology, 11-12 March, 2006, Dhanbad, India.
3. G. Sahoo, Amrita Priyam & B.M. Karan, "**Application of Optimization Techniques of DNA Sequence Alignment Proceedings**", First International Conference on Emerging Applications of Information Technology, Feb., 10-11, 2006, Kolkata, India.
4. G.Sahoo & Satish Ch. Panigrahi, "**OMTSE : Efficient Topology for Parallel Processing**", Proceedings of National Conference on High Performance Computing, April 05, 2006, Tirunelveli, India.
5. G. Sahoo, Sanchita Paul & Satish Ch. Panigrahi, "**On the Design of Some Efficient Algorithms OMMH**", Proceedings of National Conference on High Performance Computing, April 05, 2006, Tirunelveli, India.
6. G. Sahoo & Vivek Mittal., "**Efficient Inference of Phylogenetic Trees Through Sub-Tree Rearrangement Optimization**", National Conference on Computer Sciences and Information Technologies, 18-19th March 2006, B.B.S.B.E.C., Fatehgarh Sahib, Punjab, India.
7. G. Sahoo & Vivek Mittal, "**Efficient Inference of Phylogenetic Trees Through Hibrid Stochastic Search Strategy and Sub-Tree Rearrangement Optimization**", National Conference on Soft Computing Techniques for Engineering Applications, 24-26th March, 2006, N.I.T., Rourkela.
8. A. Jain, "Traffic characterization of a web proxy server using intelligent web caching",

International Journal of Applied Sciences and Computations , Vol-12 No 1 , pg 12-22, April 2005.

9. S. Paul, **“Dark side of IPR”**, Intellectual Property Rights : Issues and Challenges in the music and Entertainment Industry , pg 152-158 , IIIT Allahabad 2005
10. R. Sahay, A Kumar, A Udai & A N Sinha, **“An imitated human motion B-Spline path of a biped robot using genetic algorithm”**, Advances in Product Development (APD) - 2006, Paper 6
11. K.S. Patnaik , N. Aggarwal & G. Sahoo, **“Application of Rough set Reducts in Data Mining of Diabetes Data”**, Proceedings of National Conference on Soft Computing Techniques for Engineering Applications (SCT-2006), pg 369 - 376, March 24 - 26, 2006, NIIT Rourkela.
12. S. Ghosh & A.K. Ghosh **“On Hydromagnetic flow of a two phased fluid near a pulsating plate”** Indian Journal of Pure Applied Mathematics, 36 (10), October 2005.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS

The department is dedicated to the current needs of the industry and has the flexibility to tune its programs according to different requirements. Application of new technology in various fields is one of the concerns of the department. The department has various collaborative projects with neighboring industries like RDCIS (SAIL), HEC, Usha Martin etc. An MoU has been signed between BIT, Mesra and RDCIS, SAIL, Ranchi to increase research interaction in which the department plays an important role.

The department has been a center for research in the areas of digital signal processing, plasma engineering, microprocessor applications, fractional horsepower electric machines etc. machines etc, from time to time. In recent past new courses in the areas of Neural Networks, Fuzzy Logic Control, Genetic Algorithms, Information Technology, Advanced Microprocessor interfacing have been introduced at post graduate level and is currently being percolated at undergraduate level. Currently a number of Ph.D. scholars are working in the areas of non-stationary signal analysis, intelligent control techniques applied to automatic generation control and non linear dynamic systems, development of new architecture for neural networks etc. Research is also going on in the areas of intelligent instrumentation and clean and efficient heating. Emphasis has also been laid on the application of neural networks, fuzzy logic, genetic algorithm based evolutionary computations in the areas of control system, power system, complex analysis and design and biomedical instrumentation. It has a good record of successfully completing projects related to classification of signal using advanced digital signal processing techniques, stochastic control based forecasting, image processing, neuro-fuzzy based medical diagnosis etc.

The department has continued interaction with public and private sector industries. Consultancy assignments and sponsored research projects in the fields of control system for desired tensional/compression rolling in hot rolling mill, control of dynamical systems, study and design of observer and controller for induction motor has been successfully completed by the department.

The department desires to incorporate two small robots with sensing transducers in the laboratory. Work is now going on for the development of the programme for training the robots to identify and learn hazardous environments. We have planned to build an intelligent robot with high-resolution transducers for data acquisition making toolbox to sense and identify objects.

The department envisions to cope with the fast changing pragmatic needs of the technology throughout the globe by adopting suitable new courses and modernization of labs along with commensurate faculty development through research activities. In pursuit of that, the department is emphasizing to introduce new P.G. Course in Instrumentation, Power Electronics & Drives, and Electrical Machines.

The department targets to work in the area of intelligent control and apply the intelligent control methodologies or tools like neural network, fuzzy logic, and genetic algorithm in (a) Electrical Machine Drives (b) Power Systems and (c) Induction Heating.

Number of research papers in journals of international repute is a true reflection of the research activities of the department.

Degree/ Diploma offered

B.E. (Electrical Engineering)

M.E. (Power System)

M.E. (Control System)

Faculty Position

Professor - 6

Reader - 4

Lecturer (Sel Gr.) - 1

Lecturer - 11

Number of Student Enrolled/Registered with Department Course wise/and semester wise as on Feb. 2005

Class	Semester		No of students
BE	II		58
	III		02
	IV		55
	V		02
	VI		57
	VII		03
	VIII		52
ME	II	Control System	11
		Power System	09
	IV	Control System	08
		Power System .	09
		Total	266

Academic Innovations, Research & Development activities

The department is working in the area of intelligent control, power electronics & drives, power systems and control systems. Number of research papers in journals of international repute is a true reflection of the research activities of the department.

A. Ongoing Project

Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of Project in Years
Development of Programmable Logic Controller based Automatic Generation Control	UGC	28.12.03	4.92 lacs	3
Developing Advanced Laboratories	FIST Scheme under DST	12.07.04	27.00 lacs	5
Establishment of Instrumentation Maintenance Facility (IMF) during Xth Plan Period	UGC	29.03.04	2.50 lacs	

B. Project Completed during the year 2005-2006

Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of Project in Years
Analysis of Intelligent controller for Automatic Generation Control	AICTE under R&D project scheme	10.03.03	3.00 lacs	2
Up-gradation of electrical control laboratory	AICTE under MODROB project scheme	10.03.03	10.00 lacs	2

Short Term Course Organized by the Department

“Simulation and Design of Electronic Projects with EWB & Eagle CAD Software” - 7 Days course for Diploma students conducted by Mr. S. G. Kadwane, May 2005

Publications by Faculties

Journals

International

1. 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, Vol.20, No.4, pp. 2117-2124, 2005.
2. S.G. Kadwane, Amit Kumar, B.M. Karan, T.Ghose “Online Trained smulation And DSP Implementation of Dynamic Back Propagation Neural Network for Buck Converter” Accepted in International Journal of Automatic Control and Systems Engineering, ICGST. Vol (VI), issue (1) 2006.

3. S.G. Kadwane, Swapnil Gupta, B.M. Karan, T Ghose "Practical Implementation of GA Tuned Buck Converter" Accepted in International Journal of Automatic Control and Systems Engineering, ICGST. Vol (VI), issue (2) 2006.
4. T. Ghose, R. C. Jha, " Solution of Unit Commitment using modified Genetic Algorithm considering effect of unit outage uncertainty" accepted for publication in International journal Power and energy systems, Canada
5. D. K. Mohanta, "Optimization of safety and reliability captive power plant maintenance scheduling GA and SA", International Journal of Emerging Electric Power Systems, Vol.3, Issue 1, pp.1-21, 2005
6. 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
7. D. K. Mohanta et al., Deterministic and stochastic approach for safety and reliability optimization of captive power plant maintenance scheduling using GA / SA based hybrid techniques: A comparison of results, Reliability Engineering and System Safety (Elsevier), UK, accepted for publication.

National

1. N.L. Nat, I.J. Khalkho, et.al., "Role of engineers in the pollution control of Jharkhand state", Institution of Engineers, Nov. 26-27, 2005. Journal of Institution of Engineers, p.12-17, Nov, 2005
2. N. Pathak "Alternative energy for the control of polluted environment", Journal of Institution of Engineers, p. 60-65, Nov., 2005.
3. D.K. Mohanta et al., "Captive Power Plant Maintenance Scheduling Using GA/SA Based Hybrid Techniques for Safety and Reliability Optimization", Journal of Institution of Engineers (Electricl Division), pp. 319-326, March 2006 .

Proceedings

International

1. T. Ghose, M. Gopi Kishore, P. Sukumar "Solution of Profit Based Unit Commitment considering Market Equilibrium condition", accepted for publication in international conference organized by PES, IEEE, to be held in New Delhi, India.
2. T. Ghose, M. Gopi Kishore, P. Sukumar "Genetic Algorithm Based Solution of Unit Commitment for Competitive Agents in Power Market" Presented and published in proceeding of international seminar on Power Transmission-Research Interests and Challenges
3. Thakura P.R., Thankur A.N, Karan B.M., "Direct Torque Induction Motor Control Drive for Intelligent Manufacturing Technology", Conf. On Intelligence based Material Manufacturing Technology ISIMM-2005, 18-20 August 2005 in BIT Mesra Ranchi.

4. Kadwane S G, Thakura P R, Ghose T, Karan B M; "DSP Based Control of Single Processor Multimotor System for Robotics" All India Seminar on CAD /CAM Robotics and Futuristic Factories , IIT [I] and BIT Mesra Ranchi, 10-11 Dec 2005.
5. Sumant.G.Kadwane, Someswara Phani Vepa, B.M.Karan, T Ghose "Converter Based DC Motor Speed Control Using TMS320LF2407A DSK" 1st IEEE conference on Industrial Electronics and Applications to be held in Singapore, 25-27 May 2006.
6. Avinash Kishore, R. C. Prasad, B. M. Karan, "Matlab Simulink Based DQ Modeling and Dynamic Characteristics of Three Phase Self Excited Induction Generator", Proceeding of 'Progress in Electromagnetics Research Symposium (PIERS-2006)', Massachusetts Institute of Technology, Cambridge, USA, vol 1, p 312-315.
7. Avinash Kishore, G. Satish Kumar, "A Generalized State-Space Modeling of Three Phase Self-Excited Induction Generator For Dynamic Characteristics and Analysis" Proceeding of 'The 1st IEEE conference on Industrial Electronics and Application 2006, Singapore (accepted for publishing in May 22-24, 2006)
8. Avinash Kishore, R. C. Prasad, B. M. Karan, "Design of Field Oriented Controller to Improve Dynamic Characteristics of Three Phase Self Excited Induction Generator" Proceeding of 'The 1st IEEE conference on Industrial Electronics and Application 2006, Singapore (accepted for publishing in May 22-24, 2006)
9. Avinash Kishore, G. Satish Kumar "Dynamic modeling and analysis of three phase self-excited induction generator using generalized state-space approach" Proceeding of 'International Symposium on Power Electronics, Electrical Drives, Automation and Motion', IEEE Conference, Italy (accepted for publishing in May 23-26, 2006)
10. Avinash Kishore, G. Satish Kumar "A Generalized Dynamic Model of Self-Excited Induction Generator using State-Space Approach with ANN-model of Mutual Inductance for Transient Analysis and Control of Output Voltage by PWM-Strategy. Canadian Conference on Electrical and Computer Engineering (accepted for IEEE conference)
11. Avinash Kishore, G. Satish Kumar "A Novel Generalized dynamic modeling of three phase self-excited induction generator for transient analysis using state space approach" 12th International Power Electronics and Motion Control Conference, IEEE Conference Slovenia
12. Avinash Kishore, G. Satish Kumar "A Generalized Dynamic Model of Self-Excited Induction Generator using State-Space Approach for Dynamic Analysis and Control of Output Voltage by PWM-Strategy", 'International Symposium on Industrial Electronics-ISIE- 2006 IEEE Conference Canada
13. Pulak Purkait and S. Ravi Srikanth, "A new generalized Space Vector Modulation Algorithm for Neutral-Clamped Multilevel Converter", PIERS 2006, Cambridge, USA.
14. Pulak Purkait and S. Ravi Srikanth, "A Simple SVPWM Algorithm for Elimination of Neutral Point Current in Multilevel Inverter", SPEEDAM 2006, Taormina, ITALY. (accepted for publishing in May 23-26, 2006)
15. A. K. Jha, B.G.Fernandes, and A. Kishore, "A Single Phase Single Stage AC/DC Converter

with High Input Power Factor and Tight Output Voltage Regulation" Progress In Electromagnetic Research Symposium 2006, Cambridge, USA, March 26-29, pp. 322-329

16. A.K. Jha, and Dr. B. M. Karan, "Energy Audit in Indian Industry Context", South Asia Energy Conservation Conclave, pp. 229-233, February 2006
17. P.R. Thakura, A.N. Thakur, B.M. Karan & G.S. Buja "Direct Torque Control of Induction Motor Drives in MEMS" ICIEA-2006, Int. Conf on Industrial Electronics and Applications, 24-26 May 2006 Singapore.

National

1. S.G. Kadwane, V. S. Phani, B.M. Karan "Real time PID based DC motor speed control by TMS320LF2407A DSK with cascaded buck converter", 16-17 DEC, paper ID 15, NSC-2005, IITB
2. S.G. Kadwane, B.M. Karan, T Ghose and P. R. Thakura "DSP based control of single processor multimotor system for Robotic applications", 14-15 DEC All India Seminar on CAD/CAM Robotics and Futuristic Industries. IE (Jharkhand branch), BIT Mesra.
3. S.G. Kadwane, Amit Kumar, B.M. Karan, T Ghose "Compensator design for load changes in DC-DC converter" NCSE-2006 Bhubaneswar.
4. S.G. Kadwane, Swapnil Gupta, B.M. Karan, T Ghose "DSP based fuzzy control for buck converter with inductive load" NCSE-2006 Bhubaneswar.
5. Jana K. C., Thakura P. R., Bhagat D., Biswas Sujit, "A Simple and General Space Vector Pulse Width Modulation of Multi-Level Inverter" accepted in National Conf. on Soft Computing and Machine learning for Signal Processing, Control, Power and Telecommunications-ICSE-06, 17-19 March, 06, College of Engg. Bhubaneswar
6. Thakura P.R., Sahoo S.R., Thakur A.N., Karan B.M. : "Role of Direct Torque Control Based Induction Motor Drive for Robot Dynamics" Proc. All India Seminar on CAD/CAM Robotics and Futuristic Industries, 10-11 Dec 2005, IE(I), BIT Mesra Ranchi
7. Jana K C, & Thakura P. R., "Space Vector Modulation Multi-Level Voltage Source Inverter for Flexible Manufacturing System" Proc., All India Seminar on CAD/CAM Robotics and Futuristic Industries, Institution of Engineers [India] 10-11 Dec 2005.
8. Thakura P.R., Thakur A.N., Karan B.M.; "Direct Torque Control of Induction Motor Drive in Energy Conservation" National Conf. on Energy Management in Changing Business Scenario EMCBS-2005, 8-9 Oct 2005, BITS Pilani.
9. P. R Thakura S. R. Sahoo, S. Prasad, K. C., Jana, "Direct Torque Control of Induction Motor Using Fuzzy-Logic" National Conf. on Soft Computing and Machine learning for Signal Processing, Control, Power and Telecommunications-ICSE-06, 17-19 March, 06, College of Engg. Bhubaneswar
10. A.K. Jha, and Dr. B. M. Karan, "Energy Efficiency and Renewable Energy", Energy Day Institution of Engineers, Ranchi, December 2005.

Seminar/ Symposium/Short-term Course attended by Faculty Members

International Symposium

1. "Progress in Electromagnetics Research Symposium (PIERS-2006)", Massachusetts Institute of Technology, Cambridge, USA: Avinash Kishore, Aman Kumar Jha, Pulak Purkait
2. Conf. on Intelligence based Material Manufacturing Technology ISIMM-2005, 18-20 August 2005 in BIT Mesra Ranchi : Thakura P.R., Karan B.M
3. All India Seminar on CAD /CAM Robotics and Futuristic Factories ,IE [I] and BIT Mesra Ranchi,10-11 Dec 2005: Kadwane S G, Thakura P R ,Jana K.C, Karan B M.
4. "Energy Audit in Indian Industry Context", South Asia Energy Conservation Conclave, pp. 229-233, February 2006: A.K. Jha, and Dr. B. M. Karan
5. International Conference on Power System Operation in Deregulated Regime on 6th -8th, March 2006 at IT-BHU, Varanasi : R. C. Jha

National Workshops/ Short-term Courses

1. Workshop on "Virtual Instrumentation" at NIT Kurukshetra from 16th Dec. to 18th Dec, 2005 : Avinash Kishore, Prem Prakash, Surendra Kumar
2. Short Term Course on "Energy Management" at NITTTR, Chandigarh from 20th Feb. to 24th Feb, 2006: Avinash Kishore, Pulak Purkait, Vijaya Laxmi
3. Workshop on "Technology Development, Utilization and Transfer, at BIT Mesra, Ranchi on 6th March, 2006 : Avinash Kishore, Aman Kumar Jha, Prem Prakash, Surendra Kumar, Sumant Kadwane, Pulak Purkait,
4. Workshop on National Workshop on Power Electronics, June, 2005 at BE College (BESU) Shibpore, Kolkata : P.R.Thakura
5. One day workshop on academic Reforms, BIT,Mesra,15 Dec 2005, attended by P.R. Thakura.

Award/Nomination of Faculty by important organizations

- (i) Received Indo- Italian Fellowship Grant, University of Padova, Italy MIUR, Feb 2006, P.R. Thakura
- (ii) Special Prize Received in Contest for Innovative ideas in "Khoj" (Hardware category) 2005 Organized by SIDBI at BIT, Mesra, Ranchi: S.G. Kadwane

Ph.D Awarded

Name of the Candidate	Title of Thesis	Date of Submission	University
Kalyan Chatterjee	Development of dual mode and Soft Computing Based control techniques for load Frequency Controller of Interconnected Thermal Power Systems	05/02/06	B.I.T., Mesra
D. K. Mohanta	An Intelligent Maintenance Scheduling of Captive Power Plant for Quality Power	24/12/05	Jadavpur University

Ph.D Submitted

Name of the Candidate	Title of Thesis	Date of Submission	University
R. C. Jha	Solution of Unit Commitment using modified Genetic Algorithm considering unit outage uncertainty and deregulation of power industry	27/08/2005	B.I.T., Mesra

Student Activities

- * DRISHTANT, 6-9 Feb., 2006 (A national level technical programme organized by EES & IEE, BIT, Mesra)
- * TechnIEEk 2005, Sept., 2005 (Annual technical event organized by IEE student branch, BIT, Mesra)
- * Attended workshop on "Robotics" , September 2005, Organized by IEE
- * Industrial Tour
TATA Steel, West Bokaro, 18th Sept., 2005.
MYTHON DAM, Feb., 2006.

Development Activities

Consultancy Work

Energy Auditing at HEC, Ranchi by Aman Kr. Jha, Avinash Kishore & Pulak Purkait.

Infrastructural Facilities (2005-06)

a. Development of Power System Lab under FIST programme

1. Determination of A, B, C, D Parameter of Transmission Line
2. Static VAR Controller

3. Numerical over current relay
4. PFC Controller
5. DC Network Analyser

b. Software and Instrument Purchased in 2005 - 2006

Sl.No.	Equipment	Nos.
1.	Agilent 54621 A Oscilloscope	1
2.	Agilent 33220 A Function Generator	1
3.	Agilent E3631A Power Supply	1
4.	TMS320C5418 kit	1
5.	TMS320C8713 kit	1
6.	TMS320F2812 kit	2
7.	TMS320F2407 kit	2
8.	Bouncing Ball Experiment	1
9.	Inverted Pendulum	1

DEPARTMENT OF ELECTRONICS & COMMUNICATION

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, Antenna Measurement, Multimedia, Wireless Network, CAD etc.

This year antenna measurement laboratory, which was equipped with vector network analyzer and IE3D simulation software, has been upgraded by the addition of Antenna Trainer system up to the range 1.3 GHz, MIC Trainer Kit, Anechoic Chamber and Signal Generator (1GHz -20GHz)

The various software which has been procured this year are CommSIM, Microwave Office, Sonnet Lite, Cadence and System View to support laboratories and research work. A new laboratory has been set up for UG & PG students, as well as research scholars with the Cadence software.

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, Prof. N. Gupta and Prof. J. S. Roy have visited Aalborg, Denmark. They participated in EAGER NetWIC project meeting in Denmark and in the International Conference on Wireless Personal Multimedia Communication (WPMC-2005), Aalborg, Denmark. Prof. S. C. Goel, chaired a session in WPMC. Prof. N. Gupta and Prof. J. S. Roy presented papers in the Conference. Again in May 2005, Prof. S. C. Goel participated in the EAGER NetWIC project meeting held in Netherland.

In May 2005, Prof. D. Pal presented a paper in the conference ISCAS held in Kobe, Japan and in January 2006 Prof. Nisha Gupta delivered an invited talk on the topic "Telecommunication Education in India", in "The European-Asian Telecommunication Engineering Education & 4G workshop organized by ITB, Bandung, Indonesia.

Two specializations namely, Wireless Communication and Software Defined Radio, started under the International centre for Wireless and Mobile Communication. Software Defined Radio is a Double degree programme, in which two degrees one from BIT, Mesra (M.E. in Electronics and Communication Engineering, (Software Defined Radio)) and another from Aalborg University, Denmark (M.Sc. in Software Defined Radio) will be awarded. After successful completion of first semester, seven students under Software Defined radio discipline have proceeded to Aalborg, Denmark in month of January 2006, for pursuing the course for the remaining three semesters.

An MOU has been signed between B. I. T, Mesra and University of Leeds in the United Kingdom. Students of ECE, EEE, Mechanical Engineering of the Birla Institute of Technology (BIT), Mesra, will now have added option of getting dual degree, one from BIT (B.E) and other from the University of Leeds (M. Engg). The present agreement would allow interested students to study for two years in BIT and in the third year, they can opt for Leeds, where they would spend another two years, but get a master s degree in the respective stream.

A letter of co-operation has been signed with University of Roma Tor Vergata in the area of broadband satellite communications.

The project proposed by University of Ferrara, relative to the institution of the Tele-doctorate platform Italy- India has been approved by Italian ministry of education, Universities and Research (MIUR), with a financial contribution of 30,000.00

The revised syllabuses of the U.G. and P.G. courses have been discussed and approved by the board of studies. Two new optional papers Microelectronics and Cryptography & Network Security have been offered this year to the undergraduate students. The revised syllabus will be implemented from the next semester.

Degree/ Diploma offered

UG Programme

B.E. (Electronics and Communication Engg.)

PG Programme

M.E. (Instrumentation and control)

M.E. (Microwave)

M.E. (Wireless Communication)

M.E. (SDR) from BIT, Mesra,

M.Sc. (SDR) from Aalborg University

Faculty position

Professor - 6

Reader - 4

Lecturer (Selection Grade) - 3

Senior Lecturer - 1

Lecturer - 14

Associate Lecturer - 1

Number of students enrolled/Registered

BE	No. of Student
Semester VIII	128
Semester VII	09
Semester VI	83
Semester V	04
Semester IV	132
ME	
Semester IV (Microwave)	9
Semester IV (Instrumentation)	10
Semester II (Wireless Comm.)	8
Semester II (Instrumentation)	7
Semester II (SDR)	7
Total	397

Academic Innovations, Research and Development activities

Ongoing Projects

1. "Use of Fiber Optic Sensors for Strain, Displacement and Load measurement Data Acquisition Transmission through FO Glass", sanction by ISRO, Sanctioned Amount Rs. 9.73 Lacs., Principal Investigator : Dr. S. K. Ghorai
2. 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 Lacs. Coordinator: (Prof. S. C. Goel) ,Deputy Coordinator : Dr. Nisha Gupta.
3. "Improvement of S & T Infrastructure in Universities and Higher Educational Institutions (FIST)" by Dept. of Science & technology ,a grant of 35 Lacs, Duration- 5 years, Principal Investigator: Prof. S. C. Goel. Date of Sanction- 26.12.2003

Project completed during the year 2005-2006

1. "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.

Publication by Faculty

Journals

International

1. J. S. Roy and J. Ghosh, "A Multifrequency Microstrip Antenna", Microwave and Optical Technology Letters (USA), Vol.46, No. 1, pp. 63 - 65, July 05, 2005,.
2. V. R. Gupta and N. Gupta, "An Artificial Neural Network model for Feed Position of the Microstrip Antenna," Scientific Journal of Electronics and Electrical Engineering - Kaunas, vol. 60, No. 4, pp. 81-83, 2005.
3. V. R. Gupta and N. Gupta "Design of a Circularly Polarized Microstrip Antenna for Bluetooth Application," TechOnline - Educational Resources for Electronics Engineers, December 02, 2005.
4. S.K.Ghorai, Dilip kumar and Baljeet K Hura, "Strain Measurement in a Mach-Zehnder Fiber Interferometer Using Genetic Algorithm", Sensor and Actuators A: Physical, Vol. 122, pp.215-221, 2005.
5. M. K. Jha, S. C. Goel and Anand Mohan, "QoS Enhancement in the Clos Network for Multicast Communication," TechOnLine Publication Date: June 03, 2005 http://techonline.com/community/ed_resource/feature_article/38014

Conferences

International

1. D. Pal, J. Taylor, et al, "Two preamplifiers for non-invasive on-chip recording of neural-signals", International Symposium on Circuits & Systems (ISCAS) 2005, Kobe, Japan, pp. 2727-2730, May 23-26, 2005

2. D. Pal, J. Taylor, et al, "10-channel very low noise eng amplifier system using CMOS technology", *ibid*, 748-751, May 23-26, 2005,pp.
3. J. S. Roy, A. Bhadani, M. W. Arafat and A. Sravastava, "A Fuzzy-Based Approach for Hand-off Management in Mobile Communication", WPMC, Denmark, pp. 915-917, Sept. 2005.
4. J. S. Roy, T. Sarkar, K. Srivastava and M. Thakur, "Investigations on LCR and ADF for Time Diversity Reception in Mobile Environment", WPMC, Denmark, pp. 1868-1870, Sept. 2005.
5. N. Chattoraj & J.S.Roy, "Investigations on Microstrip Antennas Covered With a Dielectric Layer Using Genetic Algorithm" XXVIIIth General Assembly of Radio Science(URSI) GA2005, New Delhi, ,pp. 89, Oct23-29,2005.
6. J. S. Roy and J. Ghosh, "A Comparative study Between Cross-Slot-Coupled and T-Slot-Coupled Microstrip Antennas for the Application in L-Band Wireless Communication", InCMARS2005, 20-22 Dec., 2005, Jodhpur.
7. P. Chakrabarti, R. K. Lal and P. Saxena, "Theoretical modelling of an InAs_{0.89}Sb_{0.11}/GaSb Mid-Infrared Photodetector," Proc. of International conference on Electronic and Photonic materials, Devices and Systems (EPMDS-06) held at (Saha Institute of Nuclear Physics) SINP, Calcutta, during January 04-06, 2006, pp. C-18, 2006.
8. E. Muthuramalingam & Sanjay Kumar, "Analysis of BER in transmission of AWS data through satellite", in XXVIII General assembly of International Union of Radio Science (URSI), New Delhi, 23-29 Oct, 2005.
9. Sanjay Kumar, "How to Add Value to Life for Better Life Style Management?" on 21st May2005 during two days National Conference on Value Added Life Style Management at BIT, Mesra, Ranchi.
10. N. Gupta, V. R. Gupta, "Gain and Bandwidth Enhancement in Compact Microstrip Antenna", XXVIIIth General Assembly of International Union of Radio Science (URSI GA), New Delhi, India, October 23-29, 2005.
11. N. Gupta, V. R. Gupta, "Design of a Compact Circularly Polarized Microstrip Patch Antenna for Wireless Communication", International Symposium on Wireless personal Multimedia communication, Denmark, pp. 508-512,September 2005.

National

1. B.B. Pal, D.Pal and B. N. Das, "Optimized applicator with analog active filter for chemotherapy", Biomed 2005 conference at BMI department (B.I.T, MESRA), 29.4.2005-30.4.2005), Emerging trends in biomedical instrumentation.
2. B.B. Pal, D.Pal and B.N.Das, "Optimized diagnostic applicators suitable for hospital" NSMMA conference 2005 at department of APPLIED MATHEMATICS IIT, CHENNAI), 22.12.2005.
3. G. K. Mishra and J. S. Roy, "Application of genetic algorithm in channel assignment for wireless communication, NCSC-2006, Bhuneshwar, pp- 590-595, March 2006.

4. G. K. Mishra and J. S. Roy, "Blocking probability in uniform fixed channel assignment using complete channel information matrix", NCSC- 2006, Bhuneshwar, pp. 574-578, March 2006.
5. D. Pal, J. Taylor, et al, A non-invasive system of recording of biomedical signals, National Conference on Emerging Trends in Biomedical Instrumentation (BIOMED 2005), Biomedical Group, BIT Mesra, April 29-30, 2005.
6. Sanjay Kumar, "How to Add Value to Life for Better Life Style Management?" on 21st May 2005 during two days National Conference on Value Added Life Style Management at BIT, Mesra, Ranchi.
7. S.K. Ghorai, Dilip Kumar and S.Kumar, "Finger strain measurement using birefringent optical fiber", Proc. of National Conference on BIOMED- 2005, Birla Institute of Technology Mesra, Ranch, Jharkhand, April 29-30, 2005.

Seminar/Symposium/short-term Course attended by the faculty members

Prof. Bharat Gupta

Short Term Course on "IMAGE PROCESSING WITH MATLAB" on 5 Sept. 2005 to 9 Sept. 2005, organized by NITTTR Chandigarh.

Dr. D Pal

Delivered two lectures titled "Issues on Machine Vision- I" and "Issues on Machine Vision- II", respectively at the UGC sponsored Winter-School (held from 01 December to 17 December 2005), organized by the Dept. of Production Engineering, BIT Mesra.

ISCAS 2005, Kobe, Japan, 23-26 May 2005.

Prof. D. D. Seth

Attended all India seminar on Advances in Computer & Information Technology (ACIT- 2006) at Dhanbad from 11th - 12th March 2006.

Dr. J. S. Roy

International Conference on Wireless Personal Multimedia Communications WPMC2005, Aalborg, Denmark.

Prof. M. C. Shrotriya

Attended short-term course on VHDL at Tech lab New Delhi from 07 Feb 2006- 10 Feb 2006.

Prof. M. Goswami

Attended short-term course on VHDL at Tech lab New Delhi from 07 Feb 2006 - 10 Feb 2006.

Prof. N. Chattoraj

International conference XXVIIIth General Assembly of International Union of Radio Science (URSI), October 23-29, 2005 at New Delhi.

Dr. N Gupta

International Conference on Wireless Personal Multimedia Communications WPMC2005, Aalborg, Denmark

One day Workshop on Academic Reforms", organized by Technical Education Quality Improvement Programme (TEQIP), Birla Institute of Technology, Mesra, Ranchi, December 15, 2005.

Delivered an invited talk on the topic "Telecommunication Education in India", in "The European-Asian Telecommunication Engineering Education & 4G workshop Organised by ITB, Bandung, Indonesia.

A Workshop on "Quality Enhancement of Engg. Education", organized by NPTEL, CET, IIT, Kgp, 27th -28th March 2006.

Dr. R. K. Lal

International conference on Electronic and Photonic materials, Devices and Systems (EPMDS-06) , Saha Institute of Nuclear Physics, Calcutta, January 04-06, 2006,

Prof. S. Kumar

Delivered an invited talk on the subject of "Creating an Equitable Information Society: Time for Action" on the occasion of the World Telecommunication Day, organized by the Institution of Engineers (India) at Ranchi, May 17, 2005

"One day Workshop on Academic Reforms", organized by Technical Education Quality Improvement Programme (TEQIP), Birla Institute of Technology, Mesra, Ranchi, December 15, 2005.

Two days training program on "Effective Communication" at Ranchi organized by FICCI, New Delhi and supported by Hanns Seidel Foundation, Germany, July 8-9, 2005.

Prof. S. S. Solanki

Attended all India seminar on Advances in Computer & Information Technology (ACIT-2006) at Dhanbad from 11th -12th March 2006.

Attended a workshop on "Quality Enhancement of Engg. Education", organized by NPTEL, CET, IIT, Kgp, 27th -28th March, 2006

Dr. (Mrs.) Vibha Rani Gupta

1. XXVIIIth General Assembly of International Union of Radio Science (URSI GA) held at New Delhi, India, October 23-29, 2005.
2. "One day Workshop on Academic Reforms", organized by Technical Education Quality Improvement Programme (TEQIP), Birla Institute of Technology, Mesra, Ranchi, December 15, 2005.

Infrastructural facilities during the year 2005-2006

This year antenna measurement laboratory, which was equipped with vector network analyzer and IE3D simulation software, has been upgraded by the addition of Antenna Trainer system upto the range 1.3 GHz, MIC Trainer Kit, Anechoic Chamber and Signal Generator (1GHz -20GHz)

The various softwares which have been procured this year are CommSIM, Microwave Office, Sonnet Lite, Cadence and System View to support laboratories and research work. A new laboratory has been set up for UG & PG students, as well as for research scholars with the Cadence software.

Other Information

Five technical staff Mr. Kailash Prasad Singh, Mr. Hari Shankar Pathak, Mr. Kishun Mandal, Mr. David Runda, and Mr. Nageshwar Mahto have undergone training at various centers.

DEPARTMENT OF HOTEL MANAGEMENT

The Department of Hotel Management was established on 20th Jan 2003. Department offers Bachelor s Degree in Hotel Management & Catering Technology in order to shape future hospitality professionals. Department is in the stage of development various laboratories like Food Production Lab, Food & Beverage Service Lab, Accommodation Operation Lab etc. are in progress.

A twenty-six room Hospitality Training Centre 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. With in Few 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.

A National Seminar on Hospitality Industry prospects & Challenges with Special reference to National Games -2007 in association with Department of Tourism Government of Jharkhand. On 27th September 2005 was organized by the Department.

JOHAR - “Journal of Hospitality Application & Research” The Department has started publication of Journal in association with “Department of Tourism - Govt. of Jharkhand” Which is first of its own kind in India.

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.

All India Inter College Hospitality Quiz was organized on “ Hospitality & Tourism” on the occasion of World Tourism Day. Where students from Shillong, Trichnapalli, Srinagar, Ahmedabad, Bhopal & other parts of India participated.

Students from all parts of the country are learning in the department. At present the department has strength of One Hundred & Eighteen students in II, IV, VI & VII Semesters of Four year Bachelor s degree in Hotel Management.

Degree/ Diploma offered

Bachelor Degree in Hotel Management & Catering Technology (4Years)

Faculty Position

Sr. Lecturer - 2

Lecturer - 4

Assoc. Lecturer - 3

Number of Students enrolled in the Department

Course	Semester	No. of student
BHMCT	II	37
BHMCT	IV	24
BHMCT	VI	34
BHMCT	VII	23
Total		118

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. Accommodations Lab upgraded with world-class machines & Equipments. (Karcher V.C T-201, B.R-400, I.F.B-Elenza, & others.)
4. New Building of the Department is undergoing Construction.

Seminar, Symposiums, short-term courses & Workshops Conducted by the Department

1. A National Seminar on Hospitality Industry prospects & Challenges with Special reference to National Games -2007 in association with Department of Tourism Government of Jharkhand. On 27th September 2005 was organized by the Department.
2. Dr. Sonia Gupta conducted a workshop on Flower arrangement, gift packing, mocktail making & handwriting Improvement in Indore & Delhi.
3. Ms. Lata Patil from Bharati Vidya Peeth Mumbai , Sh. Ashish Dahiya & Mrs Snigdha Priya conducted a workshop on Flower arrangement on January 31 2006.
4. All India Inter College Hospitality Quiz was organized on " Hospitality & Tourism" on the occasion of World Tourism Day.
5. Mr. Ashish Dahiya designed a Training programme for "Hotel Chinar", on "Housekeeping Management & Operations".
6. Mr. Ashish Dahiya Conducted Short term Training (July - August 2005) to staff of Hotel Capitol Hill - Ranchi in Housekeeping Operations.
7. A one day Workshop on Rajasthani Cuisine & services" on 27th July 2005 was conducted by Mr. Praveen Srivastava
8. Dr. Sonia Gupta & Mr. Atul Gupta conducted a workshop on table etiquette & Manners at Abhivyakti - Dainik Bhaskar Group.

Publications

1. Department has started Publishing "JOHAR- Journal of Hospitality Application & Research" a biannual publication in association with Department of Tourism, Govt. of Jharkhand. It is the first Hospitality Journal publication in India of this kind. In the beginning itself it has been circulated amongst 200 members across the country. Hon ble Chief Minister Sh. Arjun Munda, Government of Jharkhand released the Maiden Issue of JOHAR.
2. Mr. Ashish Dahiya has been requested to write a book on Housekeeping Operations - by Coordinator SAP, Department of Hotel & Tourism Management Kurukshetra University - Kurukshetra Haryana
3. Dr. A.M. Agrawal & Mr. Ashish Dahiya presented a paper titled " Housekeeping related Musculoskeletal disorders in Hospitality Industry in India & paper has been published in Journal of Hospitality Application & Research.

Seminar, Symposiums, short-term courses & Workshops attended by the faculty members

1. Mr. P.R Sahoo presented a paper titled "Nutrition for University Student Athletes" in the National Conference "Role of Physical Education & Sports in personality development of young professionals" on 8th & 9th September 2005 organized by B.I.T. Mesra Ranchi & AIU - New Delhi.
2. Mr. Ashish Dahiya & Mr. P.R Sahoo attended "Hospitality Ensemble - 2005" organized by BCIHMCT, Guru Gobind Singh Indraprastha University - Delhi
3. "Dr. Sonia Gupta attended a workshop "Train & Practice self hypnosis for mind development & self healing by Institute of Mind Control & Development Kolkata
4. Mr. Ashish Dahiya attended Conference on "Value Added Life Style Management" organized by Department of Production engineering, B.I.T-Mesra.
5. Mr. Atul Gupta attended a National Seminar on 27th September 2005 & presented a Paper titled "Infrastructure Development in Ranchi - With Sp. Ref. To national games 2007.

Awards, Nominations of Faculty by Important Organizations

1. Mr. Ashish Dahiya has been awarded First in Merit for Topping in Bachelor of Arts (2000-2003) wide No.199/Merit/Conf.2005 Bhopal dated 9/11/2005 by order of Examination. Controller. B.U Bhopal
2. Mr. Praveen Srivastava - have been awarded a certificate by "American Hotel & Lodging Association." As their certified trainer in "Managing Quality in Hospitality Operations"
3. Mr. Ashish Dahiya has topped in PGDTHM - IODE Barkatullah University Bhopal. (03/01/2006)
4. Mr. Ashish Dahiya has been nominated & invited as an external expert in "Centre for Mountain Tourism and Hospitality Studies, HNB Grahwal University Srinagar Grahwal, Uttranchal."
5. Dr. Sonia Gupta has been nominated for listing in 1) World s Who s & Who {By Rifacimento International Publications}
6. Dr. Sonia Gupta certified as a trainer on Ikebana flower arrangements by Ikebana study group of Indo-Japanese Association, Mumbai
7. Mr. Ashish Dahiya has been nominated & invited as an external expert to establish a Department of Hotel Management & Catering Technology in Kumaon University-Nanital.
8. Mr. Atul Gupta has been selected as a National resource person for Department of Tourism Govt. of India for (Designing of Training) & (Management of Training)
9. Dr. Sonia Gupta s biographical note with photograph has been published in "Asian Americas Who s Who" - Vol. III and "Men & Women of Substance" Vol. II - Published by Rifacimento s International Publication.
10. Mr. Atul Gupta was appointed as a member of Approval Committee of AICTE for inspection of Institute of Hotel management in M.P.

Students Activities

- * III Semester Students Organized Rajasthani Theme 28th July 2005.
- * Provided hospitality services to H.E Governor of Jharkhand.
- * Students of V Semester organized Punjabi Theme on 25th August 2005.
- * Did excellent service for Chief Minister Govt. of. Jharkhand.
- * Students of I, III & V Semester organized Bihari & Jharkhand theme on 27th September 2005.
- * Students of V semester BHMCT, Participated in Chandiwala Young Star Chef Competition - New Delhi n November 2005.
- * Provided hospitality services in various national & international conferences organized by Dept. of Production Engg. Dept. of Architecture, Computer Sciences & others.
- * Students under went Industrial Exposure Training (VI Semester) & Vocational Training in various star hotels all over the country during there vacations viz. Intercontinental Delhi, The Oberoi s New Delhi, Sayaji Indore, Taj Kolkata, Taj Ganges Varanasi The Park Chennai, Cidade-de-Goa, Nirulas Delhi, Trident Bhubneshwar, AmarVilas - an Oberoi Resort Agra.

DEPARTMENT OF INFORMATION SCIENCE

A society which is increasingly looking up to Science & Technology as tool for developmental activities , providing timely and authentic information required by researchers and policy makers has become an imperative need. It is also being realized that Science & Technology information is itself a national resource - an inexhaustible resource unlike natural resources.

In this context, the need for an adequate supply of skilled manpower to design, develop and operate the numerous components of international /national / regional / local information system is apparent. With this broad vision the Department of Information Science was established in 1993.

Since then the department is keeping itself abreast with the changing environment through the up gradation of the course curriculum and by providing better platform to the students.

Degree/ Diploma offered

M. Sc. in Information Science

Ph.D.

Faculty Position

Lecturer - 1

Assoc. Lecturer - 1

Number of Students enrolled in the Department - (as on February 2006)

Course	Semester	No. of Students
Inf. Science	II	23
Inf.Science	IV	28
	Total	51

Activities of the department

1. Dr. Bhaskar karn has been elected as a Council Member of IASLIC (Indian Association of Special Libraries and information Centre) for the year 2006-07 (Election held in December 2005)
2. Dr. Bhaskar Karn attended National Seminar on "Supply Chain Management : For Global Competitiveness" at Institute of Science & Management , ISM Campus , Pundag Ranchi on February 10-11,2006.
3. Dr. Bhaskar Karn was the Resource person on E-learning for the two day programme under TEQIP held at the Institute on April 3-4 , 2006.

DEPARTMENT OF MANAGEMENT

The Department of Management was founded in 1979 to impart holistic management education to potential young managers and has completed 25 glorious year of its existence. 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 education to the students. The department has maintained its academic leadership in the eastern region of India by its ambitious plans and commitment to qualitative requirements of the professional world. The department has undergone improvisations and changes in the period under reporting in order to maintain excellence.

- a. Revision of MBA syllabus proposed and approved by BOCS. The revisions have been done taking into considerations the recent changes /developments in thoughts and concepts of management science.
- b. The department has launched MBA programmes at BITEC, Jaipur as well as Executive MBA program at BITIC, and Muscat.
- c. The bi-annual journal of the department 'The Alternative' and quarterly newsletter, 'Manage-a-Bit' has evoked interest in the management community. Many new institutions have shown their interest for subscription as well as on exchange basis for the journal.
- d. During the year 2005-06, the campus placement of the students of the department has been overwhelming. By February, 2006, 80 out of 88 students have already been placed by reputed companies like HCL Infosystems Ltd, ISPAT Industries Ltd., Genom Bio-tech Ltd., ICICI Bank, UTI Bank, IDBI Bank and others, This batch (2004) is the only batch who were admitted through MAT Examination.
- e. During the year 10 candidates were registered for their Ph. D program under different faculty members. One faculty member (BITEC, Noida) has been awarded Ph.D and one faculty member (BIT, Mesra) has submitted his Ph.D thesis.
- f. The department is co-ordinating the conduct of Staff Development Program as per requirement of TEQIP in the area of Secretarial Practices.
- g. The department is successfully conducting Certificate course on 'Information Technology Enabled Services'. This has been sponsored by Department of Industries, Govt. of Jharkhand.
- h. The project titled "National Food For work Program" sponsored by Govt. of Bihar has been successfully completed and report has been submitted to the authorities.
- i. The Department organized "National Seminar of Effective Horticulture Marketing through Inter State Networking" during March 06
- j. An MoU has been signed with Coventry Business School. UK for academic exchange programs.
- k. The annual B-school students festival. SAMAAGAM 2006 was organized during February 2006 in which students of reputed Management Schools had participated.

- l. On-site Executive Development Program was conducted by the department for the middle level executives of Income Tax department at Hazaribagh.
- m. Project on Technology Management, sponsored by DSIR, New Delhi has been completed and submitted by the department.

Programme offered by the department

Bachelor of Business Administration (3years Full Time)

Master of Business Administration (2years Full Time / 3 years Part Time)

M.E. (Quality Engg. & Management)

Ph. D

Faculty Position

Reader - 6

Sr. Lecturer - 1

Lecturer - 6

Number of students enrolled with this department

III Trimester - 74 (Full-time) + 16 (Part -time)

VI Trimester - 89 (Full-time) + 14 (Part -time)

IX Trimester - 12 (Part-time)

Academic innovation, research & Infrastructure development activities

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	National Food for Work Programme for Katihar and Araria districts of Bihar	Govt. of Bihar	April 2005	Rs. 18.00 lacs	1 year
2.	NPA Management of Commercial Banks	AICTE	Feb. 2001	Rs. 6.00 lacs	3 years
3.	A Study of Factors affecting Women Entrepreneurship	AICTE	Feb. 2002	Rs. 4.00 lacs	3 years
4.	Integration of Business Strategies with Technological Strategies of a Large Public Sector Organization and its influence on their small and medium scale suppliers	DSIR	Dec. 2002	Rs.3.00 lacs	3 years

National Seminar on “Effective Horticulture Marketing through Inter State Networking” was organized by the department in March 06.

No. of delegates were approximately 500.

Dignitaries attended were

- * Mr. Anurag Bhatnagar, Director General, NIAM, Jaipur
- * Dr. N.N. Singh, Vice Chancellor, BAU, Ranchi
- * Dr. Bengali Babu - Director, ILRI, Ranchi
- * Dr. K.K. Kumar - Director, NRC, Muzaffarpur
- * Mr. C. Mahto- Chairman, JSAMB, Ranchi
- * Mr. R. A. Ekka - MD, JSAMB, Ranchi
- * Mr. V. S. Mishra - Addl. Commissioner, Agriculture, Jharkhand, Ranchi

Name of the Paper	Author s Name	Journal/ Conference s Name	Vol/No./Page
Marketing of fruits and vegetables in South Asia	Dr. R.N. Bhagat	33rd World Marketing Congress at IMM, New Delhi On The South Asian Market : Its Challenges and Opportunities, January 06.	
Structural intervention for favorable socio-cultural influences on India Entrepreneurship		International Conference on Entrepreneurship and Human Rights held at Fordham University, New York - August 2005	
Socio-cultural influences On Indian entrepreneurs : The need for appropriate Structural interventions	Dr. S. Shivani	Journal of Asian Economics	Vol. 17, 2006, P. 5-13
Socio-cultural context of Indian entrepreneurship : A study of salient Entrepreneurial traits	The Alternative (Dept. of Management, BIT, Mesra)	Vol. 4, No. 2, 2005	
Socio- cultural context of Entrepreneurship in India : A Study of motives & inspirations of entrepreneurs	Prestige Journal of Management & Research	Vol. 9, No. 1, April '05	

Name of the Paper	Author s Name	Journal/ Conference s Name	Vol/No./Page
Role of IT in Supply Chain Management	Niraj Mishra and Dr. A. M. Agrawal	National Conference on Supply Chain Management-A Global Perspective held at IISM, Pundag, Ranchi February 2006	
Legal framework - environmental legislation	Dr. Manju Bhagat	National Seminar on Effective Horticulture Marketing through Inter State Networking at BIT, Mesra	

Entrepreneur

Seminars attended by faculty members

Conference/ Seminar / Symposium/ Short Term courses	Name of the Faculty Member
International Conference on "Entrepreneurship and Human Rights" held at Fordham University, New York City 5th- 7th August 2005.	Dr. S. Shivani
National Seminar on " Effective Horticulture Marketing Through Inter State Networking" BIT, Mesra, March 2006	Mr. Niraj Mishra Mr. A. R. Srivastava Mr. S.C. Mishra Dr. R.N. Bhagat Mr. U. Baul Dr. S. Shivani Dr. P.C Jha Mr. Vijay Agrawal Mr. Anand Kumar Mr. Amitabh Verma
Quality Improvement Program - Appreciation course in Parliamentary Processes and Procedures at Lok Sabha Secretariat, New Delhi, August 2005.	Dr. R. N. Bhagat
33rd world Marketing Congress IMM, New Delhi on "South Asian Market : Its Challenges and Opportunities" January 06	Dr. R. N. Bhagat
IPMA Young Crew International Workshop , November 2005 on Project Management at IIT, Delhi	A. R. Srivastava

Conference/ Seminar / Symposium/ Short Term courses	Name of the Faculty Member
National Conference on Supply Chain Management -A Global Perspective held at IISM, Pundag, Ranchi, February 2006.	Dr. A. M. Agrawal Mr. S. C. Mishra Mr. Niraj Mishra Mr. A.R. Srivastava
E- learning workshop organized by TEQIP, BIT, Mesra	Mr. Amitabh Verma

All India B-School Students Festival, SAMAGAM 2006 was organized by the department. Students of various Business Schools had participated in the festival.

DEPARTMENT OF MECHANICAL ENGINEERING

Since its inception in 1955, the Department of Mechanical Engineering has a wide reputation for the quality of teaching and research. The Department, recognized as DST-FIST sponsored Department by the Department of Science and Technology, Government of India, has been receiving continuous financial supports for research activities from various organisations. Design and Development of an advanced steering mechanism by Sri Ankur and Sri Sandip (both students of third year) carried out in the Department gained a wide reputation during the Auto-Expo-2005 at New Delhi.

During the year 2005-06, the Department has made specific contributions to the rural masses. "Energy Awareness in community" programme under TEQIP, run by the Department with Dr. Arbind Kumar (I) as Co-ordinator, has been receiving overwhelming responses from the villagers, women folk in particular. This workshop was inaugurated by the Vice Chancellor who encouraged the participants, village students in particular, to turn the outcome of this programme into generating their self employment. This programme has also received appreciation from the State Government agencies.

During the year under report, one bio-gas reactor has been successfully designed, developed and commissioned in the I.C. Engines Laboratory. A Solar-biomass hybrid cold storage cum dehydration unit is under progress. Research works on solid Modelling for custom fit Artificial Human Limbs have led to the development of a new laboratory. Smart sensors based on emission of electromagnetic radiations during micro-plastic deformations in metals and alloys have been successfully designed in the Materials Research Laboratory. Smt. B. Srilakshmi, Ph.D. Scholar and Lecturer in the Department of Mechanical Engineering (Aug. 2003 - Nov. 2005) has reported an additional new phenomenon on "Emission of Secondary Electromagnetic Radiation during micro-plastic deformations of metals and alloys" which has been published in the Journal of Materials Science, U.S.A. (December 2005).

During the year under report, one Tinius Olsen 100 kT Universal Testing Machine (Digital) has been procured and installed under the DST-FIST Project. Under TEQIP, one Multi Point Fuel Injection Computerized Petrol engine has been procured and installed in the I.C. Engine Laboratory.

Degree/diploma offered

B.E. (Mechanical Engineering)

M.E. (Mechanical Engineering)

Heat Power/Design of Mechanical Equipment

Ph.D. Mechanical Engineering related disciplines as well as multi-disciplinary fields.

Faculty position

Professor - 2

Reader - 5

Reader (Sel. Gr) - 1

Sr. Lecturers - 3

Lecturers - 15

Number of students enrolled/registered with the Department (as on Feb. 2006)

Course	Semester	No. of Student
B.E. (Mech)	IV	63
	V	25
	VI	91
	VII	30
	VIII	95
	Total	304
M.E. (Heat Power)	II	07
	IV	03
	Total	10
M.E. (Design of Mech. Equipment)	II	04
	IV	04
	Total	8
	Gr. Total	322

Academic Innovations, Research and Development activities

Major research activities of the Department have centred around (i) Smart Materials & Intelligent systems, (ii) Renewable energy resources, (iii) Solid Modeling of artificial human limbs, (iv) Micro-Mechanical Systems, (v) Fuel Cells and combustion, (vi) Robotics and automation, and (vii) Composite materials

(A) Ongoing Projects

Title of the project and duration	Funding Agency	Amount sanctioned (in Lakhs)
Development of Infrastructure for Smart Mechanical System (Dr. A.K. Mishra HOD)	FIST- DST	26.00
Engineering of Smart Materials through Mechano emission characteristics (Nov. 2002- Nov. 2005)	DST	15.7612
Cold Storage and Dehydration of Vegetables through single Solar-Biomass Hybrid System for Tribal States (2005-2007)	Ministry of Food Processing Industries Govt. of India	66.80
Development of CAD Model for custom fit Artificial Human Limbs using Reverse Engineering Method (2005-08)	DST	15.00

(B) Project sanctioned during the year 2005-06

Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
Dr. A.N. Sinha	Development of CAD Model for custom fit Artificial Human Limbs using Reverse Engineering Method (2005-08)	Rs. 15.00 Lakhs	DST

(C) Project completed during the year 2005-06

Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
Dr. Ashok Misra	Correlation of Micro-structural characteristics with stress-induced Magnetic and electro-magnetic effects in Metals (April 2001 - March 2004)	Rs. 5.18 Lakhs	UGC

(D) Project submitted during the year 2005 - 2006

- (i) Arbind Kumar (I) and Ashok Misra : "Renewable Energy Park", Department of Energy, Government of Jharkhand : **Rs. 264.41 Lakhs.**
- (ii) A. N. Sinha, R. P. Sharma and Apurba Roy, "Integrated System Design of Local Exhaust Ventilation System for Dust Control in Mineral Handling and Processing Plants", Ministry of Environment & Forest, New Delhi : **Rs. 39.17 Lakhs only.**
- (iii) Sabin Kumar Mishra, "Development of 3-D CAD Model of Elliptical Gear and its Manufacturing by Rapid Prototyping method", Institution of Engineers (India) : **Rs. 1.56 lakhs only.**

(E) Seminar/Conferences/Workshop organized by the Department

- (i) International symposium on "Intelligence based Materials and Manufacturing", August 18-20, 2005.
- (ii) TEQIP Workshop on "Energy Awareness in Community" was organized during April 20-21, 2006 at the Government Basic School, Mesra, Ranchi under the leadership of Dr. Arbind Kumar I and Dr. R.P.Sharma. A total of 37 participants, men and women of all ages, from the rural areas enthusiastically attended the workshop.
- (iii) TEQIP workshop on "Auto-CAD", May 1-6, 2006; Co-ordinators : Dr. R. P. Sharma and Mr. Sabin Kumar Mishra.
- (iv) TEQIP Workshop on "Automobile Engineering Systems" May 08 - 13, 2006; Co-ordinators : Mr. D. B. Lata and Mr. R. K. Mishra.

(F) Publications by the Faculty

International Journals

1. B. Srilakshmi and Ashok Misra, "Secondary Electromagnetic Radiation during plastic deformation and crack propagation in uncoated and tin-coated steel." *Journal of Materials Science, U.S.A.* **40** (2005) pp. 6079 - 6086.
2. B. Srilakshmi and Ashok Misra, "Electromagnetic Radiation during opening and shearing modes of fracture in commercially pure aluminium at elevated temperature", *Materials Science and Engineering A U.S.A.* **404** (2005) pp. 99-107.
3. B. Srilakshmi and Ashok Misra, "Emission of Electromagnetic Radiation during plastic deformation and fracture of cold rolled commercially pure aluminium sheets", *manufacturing Technology and Research* **1** (2005) pp. 97-104.
4. Arbind Kumar* and Ashok Misra, "Shape Anisotropy of Magnetic Field Generation during Tensile Fracture in Steels, " *Journal of Magnetism and Magnetic Materials*, **285** (2005) pp. 71-78.
5. R. Dwivedi and A.N.Sinha, "Design and Analysis of Dust Extraction System", *Bulk Solid Handling, Germany*, **26** (2006) pp. 1-12.

National Journals

1. Arbind Kumar, "Performance study of Oxen Driven Screw Pump," *Journal of Rural Technology* (Sept. 2005) pp. 5-7.
2. Arbind Kumar, "Development and Testing of Extrusion Machine for making Puja Dhoop", *Journal of Rural Technology* (Jan. 2006) pp. 8-10.

International Conferences/Seminars/Symposium

1. A.N. Sinha, Nibedita Das and G.Sahoo," Data Clustering using Ant Colony optimization," *Proceedings of International Symposium on Intelligence based Materials and Manufacturing*, Aug. 18-20, 2005, Ranchi.
2. B. Srilakshmi and Ashok Misra, "Development of Smart Materials through Electromagnetic Radiation in Metal Coating", *Proceedings of International Symposium on Intelligence based Materials and Manufacturing*, August 18-20, 2005, Ranchi.
3. B. Srilakshmi, V.S. Chauhan and Rajeev Kumar, "Intelligent Materials: Present Status and Future Potentials," *Proceedings of International Symposium on Intelligence based Materials and Manufacturing*, Aug. 18-20, 2005, Ranchi.
4. Rajeev Kumar and Ashok Misra, "A New Approach for Smart Sensors in Design against Metallic Failure," *Proceedings of the International Conference on Resource Utilisation & Intelligent Systems*, Jan 4-6, 2006, Erode, India.

National Conference/Workshop

1. A.N. Sinha, "Reverse Engineering Method for CAD Model of Human Body Parts," *Keynote Address in Advances in Product Design*, Institution of Engineers (India) & MNNIT, Allahabad, Feb. 2006.

2. Gopal Krusna Mohanta, Abhay Kumar and A.N. Sinha, "Gear Involute Profile Geometry Design by Cubic Spline," Proceedings of the National Seminar on "CAD/CAM , Robotics & Futuristic Factories," Institution of Engineers (India) & B.I.T. Mesra, Dec. 2005.
3. A.D. Uday and A.N. Sinha, "Trajectory Planning of a Biped Robot," Proceedings of National Seminar on "CAD/CAM, Robotics & Futuristic Factories", Institution of Engineers (India) & B.I.T. Mesra, Dec. 2005.
4. D.B. Lata, Ashok Misra and Ramesh Chandra, "Effect of Light on Bio-hydrogenation", Proceedings of National Conference on I.C. Engines and combustion, combustion Institute (Indian Wing) Chennai, Dec. 2005.
5. Vivek Kumar Gaba and Praveen Mishra, "Recent Trends in Biogas Plant Design for the Performance of Dual Fuel Engine," Proceedings of National Conference on "Recent Trends in Renewable Energy Technology," Dec. 2005, Tamilnadu.
6. Praveen Mishra, Anand Kumar and Vivek Gaba "Hearth Conditions of a Furnace with reference to Hot Metal Flow", Proceedings of 32nd National Conference on Fluid Mechanics and Fluid Power, Dec. 2005, Osmanabad (M.S.).
7. Ranjeet Ranjan, A.D. Udai and A.N.Sinha, "Kinematics and Control of a Biped Robot", Proceedings of National Seminar on "Advances in Product Design", IE (I) and MNNIT, Feb. 2006, Allahabad.
8. R. Sahay, Abhay Kumar, A.N.Sinha and A.D. Uday, "An Imitated Human Motion optimal B-Spline Path of a Biped Robot Using Genetic Algorithm", Proceedings of Natinal Seminar on "Advances in Product Design", IE (I) and MNNIT Feb. 2006, Allahabad.
9. Sabin Mishra, Gopal Krusna Mahanta and A.N. Sinha, "Computer aided Design of General Elliptical Gear", Proceedings of National Seminar on "Advances in Product Design", IE (I) and MNNIT, Feb. 2006, Allhabad.
10. Arbind Kumar, "Energy Audit - A complete System Approach for Energy conservation", Proceedings of the Workshop on Energy conservation, Petroleum Conservation Research Association & C.C.L., Jan. 2006, Ranchi.
11. Arbind Kumar, "Appropriate Technology for Rural Upliftment", Proceedings of the National Seminar on Appropriate Technology Applications, Feb. 2006, Raipur.
12. B.S. Choudhary, "Mechatronics based Integrated Belt-Conveyor Optimum System Design for Bulk Solid Handling", Seminar on "Recent Trends in Mechanical Engineering", Jan. 2006, Bhubneswar.

(G) Seminar/ Workshops Attended by Faculty Members

1. Anand Kumar, "Structural Steel Design (Limit State Method)", June 2005, IT, BHU, Varanasi.
2. Sabin Kr. Mishra, "Structural Steel Design (Limit State Method)", June 2005, IT, BHU, Varanasi
3. R.K. Mishra, "ANSYS Advance Workshop", Dec. 2005, Bangalore.

4. Ullekh Pandey, "TEQIP Workshop on Academic Reforms", Jan. 2006, B.I.T. Mesra.
5. Ullekh Pandey, "Fuel Cells: Power Device of the Future", Feb. 2006, IIT Kanpur.
6. A.N.Sinha, "Quality Enhancement of Engineering Education through NPTEL", March 2006, IIT, Kharagpur.
7. Arbind Kumar, "Rural Technology Applications", organized by the Department of Scientific and Industrial Research, Government of India, March 2006.

(H) Award/Nominations of Faculty Members by Important Organisation

1. Dr. A.N. Sinha :
 - a. Expert Member, UPSC Interview Board
 - b. Expert Member for Faculty Selection (N.I.T. Rourekela)
2. Dr. Ashok Misra :
Appointed Member of Research Board of Advisors, American Biographical Institute, USA.

(I) Student Activities

1. Sri Uday Sharan Chakravarty (2001 batch) designed and fabricated a "Folding Walker" for crippled persons which have been appreciated by the Social Activists for Handicapped persons.
2. Kumar Pallav and Sri Vikas Pandey (both 2002 batch) have helped in designing Oxen Driven Generator set for rural masses which has got Patent in Collaboration with Dr. Arbind Kumar I .
3. The Mechanical Engineering Society (Mechanical Engineering Students Chapter of Institution of Engineers, (India) organised the Annual Technical Function AKRITI - 2005.
4. The prestigious **Annual Henning Award for Technical Excellence (2005)** Sponsored by **Larsen and Toubro Ltd.** was awarded to the following students:

First Prize : (Rs. 12,000/- only plus citation)

Sri Manish Piyush : Roll No. BE 330/02 (Mechanical)

Sri Anish Sinha : Roll No. 241/02 (Mechanical)

Second Prize : (Rs. 8000/- plus citation)

Sri Abhay Mishra : Roll No. IR/2K 104/02 (Mechanical)

(J) Information regarding Patents

1. Dr. Arbind Kumar I : Patent of "Oxen driven primemover" vide Patent No. 288/KOL/ 2006.
2. Dr. Arbind Kumar I has applied for Patent for his newly designed "Extrusion Machine for Pooja Dhoop".
3. For creating "Energy Awareness in Community" during the Programme: "Renewable

Energy Resources for Domestic Uses” under TEQIP : Service to Community Programme by the Department of Mechanical Engineering, Dr. Arbind Kumar I also successfully demonstrated his newly designed following items :

- a. Energy Cakes
- b. Improved Chulhas
- c. Solar Drier

These items along with the Extrusion Machine for Pooja Dhoop mentioned under Sec J (ii) above, received overwhelming responses from the villagers, rural women in particular.

DEPARTMENT OF PHARMACEUTICAL SCIENCE

Established in 1972 and during the past 34 years of its existence, the students of this department has made themselves well known for their Alma Mater worldwide. The department offers academic programmes in the Undergraduate, Postgraduate levels and Ph.D. in diverse area of Pharmaceutical Sciences. The courses are recognized by the Pharmacy Council of India and AICTE. These courses are designed to create professional in Pharmaceutical Sciences namely in Biopharmaceutics, Synthetic Drugs, Natural Products, Herbal Pharmaceuticals, Pharmacology, Biochemical Pharmacology, Toxicology etc. The syllabi of the course 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 purposes. It 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 curriculum and the various species of the medicinal plants used by the students for their projects and research work are picked up from this garden. In addition, a number of entrepreneurs have been trained in processing and cultivation of medicinal plants. Department also maintain well maintained animal house which is 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 project from organizations like UGC, AICTE and DST. Some projects are on the anvil and it is expected that this would be a continuous process in the years to come. To meet challenges of Pharmacy Professionals and Industries, the department is in process of introducing concept of specialization at under graduate level itself.

The department currently offers courses leading to B. Pharm., M. Pharm in 4 specializations and Ph.D. It also provides necessary support to department like Hotel Management & Catering Technology, Biotechnology, Biomedical Instrumentation and Environmental Sciences and Engineering Food / Technology. Department has plan to introduce Diploma in Pharmacy Programme as well as M. Pharm. in three more specialization namely Pharmaceutical Biotechnology, Quality Assurances and Clinical Pharmacy. In addition the department is providing necessary support to Diploma and Degree level programme in allied sciences like Medical Laboratory Technology.

To meet the requirements of the department to accommodate it s new programme and to accommodate B. Pharm students with an intake of 60, new spacious building has been planned which shall be ready within a year s time. The department is currently running the only approved drug-testing laboratory of the state

Degree/diploma offered

Course	Degree	Specialisation
Undergraduate	B. Pharm	
Postgraduate	M. Pharm	Pharmaceutics Pharmaceutical Chemistry Pharmacognosy Pharmacology Biotechnology

Faculty Position

Professor - 5

Assoc. Professor - 2

Reader - 4

Sr. Lecturer - 4

Lecturer - 6

Assoc. Lecturer - 2

Number of students enrolled/registered with the Department (as on Feb. 2006)

Course	Semester	No. of Student
B. Pharm	II	54
	IV	43
	VI	32
	VIII	28
	Total	157
M. Pharm	II	43
	III	6
	IV	25
	Total	74
	Gr. Total	231

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

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Technical back-up to rural industries of Jharkhand	KVIC Govt. of India	2003	Rs. 42.25 lakhs	5 years
2.	Creation of infrastructure facilities including extension services under the scheme for human resource development	MFPI	Dec. 2004	Rs. 50 lakhs	-
3.	Set up of Quality Control Laboratories for Food Processing Industries	MFPI	Jan. 2005	Rs. 50 lakhs	-
4.	Food and Neutraceutical security with Biotechnology Interventions	MFPI	Mar. 2005	Rs.80 lakhs	2 years

B. Project sanctioned during the year 2005-2006

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	FIST	DST	Mar. 2006	Rs. 38.00 lakhs	5 years

C. Project completed during the year 2005-2006

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Studies on potent Antiinflammatory agents from Natural Sources	UGC	Sept. 2004	Rs. 5.81 lakhs	3 years
2.	Microcomputerised Identification of Indigenous drugs and Development of Standards	AICTE,	April 2002	Rs. 12 lakhs	4 years

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

Number of delegates, Name of dignitaries

1. The department alongwith IPA Jharkhand Branch organised one day WHO sponsored Workshop on "Good Pharmacy Practice" on 26th November 2005 where 50 delegates participated
2. Dr. P.H. Rao Professor of Administrative Staff College of India, Hyderabad, delivered a lecture on "Prescription Audit in May 2005.
3. Mr. V.K. Arora, Director Research, Ranbaxy Research Lab, Gurgaon, spoke on "Challenges before Pharmaceutical Industry", in Jan. 2006
4. Dr. T. Sen, Dept. of Pharmaceutical Technology, Jadavpur University spoke in "Recombinant Expression of G-Protein couple Receptor" in Jan 2006.
5. Mr. K.R. Babu, Manager (Regulatory Affairs) Lupin Ltd., Pune spoke on "Regulatory Affairs" in Feb. 2006.
6. Dr. (Mrs.) Namrita Lall, University of Pretoria South, Africa, spoke on "South African Traditional Healing - A Pharmaceutical Perspective" on 5th Jan. 2006.
7. Dr. U. Kompella, Professor of University of Nebraska Medical Centre spoke on "Ophthalmological Applications of Nanotechnology on 27th Feb. 2006.

E. Publications by faculty

Publications

International Publications

1. Mazumder Avijit., Mahato Arun., Mazumder Rupa., "Antimicrobial potentiality of *Phyllanthus amarus* against drug resistant pathogens", *Natural Product Research*, 2006. (Accepted and in press)
2. Mazumder A., Mahato A., Pattnaik A.K., Mazumder R., "Studies on analgesic activity and antipyretic potential of *Phyllanthus amarus*", *Hamdard Medicus*, 2006(Accepted and in press)
3. Nagarajan K., Mohammed Shafeeq KAM., Mazumder Avijit., Ghosh L.K., Jha S., Suriya Prabha K., Sakthivel M., "Hepatoprotective effect of ethanol extract from leaves of *Phyllanthus emblica* in rats", *Hamdard Medicus*, 2006(Accepted and in press)
4. Mazumder R., Bhattacharya S., Mazumder Avijit., Pattnaik, A.K., Tiwary P.M., Chaudhary S., "Antidiarrhoeal evaluation of *Aegle marmelos* (Correa)Linn. root extract", *Phytotherapy Research*, 20, 82-84,2006.
5. Mazumder Avijit, Saha B.P., Basu S.P, Mazumder Rupa, "Evaluation of antipyretic potential of *Lagerstroemia parviflora* extract in rats", *Pharmaceutical Biology*, 43(1), 64-66, 2005.
6. Mazumder, Avijit, Saha, B.P, Basu S.P., Mazumder, Rupa , "A Comparison of in vitro anti fungal activity of the methanol extract of various parts of *Lagerstroemia parviflora* (Roxb)", *Ethiopian J. of Pharmaceutical Sciences*, 22, 61-65, 2005
7. Mazumder, Avijit, Saha, B.P, Basu S.P., Mazumder, R. 'Anti bacterial potentiality of *Lagerstroemia parviflora* (Roxb) flowers", *Pak. J. Biol. Sc*, 22, 61-65, 2005.
8. Dash S., Bhise S., Bhattacharya S., Nath LK., " A flavanoid from the root of *Heracleus nepallense* D. Don", *Asian Journal of Chemistry*, 18(2), 2006.
9. Prakash Surya, Gupta B. N., Upmanyu Neeraj, Bhattacharya S., Moorthy N. S. H. N., "QSAR studies of 2-arylindole derivatives: Tubulin inhibitors in cancer therapy", *Asian J. Chemistry*, 2006, 18(1), 753-756.
10. Dubey Raghvendra, Shrivastava Prabhat K., Basniwal Pawan K., Bhattacharya S., Moorthy N. S. H. N., "2-4-Aminophenyl benzothiazole: A potent and selective pharmacophore with novel mechanistic action towards various tumor cell lines" *Mini Reviews in Medicinal Chemistry*, (accepted).
11. Bhattacharya S., "Estimation of Etoricoxib in Bulk Drug and Pharmaceutical Dosage Form using UV Spectrophotometry and RP-HPLC", *Journal of Pharmaceutical and Biomedical Analysis*, (accepted).
12. Chandra S., Sharma H.P., Chandra R. and Jha S., " Effect of 2,4-D and BAP on callusing response of *Spilanthes paniculata* (D.C.) Jansen Int. J. Mendel, 2006 (Accepted)
13. Chandra R., Ghosh P. and Bhatnagar S.P., L-Asparaginase activity of various bacterial and yeast isolates; *Inter J. Mendel* 2006 (Accepted)

14. Ganguly S. and Somakala K., "Synthesis and study of N-(aryl)-2-(2-methyl-5-nitro-1H-imidazole-1-yl-) acetamides", Medicinal Chemistry, Bentham Science Publishers. (Accepted)
15. Kumar J.K. and Bhatnagar S.P. " Fuzzy role based systems in classification of Terminalia chebula fruits of complementary and alternative medicine accepted for publication in Journal of complementary and Integrative Medicine 2006.
16. Kumar J.K. and Bhatnagar S.P., "Fuzzy logic and analytical tool coupling in the standardization of herbal medicine, Evidence based complimentary and Alternative Medicine, 2006. (Accepted)
17. Nagraj K., Samanta S., Pratibham S. and Maheswari R. Uma "Pharmaceutical evaluation of smaller dipeptides and tripeptides in alloxanized rabbit" Hamdard Medicine Jan-March, 2006. (Accepted)

Contribution In Book Chapters

1. Mazumder Avijit., Lahkar V., Mazumder Rupa, "In vitro antibacterial potentiality of leaves of *Cassia tora* : an ethno medical herbal remedy in Ranchi" in Recent Progress in Medicinal Plants , Govil JN. (Ed.), Stadium Press LLC, Houston, Texas, USA, 2005.
2. Mazumder Avijit., Mazumder Rupa, "Studies on neuropharmacological profile of *Lagerstroemia parviflora* Roxb leaf extract in animal model" in Recent Progress in Medicinal Plants , Vol. 12, Govil JN. (Ed.), Stadium Press LLC, Houston, Texas, USA, 2005

National Publications

1. Mazumder R, Dastidar Sujata G, Basu S. P., Mazumder Avijit, "Effect of *Mesua ferrea* Linn. flower extract on *Salmonella*", Indian J of Exp Biol, 43, 566-568, 2005 .
2. Mazumder Avijit, Mazumder R., Basu S.P, Saha B.P., "sitosterol : a key antibacterial steroid from the leaves of *Lagerstroemia parviflora*", J of Sc & Pharmacy, 6:1, Jan-Mar, 2005.
3. Mazumder Avijit, Raj Pradeep, Mazumder Rupa, "Studies on antibacterial potentiality of the leaf extract of *Lawsonia inermis*", Drug Lines, 7 (1 and 2), March 2004 - Apr. 2005, 15-16, 2005.
4. Mazumder, Avijit, Madhusudhan M. Krishna Mohan M., Mazumder, R., "Microbial polysaccharides: a new pharmaceutical adjuvant in the coming era" Pharma Times, 37(3), 2005.
5. Tripathi Laxmi, Yusuf Humaria, Bhattacharya S., "Nature treasure: alternative approach to treat diabetes", Natural Product Radiance (CSIR)(Accepted).
6. Lata DB, Chandra R. and Mishra A; Effect of light on biohydrogenation; paper presented and published in proceeding 19th nation conference on IC Engines and combustion pp-589-592, Ammamalai University, Chidambaram, p -589-592 December 21-23, 2005.
7. Jha S., Chandra R. and Singh P., "Phytotherapeutics remedies for kidney stones" Pharma Times, 2006 (Accepted)
8. Mishra A., Chandra R., and Jha S., "A review on soluble fibers (Gum) used as potential additive", Indian J. of Natural Product 2006 (Accepted)

9. Mani V. Puratchi and Jha S., "Standardization of Tinosporoside from *Tinospora cordifolia* stem using HPTLC. Indian J. of Natural Products 2006, (accepted).
10. Oraon A., Patnaik A.K., Mazumder A., Mazumder R. and Mahto H.N., "Studies on phytochemical and analgesic activity of the bark of *tectona grandis*", Drug lines, Vol. 8, 1, 2005.
11. Ganguly S. and Razdan B.K., "Synthesis of Some New Derivatives of 2-methylimidazole", Indian J. of Heterocyclic Chemistry, Vol. 14 p 253-254, 2005.
12. Ganguly S. and Razdan B.K., "Synthesis of novel 2-methyl-5-nitroimidazole derivatives", Indian J. Heterocyclic Chemistry Vol. 15 p 191-192, 2005.
13. Ganguly S., Bhatnagar S.P., Paul P. and Pandey Prachi, "Development of a database for identification of crude drugs", Indian J. of Pharmaceutical Education Vol. 39(1), p 38 41, 2005.
14. Ganguly S. and A. Kapoor, "Molecular Modeling - A New paradigm in Drug Discovery", Science and Culture, Vol. 71(11-12) P 441-443, 2005.
15. Sasmal D. and Mazumder P.M., "Overweight & Obesity: Health consequences", Pharmatimes, 37(12), 23-26, 2005.
16. Singh Brijendra Poonia., Sasmal D. and Mazumder P.M., "Antidepressant activity of method extract of *Litsea polyantha* bark", Indian Drug, 2006. (Accepted)
17. Kumar J.K. and Bhatnagar S.P. 'Simultaneous estimation of Tannic acid chebulinic ethylgallate and gallic acid form *Terminalia chebula*', The Pharm Review 3,15, 2005.
18. Kumar J.K. and Bhatnagar S.P., "Estimates of newer triterpenes from *Terminalia chebula*" The Indian Pharmacist, 10(37), 69-74, 2005.

International Presentations

1. Sinha B.N., Vadivelan S. and Saram J.A.R.P., "Pharmacophore generation, mapping and 3-D QSAR studies on Sulfonyl hydroxamic acid derivatives as matrix metalloproteinase-I inhibitors to design novel compounds", Proc. of the BIOINFO 2005 (International Joint Conference of InCoB, AASBI and KSBI), Busan, Korea (Sept. 2005).
2. Vadivelan S., Sinha B.N. and Saram J.A.R.P., "Chemical feature based pharmacophore identification and mapping of Hemiasterlin analogue inhibitor on tubulin", Proc. of the BIOINFO 2005 (International Joint Conference of InCoB, AASBI and KSBI), Busan, Korea (Sept. 2005).
3. Mazumder A. Mazumder R., Bhattacharya S., "Evaluation of antityphoid potentiality of *Phyllanthus amarus* against antibiotic resistant *Salmonella* isolates: a study invitro" International conference on Drug discovery: perspectives and challenges, CDRI, Lucknow, Feb. 24-26, 2006.
4. Mazumder R., Mazumder A., Bhattacharya S., "Studies on acute toxicity and anti-inflammatory potentiality of the methanolic extract of *Grewia asiatica* leaves", International conference on Drug discovery: perspectives and challenges, CDRI, Lucknow, Feb. 24-26, 2006.

DEPARTMENT OF POLYMER ENGINEERING

The Department of Polymer Engineering was established in 1994, recognizing the potential of this emerging field. Today, the Department has well established laboratory facilities in the fields of Polymer Synthesis, Polymer Characterization, Polymer Processing, Polymer Product Design and Development and Product Testing. Since 1996 the Department offers a 4-year undergraduate programme leading to BE (Polymer Engineering), only of its kind in Eastern India. The annual sanctioned in-take for the B.E. course is 30. Presently there are four foreign students pursuing the undergraduate programme. This Academic Year AICTE approved course ME (Polymer Engineering) has been introduced, with a sanctioned annual intake of 18. The Department also provides facilities for Doctoral Research in the fields of Polymer Science & Engineering and Chemical Engineering.

In collaboration with BIT Extension Centre Muscat, the Department is conducting Integrated Industrial Training programme for a company Amiantit Oman, at Muscat. This Academic year a course Polymer Technology- Rotomoulding was introduced in addition to the existing courses Polymer Technology - PVC pipe production and Polymer Technology - HDPE pipe Production. All the courses are approved by City and Gilds.

Department of Polymer Engineering also coordinate the activities of "Design Development and Training Centre in Plastics Engineering", a joint venture of Department of Industries, Government of Jarkhand and BIT Mesra. The ongoing Programmes are one year Certificate Programme in Plastic Processing Machine Operator for matriculates, and one year Certificate Programme for Mould Making Technician for ITI qualified machine operator. This academic year a six-month course on Plastics Processing for graduates has been introduced. All the courses are aimed at manpower development for the Plastics Processing Industries of Jharkhand. Apart from the training programmes the Centre provides Consultancy and Product testing facilities to the Industries.

The Department has well equipped Polymer Synthesis facility including a High Pressure, computer controlled reactor. The facilities in the Polymer Characterization Laboratory include IR Spectrophotometer, RT 20 HAAKE Rotational Viscometer, HAAKE Torque Rheometer with Mixer and Extruder, Oscillating Disc Rheometer, RIGAKU Miniflex Xray Diffractometer, Instron Tensile Testing machine, ATLAS weatherometer etc. and procurement of a Dynamic Mechanical Thermal analyzer is under progress. This academic year a 80 ton Ergotech, L&T Microprocessor controlled Injection Moulding machine and a PVC compounding mixer are added to the existing facilities of Polymer Processing workshop which include Injection Moulding machine, Extrusion Blow moulding machine with parison programming, Kolsite Recycling Plant, Film blowing plant and PVC pipe Extrusion plant, Two roll mixing mill etc. The product Testing Laboratory is well equipped with testing facilities for various plastics products like films, sheets, pipes etc. The facilities in the plastics product Development laboratory includes MCP-HEK vacuum casting machine for prototyping and Mold Flow Software with Flow, Warp, and Stress Modules, 3 axis CNC EDM machine etc. and procurement of a Fused Deposition Modeling system for rapid prototyping is under progress.

The active involvement of faculty members in research in the areas of Polymer Blends,

Polymer Recycling, Process Simulation and Optimization, Product Development, Nano-Composites, Magnetic Polymer, Polymerization Kinetics, Specialty Polymer synthesis etc are reflected in the innumerable paper publications in International Journals of repute. At present, C. Guria, Senior Lecturer is pursuing PhD programme at IIT, Kanpur in the Department of Chemical Engineering on Multi-objective Optimization of Froth Flotation Circuit Optimization. Similarly, G. Sarkhel and K. Kumar are also pursuing PhD programme at Jadavpur University, Kolkata and their topics are "Studies on Polyethylene-EPDM Blends & Composite" and "Virtual manufacturing of Gears" in the Department of Chemical Engineering and Mechanical Engineering respectively. The department has conducted several UGC and AICTE funded projects in present Academic year faculty members presented research papers at various conferences and attended various Workshops and Training Programme.

Degree/diploma offered

B.E. (Polymer Engineering)

No of Seats : 30

Duration : 4 years

M.E. (Polymer Engineering)

No of seats : 18

Duration : 2 years

Regular Certificate courses [Design Development and Training Centre in Plastics Engineering]:

Plastic Processing machine operators course

No of seats : 20

Duration : 1 year

Mould making technician course

No of seats : 20

Duration : 1 year [Eligibility - ITI trained machinist]

Plastic processing [for supervisors and entrepreneurs]

No of seats : 20

Duration : 6 months [Eligibility - Graduate]

Industry Integrated Training Programme [Approved by City and Guilds]:

Polymer Technology - HDPE Pipe Production

Polymer Technology - PVC Pipe Production

Polymer Technology - Roto Moulding

Faculty position

Professor - 1

Sr. Lecturer - 2

Lecturer - 4

Sci. Officer - 1

Asst. Sci. Officer - 1

Number of students enrolled/registered with the Department (as on Feb. 2006)

Programme	Semester	No. of Student
B.E.	II	21
	IV	18
	V	4
	VI	5
	VIII	6
M.E.	II	7
	Total	61

Academic Innovation, Research and Development activities

Ongoing Projects

Project title : Setting up of Design Development and Training Centre in Plastics Engineering

Funding agency : Department of Industries, Government of Jharkhand

Date of sanction : June 2003

Sanctioned amount and duration of project : Rs 102.5 lacs, 3 years duration

Project submitted during the year 2005-06 (details as A)

- I. Synthesis, Characterization and Optimization of Stereo Lithographic Resins, a Proposal submitted to University Grand Commission (UGC) on May 2005. PI: C. Guria. Amount: 11.0 lakhs.
- II. Multi-objective Optimization of Polymerization Reactors, a proposal submitted to All India Council for Technical Education (AICTE) on September 2005. PI: C. Guria Amount: 10.0 lakhs.
- III. Studies on halogen-free fire retardant aqueous based polymer blends & its applicability as coating & nano-composites, a Proposal submitted to Council of Scientific and Industrial Research (CSIR) on September 2005. PI: C. Datta. Amount: 11.72 lakhs.

Publications by faculty

Journals

International

Published (3), In press (8), Communicated (9)

International Journals

1. R. Kachhap & C. Guria. Multi-objective Optimization of Copoly (ethylene polyoxy-ethylene

terephthalate) Batch Reactor Using Adaptations of Genetic Algorithm. *Macromol. Theory & Simul.*, 14, 358-373, 2005.

2. C. Guria, P. K. Bhattacharya & S. K. Gupta. Multi-objective Optimization of Reverse Osmosis Desalination Units Using Different Adaptations of Non-dominated Sorting Genetic Algorithm. *Comp. & Chem. Eng.*, 29, 1977-1995, 2005.
3. C. Guria, M. Verma, S.P. Mehrotra, & S. K. Gupta. Simultaneous Optimization of the Performance of Flotation Circuits and their Simplification Using Jumping Gene Adaptation of Genetic Algorithm, *Int. J. Min. Proc.*, 77, 165-185, 2005.

In Press

1. C. Guria, M. Verma, S.P. Mehrotra, & S. K. Gupta. Simultaneous optimization of the performance of flotation circuits and their simplification using the jumping gene adaptations of genetic algorithm-II: More complex problems, *Int. J. Min. Proc.* 2006.
2. Gautam Sarkhel, Pinaki Bhattacharya, Amarnath Banerjee, Effect of HDPE-g-MA on jute reinforced HDPE-EPDM blends Part-I Mechanical and morphological Properties, *Polymer and Polymer Composite*, 2006.
3. Gautam Sarkhel, Pinaki Bhattacharya, Amarnath Banerjee, Effect of HDPE-g-MA on jute reinforced LDPE-HDPE-EPDM blends Part-I Mechanical and Morphological Properties, *International Journal of Plastic Technology*, 2006.
4. Sandeep Kumar and I.K.Varma. Degradation Studies of Polycaprolactone in Banana Fibres Reinforced Thermoplastics Composites. *International Journal of Macromolecules*, 2006.
5. Sandeep Kumar, B.V.Ramanaiah and S.N.Maiti. Studies on Impact Strength and Thermal Properties Of Nylon-6/LDPE -g-MAH Blends. *Journal of Polymer Technology and Engineering*, 2006.
6. Sandeep Kumar, and S.N.Maiti. Studies on Effect of Crosslinking on Properties of Polycarbonate and Polydimethylsiloxane Rubber Blends. *Journal of plastic technology*, 2006.
7. C.Datta, D.Basu , A.Roy and A. Banerjee. Studies and Characterization of EPOXY/VAc-EHA/HMMM IPN systems in aqueous medium. *Journal of Applied Polymer Science*, 2006.
8. Gautam Sarkhel, Pinaki Bhattacharya, Amarnath Banerjee, Studies on rheological and mechanical properties of HDPE-LDPE blends, *Polymer/Plastic Technology*, 2006.

Communicated

1. C. Guria, M. Verma, S.P. Mehrotra, & S. K. Gupta. Synthesis and Optimization of an Industrial Fluorite Beneficiation Plant using the jumping gene adaptations of genetic algorithm *Int. J. Min. Proc.* (Communicated).
2. Sandeep Kumar, and S.N.Maiti. Studies on EVA Compatibilised Blends of Polycarbonate And Polydimethylsiloxane Rubber, *International Journal of Macromolecules* (communicated).

3. Sandeep Kumar, B.V.Ramanaiah and S.N.Maiti. Studies on Mechanical, Thermal and Electrical Properties Of Nylon-6/EPDM -g- AH Blend. Journal of Polymer Technology and Engineering (communicated)
4. Sandeep Kumar and I.K.Varma. Degradation Studies of Thermoplastic composites of Jute Fibres Reinforced LDPE/Polycaprolactone blends. International Journal of Philosophical News (communicated)
5. Arup Choudhury, Mandira Mukherjee, Basudam Adhikari. Recycling of poly (ethylene terephthalate) / Polyethylene based post consumer oil pouches using compatibilizer. Polymer for Advance Technology (communicated).
6. Akhil K. Sen, Sandip Roy, Vinay A. Juvekar, Effect of structure on the properties of sodium polystyrene sulfonate (NaPSS), Polymer International (Communicated).
7. Gautam Sarkhel, Pinaki Bhattacharya, Amarnath Banerjee, Studies on mechanical and dynamic mechanical properties of dynamically vulcanized HDPE-EPDM blends, Polymer/Plastic Technology (Communicated)
8. Gautam Sarkhel, Pinaki Bhattacharya, Amarnath Banerjee, Effect of HDPE-g-MA on jute reinforced LDPE-HDPE-EPDM blends Part-II Dynamic mechanical and thermal properties, Polymer/Plastic Technology (Communicated).
9. Gautam Sarkhel, Pinaki Bhattacharya, Amarnath Banerjee, Effect of HDPE-g-MA on jute reinforced HDPE-EPDM blends Part-II Thermal and dynamic mechanical Properties, Polymer and Polymer Composite (Communicated).

National Journals

1. Arup Choudhury, Mandira Mukherjee, Basudam Adhikari. Recycling of Nylon 6/ Polyethylene Waste Oil Pouches using Compatibilizers. Indian Journal of Chemical Technology 2005 (in press).

Proceedings

International Proceedings : Published (11)

National Proceedings : Published (3)

International Proceedings

1. Om Prakash and C. Guria, Modeling and simulation of batch suspension poly (vinyl chloride), pvc, reactor, International Symposium on *Intelligence based Materials and Manufacturing*, August 18-20, 2005, Birla Institute of Technology, Mesra, Ranchi, Jharkhand.
2. A. K. Bharti, R. Kachhap and C. Guria, Multi-objective dynamic optimization of a batch copoly (ethylene-polyoxyethylene terephthalate) reactor using non-dominated sorting genetic algorithm, International Symposium on *Intelligence based Materials and Manufacturing*, August 18-20, 2005, Birla Institute of Technology, Mesra, Ranchi, Jharkhand.
3. Ashutosh Kumar and Akhil K. Sen, Adsorption of hydrophobically modified polyacrylamide on Titania and Calcium carbonate particles, International Symposium on *Intelligence based*

Materials and Manufacturing, August 18-20, 2005, Birla Institute of Technology, Mesra, Ranchi, Jharkhand.

4. Arup Choudhury, Mandira Mukherjee, Basudam Adhikari International conference on Polymer Blends (Eurofillers 05) held in the Bruges, Belgium (May 9-12, 2005). Topic of the paper: "Recycling of post consumer oil pouches containing polyethylene/nylon 6 by using compatibilizers."
5. Sandeep Kumar, and S.N.Maiti. Studies On Nano-Titaniumdioxide filled Composites of Polycarbonate And Polydimethylsiloxane Rubber. Intelligence Based Matand Manufacturing, International Conference (ISIMM 2005), August-18th, Ranchi (India) 2005.
6. Sandeep Kumar, B.V.Ramanaiah and S.N.Maiti. Studies on Mechanical and Thermal Properties Of Nylon-6/LDPE -g-MAH Blends. Intelligence Based Materials and Manufacturing, International Conference (ISIMM 2005), August-18th, Ranchi (India) 2005.
7. S. Haro and C. Datta. Nanosize polymer lattices and polymer, International Symposium on *Intelligence based Materials and Manufacturing*, August 18-20, 2005, Birla Institute of Technology, Mesra, Ranchi, Jharkhand.
8. A. Takhur and C. Datta. Magnetic field sensitive polymer composite, International Symposium on *Intelligence based Materials and Manufacturing*, August 18-20, 2005, Birla Institute of Technology, Mesra, Ranchi, Jharkhand.
9. S. Saw and C. Datta. Mechanical and dynamic mechanical properties of jute fiber-montmorillonite filled novalac epoxy composite laminates, International Symposium on *Intelligence based Materials and Manufacturing*, August 18-20, 2005, Birla Institute of Technology, Mesra, Ranchi, Jharkhand.
10. Sandeep Kumar, Chandan Datta and S.N.Maiti. Studies on Effect of Crosslinking on Properties of Polycarbonate and Polydimethylsiloxane, Rubber Blends, 19th Rubber conference, organized by Indian rubber manufacturers research association, Mumbai. December 19 - 20, 2005.

National Proceedings

1. V. Sakria and C. Guria, Pollution Control by Supercritical Extraction: A Review on Sustainable Cleaner Technology, National Seminar on *Green Productivity and Sustainable Development*, March 10-11, 2005, Birla Institute of Technology, Mesra, Ranchi, Jharkhand.
2. Arup Choudhury, Mandira Mukherjee, Basudam Adhikari National conference on Polymer Blends (Macro 05) held in the Department of Polymer Science, SJE College & Engineering, Mysore; India (April 6-7, 2005). Topic of the paper: "Recycling of PE/PET based post consumer oil pouches in presence of compatibilizers."
3. Mandira Mukherjee, A invited lecture on "Analytical approach to trouble shooting in single screw extrusion" a CEP Courses on Rheology and Processing of Polymeric Material, September 5 - 9, 2005, held at DMSRDE, Kanpur,

D. Seminar/Symposium/Short-term Course attended by faculty members

1. International Symposium on "Intelligence based Materials and Manufacturing", August 18-20, 2005, Birla Institute of Technology, Mesra, Ranchi (Department of Mechanical & Production Engineering) Attended by Dr. C. Datta, A. K. Sen, S. Datta, S. Saw, Mrs. A. Singh and C. Guria.
2. One-day workshop on "Academic Reforms", December 15-20, 2005, Technical Education Quality Improvement Programme (TEQIP), Birla Institute of Technology, Mesra Ranchi. Attended by Dr. P. Mukhopadhyay, G. Sarkhel and C. Guria
3. Workshop/Short term course on "Technology Up gradation in Rubber Technology" organized by RTC, IIT, Kharagpur during January 9-13, 2006. Attended by Dr. C. Datta
4. Four Days advanced workshop on 2005, ANSYS INDIA Conference training, at Bangalore organized by ANSYS on Nov 29 to Nov 30, 2005, Attended by S. Kumar.
5. 2005 ANSYS INDIA Advanced Workshop, December 1st and 2nd, 2005, at Bangalore attended by S.Kumar.
6. ANSYS Basic Training, 5th -7th Dec, at BIT Mesra attended by C.Guria and K Kumar.
7. Workshop & Exhibition on: "Technology Development, Utilization and Transfer" jointly organized by Department of Scientific & Industrial Research, Ministry of Science & Technology, Govt. of India and BIT Mesra on 6th March 2006, Attended by Dr. P. Mukhopadhyay and C. Guria.
8. Workshop/visit to "Plastindia" 2006 (with students) held on February 10-13th , 2006 at Pragati Maidan, New Delhi. Attended by Dr. C. Datta, M. Swain and K. Kumar.
9. UGC sponsored refresher course on "Automation in Manufacturing" Birla Institute of Technology, Mesra Ranchi, from Nov. 28-Dec. 17th, 2005, Attended by K. Kumar..
10. Short-term training programme on "Robotics & Automation in Manufacturing" at Jan. 2-7, 2006 at BESU Shibpur, Howrah (WB), Attended by K. Kumar.
11. Short-term Training Programme on "CATIA Software" at BIT, Mesra, Ranchi from March 27-29, 2006 Attended by S. K. prasad and K. Kumar.
12. Short-Term Training Programme on "Content Development in e-learnig" at BIT, Mesra Ranchi from April 3-4, 2006, Attended by Dr. A. K. Sen and K. Kumar.
13. Third SERC school on "Colloids & Interfaces: Fundamentals and Research Challenges", March 6-10, 2006, IIT Bombay, Attended by Dr. A. K. Sen.
14. Short-Term course on "Organic Electronics and Flat Displays" July 11-15, 2005, Samtel Center for Display Technologies, IIT Kanpur, Attended by Dr. A. K. Sen.

E. Award/Nomination of faculty by important organizations

Akhil Kumar Sen awarded PhD degree from IIT, Bombay in the Department of Chemical Engineering.

Thesis title : Behavior of Sodium Polystyrene Sulphonate in Solution and at Interfaces.

F. Student Activities

- (a) Sashi Bhusan Singh (B.E. Student, Roll No. 168/03) and Rahul Kumar (M.E. student, Roll No. 01/05) attended Polymer Quest - 2005, an all India young scientist, essay, seminar and quiz competitions in Polymer Science and Technology organized by Rubber technology Centre, IIT, Kharagpur on November, 2005.
- (b) All students (including Diploma, B.E. and M.E. students of Polymer Engineering Department) visited PLAST-INDIA held on February 10-13th, 2006 at Pragati Maidan, New Delhi.
- (c) Alumni of the Department Mr. Sharat Chandra, was selected in the AICTE Early Faculty Induction Programme during his MTech Programme in Metallurgy and Materials Science Department at IIT Kanpur, was invited to the Department to deliver a talk on his M.Tech research work in the area of Polymeric Light Emitting Diodes.
- (d) Five out of six eligible were placed by campus recruitment in organizations like TCS, CTS and Accenture.

G. Infrastructural facilities during the year 2004-05

Polymer Characterization: Dynamic Mechanical thermal Analyzer [procurement in progress under TEQIP]

Polymer Processing: 80ton L&T Ergotech Injection Moulding Machine, PVC mixer.

Polymer Product Design and Development: Fused Deposition Modeling rapid prototyping unit [procurement in progress under TEQIP]

DEPARTMENT OF PRODUCTION ENGINEERING

Since its inception in 1964, The Department of Production Engineering has been imparting quality education to under graduate and post graduate students by training them to meet the demands of the manufacturing industry. 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 rapidly changing manufacturing scenario.

Keeping in view of the rapid advances in manufacturing technology, like computer controlled processes, management information systems, ERP, and new manufacturing concepts like Toyota production system (TPS), agile manufacturing, pull system etc., are reinforcing the recognition of technological, organisational, economic and human factors. Furthermore, specialised 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 major long- range goal of the Department is to make itself a centre of excellence in teaching, consultancy and research in various aspects of Production Engineering. An increasing number of university-industry collaborations are shaping through sandwich training programmes, short term courses, workshops, and live projects for UG, PG and Doctor Level. 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.

Degree/diploma offered

Bachelor of Engineering (Production)

Master of Engineering (Automated Manufacturing System)

Ph.D.

Faculty position

Professor - 1

Reader - 5

Lecturer - 12

Number of students enrolled/registered with the Department (as on Feb. 2006)

Course	Semester	No. of Student
UG Course	II	21
	III	12
	IV	18
	V	5

Course	Semester	No. of Student
UG Course (Contd.)	VI	20
	VII	2
	VIII	22
PG Course	II	4
	III	1
	IV	2
	Total	107

Research and Development / Interest of Faculty Members

- * Waste Minimization and Lean Processes
- * Manufacturing Automation & Robotics
- * Work Design and Ergonomics
- * Water Jet Technology
- * Formability of Sintered Preforms
- * Hydrodynamics of Metal Forming Processes
- * Wire Cut EDM
- * CAD/CAM/FMS
- * Friction stir welding

Special facilities of the Department

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 installed in the nontraditional manufacturing laboratory.

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.

Academic Innovations, Research & Development activities

A) Ongoing Projects

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Electro Chemical Machining	UGC	April 2003	Rs. 5.6 lakhs	2 years

B) Project completed during the year 2005-2006

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development of Manufacturing Machatronics Laboratory	AICTE	4.3.2002	Rs. 12 lakhs	2 years

D) Project submitted during the year 2005-2006

Sl. No.	Project Title	Funding Agency	Sanctioned Amount	Duration of the Project
1.	Metallic Foams	Under NCP scheme AICTE	Rs. 39 lakhs	2 years

E) Seminar/Conference/Short Term Course Conducted by the Department

Sl. No.	Name of the Programme	No. of Participants
1.	National Workshop on "Value Added Life Style Management", 21st - 22nd May 2005.	45
2.	National Workshop on "Value Added Time Management" from 21st August, 2005.	20
3.	International Symposium on "Intelligence based Materials & Manufacturing", 18-20 August, 2005.	50
4.	Seminar on "CAD/CAM, Robotics and Futuristic Factories", 10th -11th December 2005.	50
5.	UGC-Refresher Course on "Automation in Manufacturing Engineering", 28th November - 17th December, 2005.	31
6.	Training Programme on "CAD, CAM and Robotics", 5th December-11th December, 2005 under TEQIP Networking Scheme	20
7.	Training Programme for non-executives on "Welding and Forging", 19th - 24th December, 2005 under TEQIP Networking Scheme	15

Publications by the Faculty Members

Journals

International

1. S. Kumar, S K Mukherjee and P K Srivastava, "Effect of Over-Voltage on Material Removal Rate During Electrochemical Machining", Tamkang Journal of Science and Engineering, 2005.
2. S Kumar and P K Srivastava, "Tribiochemistry of Lubrication Issues of Magnetic Disk Storage devices", Tribology International Journal, 2005.
3. R.K. Singh, S.Kumar, Prakash, and M.K.Tiwari "Psycho-Clonal based approach to Solve a TOC Product Mix Decision Problem", International Journal of Advance Manufacturing Technology, 2005, Published Online: DOI 10.1007/s00170-005-0019-8
4. R.K. Singh, S.Kumar, A.K.Choudhury, and M.K.Tiwari "Lean Tool Selection In A Die Casting Unit: A Fuzzy Based Decision Support Heuristic", International Journal of Production Research, 2006, Vol. 44, No. 7, 1399-1429.
5. Vijay Pandey, M. K. Tiwari, S. Kumar, "An interactive approach to solve the operation sequencing problem using simulated annealing", International Journal of Advance Manufacturing Technology, Published On- line, DOI 10.1007/s00170-005-0007-z.
6. Vinay Sharma, Surender Kumar "A study of process parameters for coal cutting under Indian environmental condition using hydro jet cutting system", International Journal of Manufacturing Technology and Management, Vol. 7, Nos. 2/3/4, 2005

Conference Proceedings

International

1. S. Muthukumaran, "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.
2. R.K. Singh and S. Kumar "Molecular Manufacturing: an emerging technology of 21st century", International Symposium on Intelligence Based Materials & Manufacturing, B.I.T, Mesra, Ranchi, August 2005. pp.225-232.
3. R.K. Singh, S. Kumar and M.K. Tiwari "An Intelligent Model For Multi- Preference, Multi-Criteria, Decision Making To Select A Process Mapping Tool For Minimization of Wastes", International Symposium on Intelligence Based Materials & Manufacturing, B.I.T, Mesra, Ranchi, August 2005. pp.342-343.
4. S.C. Srivastava, Ujjawal Nag, Vijay Pandey and Surender Kumar, "Evolving Artificial Neural Network With The Use of Hybrid Strength Pareto Evolutionary Algorithm and Back Propagation Algorithm", Proceeding of International Symposium on Intelligence Based Materials and Manufacturing, B.I.T., Mesra, Ranchi, August 18-20, 2005.
5. Pattanaik L.N. et al., "Cell formation using modular-reconfigurable machines", Proceedings of 16th International Symposium, 19-22nd, October 2005, Optiza, Croatia.

National

1. Saurbh Agarwal, Surender Kumar and Vijay Pandey, "Using Mechatronics in Product Development", 18th -19th February 2006, Proceeding of All India Seminar on Product Development, Jointly organized by MNNIT Allahabad and Institution of Engineers (I), Allahabad Local Centre.
2. L.N. Pattanaik, et al, "Genetic Algorithm based approach to machine grouping in cellular manufacturing using a new similarity measure", Proceedings of All India Seminar on CAD/CAM, Robotics and Futuristic Factories, BIT, Mesra, Ranchi, 10-11 December, 2005.
3. Vinay Sharma, et. al. "Expert System for Lubricant Condition Monitoring", Recent Advances in Industrial Tribology and Maintenance" 21st-22nd January 2006, NIT, Rourkela, Orissa.
4. S.C. Srivastava, Aakash Roy, Vinay Sharma and S.Kumar. "A Hybrid Artificial Intelligence based approach to Intelligent Manufacturing Systems". All India Seminar on CAD/CAM, Robotics and Futuristic Factories, B.I.T Mesra, Ranchi, December 10-11, 2005.
5. Vinay Sharma, et. al. "Automation of Water Jet Machine", CAD/ CAM, Robotics and futuristic factory, 10th-11th December 2005, Institution of Engineers (India), Jharkhand State Centre.
6. Vinay Sharma, et. al. "Hierarchical Oriented Multi-Agent Based Data Mining Distribution For Manufacturing Sector", CAD/ CAM, Robotics and futuristic factory, 10th-11th December 2005, Institution of Engineers (India), Jharkhand State Centre.
7. Saranjit Singh, "Forging of Sintered Components: Technology Management Issues", Journal of Manufacturing Technology Today, CMTI, vol. 5, No. 2, February 2006, pp. 23 - 27.

Seminar/Conference/Short Term Course attended by Faculty Members

1. Saranjit Singh, One-day workshop on "Academic Reforms", TEQIP Programme, BIT Mesra, Ranchi.
2. S. K. Jha, R. K. Singh, S. C. Srivastava, R. K. Ranjan, Rajeev Agarwal, A. N. Sinha, UGC - Refresher course on "Automation In Manufacturing" held at Department of Production Engineering, BIT Mesra, Ranchi, 28th Nov - 17th Dec, 2005.
3. R.K. Singh, International Symposium on "Intelligence Based Materials & Manufacturing", B.I.T Mesra, Ranchi, August 2005.
4. Short term Training Programme on "An Modelling in Metal Processing: Concepts, Theory and Applications", at IIT Kanpur, 1-4, February 2005.
5. S.K. Jha, S.C. Srivastava, Short term Course on "Mechatronics, Robotics and Industrial Automation", Under TEQIP scheme, at Bengal Engineering and Science University, Shibpur, 2-7, January 2006.
6. S.K. Jha, Workshop and Exhibition on "Technology Development: Utilisation and Transfer", at BIT Mesra, Ranchi, 6th March 2006.

Award/Nomination of Faculty By Important Organization

1. Sri Sanjay Kr. Jha, Sr. Lecturer received "Outstanding Young Technocrat Award-2005" on 17th August 2005 by Institute of Indian Foundry Men Society, for his contribution towards making rural artefacts manufacturing process more competitive in Jharkhand.
2. Sri Vijay Pandey, Lecturer received "Sir R. N. Mookerjee Award" given by Institution of Engineers (India) in December 2005 for the best paper in the Journal of Mechanical Engineering "Dynamic modification of machine tool structure".

DEPARTMENT OF REMOTE SENSING

With the advent of highly sophisticated Earth Resources Satellites like IRS (India), LANDSAT (USA), SPOT (France), ERS (ESA), IKONOS (USA), Quickbird (USA) etc., the world is being scanned continuously and Remote Sensing (RS) data is generated digitally and in pictorial forms regularly. Availability of repetitive RS data products have increased the scope of identifying, mapping, monitoring, classifying and evaluating different forms of renewable and non-renewable earth resources using multi-spectral, multi scanner and multi-temporal RS data products. The benefits of space technology, both direct and indirect, have introduced new dimensions into the study and understanding of Earth's processes and in improving the quality of life for the people living on it.

The application of Remote Sensing techniques, Geographic Information System (GIS) and Global Positioning System (GPS) in various activities including resources evaluation, environmental monitoring and land use/land cover mapping etc. has grown considerably during the last three decades and RS data products are being increasingly used for plan formulation at all levels. An essential prerequisite to partaking in these opportunities is the building of various indigenous capacities for the development and utilization of space science and technology. This has led to a spurt in the demand of qualified man power. Keeping this in view, Department of Remote Sensing at B.I.T. was established in 1997.

To provide hands on training to the students, various labs such as Digital Image Processing, GIS, GPS and Satellite Navigation, Photogrammetry and Digital Photogrammetry, Cartography and Image Interpretation have been established. 35 Pentium IV machines have been installed in these laboratories. Department has Magellan ProMark V Global Positioning system (GPS), Leica DGPS, Umax Scanner, Widecom Scanner A0, HP A0 Plotter, Procom-2, Optical Pantograph, Drafting tables and Mirror Stereoscopes, GTR etc. Department has also procured no. of software for GIS, Cartography and Digital Image Processing such as ArcGIS, ERDAS Imagine, PCI Geomatica, Image Analyst, Modular GIS Environment (MGE), I/RAS, Geomedia Professional, Geomedia Intersite Interplot Professional, Microstation SE, Oracle 8.0 etc.

Remote Sensing Department is now a DST-FIST sponsored department. Department of Science and Technology Govt. of India has already identified this department for establishing district NRDMS Centre. The department offers Ph.D. programme in interdisciplinary mode and is also engaged in various research and development projects. It is in the process of starting M.Tech in GIS and B.E./M.E. in Geoinformatics.

During 2005-06 the Department organized 25th Indian Society of Remote Sensing Annual Convention and National Symposium on Emergence of Geo-informatics for Development: Trends & Opportunities during 6-9th December 2005 where 350 participants from various parts of the country participated.

Degree/Diploma offered

M.Tech. Remote Sensing

Ph. D

Faculty position

Professor - 2

Reader - 2

Scientific Officer - 1

Sr. Lecturer - 1

Lecturer - 3

Assoc. Lecturer - 1

Number of Student enrolled/registered with department (as on Feb. 2006)

Semester	No. of Student
II	13
IV	16
Total	29

Academic Innovations, Research and Development activities*(A) Ongoing Projects*

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Fund for improvement of Science and Technology Infrastructure (FIST) (Dr. M. S. Nathawat and Dr. A. P. Krishna)	Dept. of Science and Tech. (DST), Govt. of India	Jan. 2006	Rs. 38 Lakhs	5 years
2.	Interferometric and Clinometric Analysis of Radar Data for Estimation of Tree/Stand Height (Dr. M. S. Nathawat and Dr. A. P. Krishna)	Technology Development Project under JEP Microwave, Space Application Center (SAC) DoS, Ahmedabad	Nov. 2005	Rs. 5 Lakhs + Satellite Data	2 years
3.	Mapping of Indicators of Desertification using Satellite based SAR data, Jaisalmer District, Rajasthan (Dr. M. S. Nathawat and Dr. A. C. Pandey)	Technology Development Project under JEP-Microwave, Space Application Center (SAC) Dos, Ahmedabad	Nov. 2005	Rs. 4.30 Lakhs + Satellite Data	2 years

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
4.	Water quality analysis in select Blocks (10) of Jharkhand State & its GIS database development Coordinators-Dr. G. Pathak, Dr. Usha Jha, Dr. M. S. Nathawat, Dr. R. P. Bhatnagar) Joint project of Environment Group, Applied Chemistry and Remote Sensing Dept.	UNICEF-Bihar-Jharkhand unit ate of sanction - Dec. 2005		Rs. 11.68 Lakhs	6 months
5.	Geo-Informatics based water resources management plant for Ghad sub-Watershed, Maharashtra (Dr. R. Sivakumar)	Dept. of Sc. & Tech., Govt. of India New Delhi	25.11.04	Rs. 10,02,000/-	3 years
6.	Establishment of District Center of Ranchi (Jharkhand) & creation of geo-spatial database for the development of decision support system (Dr. M. S. Nathawat)	NRDMS, Dept. of Sc. & Tech. Govt. of India New Delhi	16.07.03	Rs. 29,60,000/-	3 years

(B) Projects sanctioned during the year 2005-06

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Fund for improvement of Science and Technology Infrastructure (FIST) (Dr. M. S. Nathawat and Dr. A. P. Krishna)	Dept. of Science and Tech. (DST), Govt. of India	Jan. 2006	Rs. 38 Lakhs	5 years
2.	Interferometric and Clinometric Analysis of Radar Data for Estimation of Tree/Stand Height (Dr. M. S. Nathawat and Dr. A. P. Krishna)	Technology Development Project under JEP Microwave, Space Application Center (SAC) DoS, Ahmedabad	Nov. 2005	Rs. 5 Lakhs + Satellite Data	2 years

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
3.	Mapping of Indicators of Desertification using Satellite based SAR data, Jaisalmer District, Rajasthan (Dr. M. S. Nathawat and Dr. A. C. Pandey)	Technology Development Project under JEP-Microwave, Space Application Center (SAC) Dos, Ahmedabad	Nov. 2005	Rs. 4.30 Lakhs + Satellite Data	2 years
4.	Water quality analysis in select Blocks (10) of Jharkhand State & its GIS database development Coordinators-Dr. G. Pathak, Dr. Usha Jha, Dr. M. S. Nathawat, Dr. R. P. Bhatnagar) Joint project of Environment Group, Applied Chemistry and Remote Sensing Dept.	UNICEF-Bihar-Jharkhand unit ate of sanction - Dec. 2005	Dec. 2005	Rs. 11.68 Lakhs	6 months
5.	Desertification Status Mapping (Dr. M. S. Nathawat and Dr. A. C. Pandey)	Space Application Center (SAC), DoS Ahmedabad	Oct. 2005	Rs. 50,000/- + Satellite Data	2 months
6.	Establishment of District NRDMS Center for Ranchi (Jharkhand) & creation of geo-spatial database for the development of decision support system (Dr. M. S. Nathawat)	Dept. of Sc. & Technology (DST) Govt. of India	Oct. 2003	Rs. 29.60	3 years

(C) Project completed during the year 2005-2006

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Desertification Status Mapping (Dr. M. S. Nathawat and Dr. A. C. Pandey)	Space Application Center (SAC), Dos, Ahmedabad	Oct. 2005	Rs. 50,000 + Satellite Data	2 months

(D) Project submitted during the year 2005-06

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Fund for improvement of Science and Technology Infrastructure (FIST) (Dr. M. S. Nathawat and Dr. A. P. Krishna)	Dept. of Science and Tech. (DST), Govt. of India	2005	Rs. 116 Lakhs	5 years
2.	Geo-environmental assessment of subsidence hazard due to coal mining around Dhanbad and Jharia areas using geo-informatics techniques (Dr. Gopal Pathak, Dr. M. S. Nathawat, Dr. A. P. Krishna and Dr. A.C. Pandey)	Central Mine Planning and Design Institute Ltd.	2005	Rs. 82.68 Lakhs (Project under consideration - first presentation over)	5 years
3.	Effect of Urbanization on Hydrology of Pondicherry region (Dr. R. Shivakumar)	Dept. of Sc. & Tech., Govt. of India, New Delhi			3 years
4.	Developing Land and Water Audit Methodology through Geo-informatics : Approach to Evaluate Regional Resources Stress & Implications (Dr. M. S. Nathawat and Dr. A. C. Pandey)	Under SAP-UGC, New Delhi	2005		5 years
5.	Hydro-geological Investigation of Water Resources & Development of Geographical Information System (GIS) for Ranchi district of Jharkhand State (Dr. M. S. Nathawat and Dr. A. C. Pandey)	Govt. of Jharkhand	2005		3 years
6.	GIS database development of minerals and mining sites in Jhrkhand State (Dr. M. S. Nathawat and Dr. A. C. Pandey)	JSAC-Govt. of Jharkhand	2005		2 years

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
7.	Interferometric and Clinometric Analysis of Radar Data for Estimation of Tree/Stand Height (Dr. M. S. Nathawat and Dr. A. P. Krishna)	Technology Development Project under JEP-Micro-wave, Space Application Center (SAC) Dos, Ahmedabad	Nov. 2005	Rs. 5 Lakhs + Satellite Data	2 years
8.	Mapping of Indicators of Desertification using satellite based SAR data, Jaisalmer District, Rajasthan (Dr. M. S. Nathawat and Dr. A. C. Pandey)	Technology Development Project under JEP-Micro-wave, Space Application Center (SAC) Dos, Ahmedabad	Nov. 2005	Rs. 4.30 Lakhs + Satellite Data	2 years

(E) Seminars/Conferences/Short-term Courses conducted by the Department

Title - 25th Indian Society of Remote Sensing Annual Convention and National Symposium on Emergence of Geo-informatics for Development: Trends & Opportunities-6-9th December 2005

Number of delegates - 350

Name of dignitaries

- * Shri Kamlesh Kumar Singh, Honorable Minister of Water Resources, Food and Civil Supplies, Government of Jharkhand as Chief Guest
- * Shri M.K. Mandal, IAS, Development Commissioner, Government of Jharkhand
- * Dr. T. Nandkumar, IAS, Director General, Administrative Training Institute, Government of Jharkhand
- * Shri R.S. Sharma, IAS, Principal Secretary, Department of Information Technology, Government of Jharkhand as the Guest of Honour
- * Dr. R R Navalgund, President, Indian Society of Remote Sensing (ISRS) and Director, Space Applications Centre (SAC), Department of Space, Govt. of India, Ahmedabad
- * Shri B.S. Bhatia, Director, Development and Education Communication Unit (DECU), ISRO, Ahmedabad
- * Dr. P. Nag, Director, NATMO (DST, Govt. of India), Kolkata

- * Shri D.V.A. Raghavamurthy, Director (T), CARTOSAT-1, ISRO, Bangalore
- * Dr. J.R.Sharma, Head, RRSSC, Jodhpur
- * Dr. Y.V.N. Krishnamurthy, Head, RRSSC, Nagpur
- * Dr. V.Jeyram, Head, RRSSC, Khargarpur
- * Dr. A.P. Subudhi, Director, JSAC, Ranchi
- * Shri Joseph Arokiadas R., Group Head, NDC, NRSA, Hyderabad
- * Dr. Shailesh Nayak, SAC, Ahmedabad
- * Dr. R. Nagaraja, NRSA, Hyderabad
- * Mr. Hans Schute, Cultural Secretary, Netherlands Embassy
- * Prof. Mahavir, School of Planning and Architecture, Delhi
- * Dr. Ajai, SAC, Ahmedabad
- * Prof. M.N. Kaul, Jammu University
- * Dr. M.S.R. Murthy, NRSA, Hyderabad

(F) Publications of faculty

Journals

International

1. Krishna, A.P. (2005). Snow and glacier cover assessment in the high mountains of Sikkim Himalaya, Hydrological Processes, Vol. 19, Issue 12, pp. 2375-2383.
2. Zhu Xiao-hua, Nilanchal Patel, Zuo Wei, Yang Xiu-chun (2006). Fractal Analysis Applied to Spatial Structure of China's Vegetation, Chinese Geographical Science, Vol. 16, No. 1, pp. 48-56.
3. Chandra S. Dubey, Manoj K. Chaudhary, Richard A. Marston, A.R. Bharti, Pandey A. C, Bhoop Singh (2006). An integrated approach for a 3D modeling for landslide prediction in mountainous terrain- a case study of Chandmari Landslide, Sikkim, Eastern Himalaya, In Journal: Landslide.

National

1. Arun,P.S., Jana, R. Nathawat, M.S. (2005) A Rule Base Physiographic Characterization of a Drought Prone Watershed Applying Remote Sensing and GIS, Photonirvachak (JISRS) Vol.33,No.2, 2005,pp189-201
2. Pandey A.C and Saklani P.S. (2006). Morphotectonic Evolution of Bhagirathi Valley, Lesser Garhwal Himalaya, Uttaranchal, Indian Journal of Geomorphology, Vol. 9, No. 151, pp. 73-82.

Proceedings

International

1. Suraj Dev Kumar Kushwaha, Nilanchal Patel, Ranjan Panda, Assessment of Changes in the Environs of Ranchi Area through Remote Sensing and GIS, Proc. 25th International Congress of Indian Cartographic Association held during 28 Nov - 1 Dec, 2005 at the H.S.G. University, Sagar, India.
2. R Sivakumar and V H Vinod Kumar (2006). Application Programmer Interface (API) in GIS for Water Resources Modeling, , MAPINDIA 2006 (International Conference on GIS technology and Applications, <http://www.mapindia.org/2006/conference/session.asp>
3. R Sivakumar, Pradeep Mohan and Anish Kumar (2006). Application of Advanced Clustering Methods in Geographic Data Analysis and Mining, MAPINDIA 2006 (International Conference on GIS technology and Applications), [http:// www.mapindia.org/2006 / conference/session.asp](http://www.mapindia.org/2006/conference/session.asp)
4. R Sivakumar, A P Krishna and M S Nathawat Need of Advanced Curriculum for Geoinformatics Education, International workshop on GIScience Education and Curriculum development, MAPINDIA 2006 (International Conference on GIS technology and Applications), <http://www.mapindia.org/2006/>
5. A.K. Singh and Roheet Bhatnagar, Monitoring of Rain Water Harvesting in the Bariatu region of Jumar River Basin in Ranchi District using Remote Sensing, MAPINDIA 2006 (International Conference on GIS technology and Applications), <http://www.mapindia.org/2006/conference/session.asp>

National

1. M.S. Nathawat and A.P. Krishna, Geoinformatics Education: Trends and Opportunities, 25th ISRS Annual Convention and National Symposium on Emergence of Geoinformatics for Development: Trends & Opportunities, 6-9 December 2005, BIT, Mesra, Ranchi, pp. 145.
2. Ranjan Panda, Nilanchal Patel, Suraj Dev Kumar Kushwaha, Assessment of the Impact of Urbanization on the Drainage Pattern and Morphometric Characteristics through the Analysis of IRS LISS III and PAN Merged Data: A Case Study in Ranchi Area, Proc. ISRS-2005 held at the Birla Institute of Technology, Mesra, Ranchi, India during 6-9 December, 2005 organized by the Indian Society of Remote Sensing.
3. Suraj Dev Kumar Kushwaha, Nilanchal Patel, Ranjan Panda, Delineation of Change in Road Network Pattern in Ranchi Area through Remote Sensing and GIS Techniques, Proc. ISRS-2005 held at the Birla Institute of Technology, Mesra, Ranchi, India during 6-9 December, 2005 organized by the Indian Society of Remote Sensing.
4. Nilanchal Patel, Remote Sensing and GIS Methods for Earth and Environmental Resources Studies, National Seminar on Natural and Anthropogenic Disasters in Indian Subcontinent - Forecasting and Disaster Mitigation Plans, Sambalpur University, Jyoti Vihar, Burla, Orissa, 3-4 March, 2006. (Keynote Presentation).

5. Shipra Kumari and A.P. Krishna, Geoinformatics Application for Land use/cover Change Detection in Parts of Subarnarekha River Basin, Ranchi district, Jharkhand, 25th ISRS Annual Convention and National Symposium on Emergence of Geoinformatics for Development: Trends & Opportunities, 6-9 December 2005, BIT, Mesra, Ranchi, pp. 74.
6. Praveen Kumar, A.P. Krishna, M.S. Nathawat and Roheet Bhatnagar, Integrated Geoinformatics approach for disaster mitigation and management, 25th ISRS Annual Convention and National Symposium on Emergence of Geoinformatics for Development: Trends & Opportunities, 6-9 December 2005, BIT, Mesra, Ranchi, pp. 113-114.
7. R Sivakumar, Urbanization and hydrology - Need for detailed Research and Capacity building, Brain storming session/Workshop on Training and research activities in water resources, Andhra University, Vishakhapatnam, Workshop volume pp. 1-11, 4- 6 December, 2005.
8. Gulab Singh, A.C.Pandey, Hina Pande, Poonam Seth, Spatial Prognostic Modeling for Landslide Hazards using Geoinformatics: A case study of a part of Silchar -Aizawl (Mizoram State) regions. Proceedings of 25th ISRS Annual Convention and National Seminar, 2005, BIT, Mesra.
9. Gulab Singh, A.C.Pandey, Hina Pande, Poonam Seth, Soil Erosion Modeling for Khuai Lui sub watershed through Geoinformatics. Proceedings of 25th ISRS Annual Convention and National Seminar, 2005, BIT, Mesra.
10. Md. Surabuddin Mondal, Pandey A.C., R.D. Garg., Rishikesh Urban Information System (RUIS) - A Geoinformatics Based Information System for Urban / Regional Planning. Proceedings of 25th ISRS Annual Convention and National Seminar, 2005, BIT, Mesra
11. V.S. Rathore, M.S. Nathawat, Implication of Neo-tectonic Activities on Geomorphic Features, Structure and Hydrodynamic, Proceedings of 25th ISRS Annual Convention and National Seminar, 2005, BIT, Mesra.
12. Perveen Zahra, B.M. Choudhary, Indigenous Technology for the production of Horticulture Crop, National Seminar on Green Productivity and Sustainable Development, Environmental Science and Engineering Group, BIT Mesra, Ranchi.

Papers in edited books

1. Krishna, A.P., Kumar, N. and Nathawat, M.S. (2006). Natural Hazard Assessment through Remote Sensing and GIS - A Case Study from Sikkim State, India, In: Disaster Management (Eds. N.C. Mahanti et al), Publ. Narosa Publishers, Delhi, pp. 73-83.
2. Pandey A.C. (2006). Waiting for inevitable natural disaster in Lesser Himalayas, Garhwal - A geoinformatics based geoenvironmental perspective on feasibility of Tehri dam. In: Disaster Management (Ed: N.C. Mahanti et al), Narosa Publishing House, Delhi.
3. 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 (Ed: P.S. Saklani), Satish Serial Publishing House, Delhi, volume-3.

(G) Seminar/Symposium/Short-term Course attended by faculty members

1. All Faculty Members, 25th Indian Society of Remote Sensing Annual Convention and National Symposium on Emergence of Geo-informatics for Development: Trends & Opportunities (6-9 December 2005), BIT, Mesra.
2. Dr. M.S. Nathawat, Dr. N. Patel, Dr. A.P. Krishna, Dr. A.K. Singh, One Day Workshop on Academic Reforms (15th December 2005), TEQIP, BIT, Mesra, Ranchi.
3. Dr. M.S. Nathawat, Dr. N. Patel, Dr. A.P. Krishna, R Bhatnagar, .V.S.Rathore, Workshop and Exhibition on Technology Development, Utilisation and Transfer (6th March 2006), DSIR, Ministry of Science and Technology, Govt. of India at BIT, Mesra.
4. Dr. M.S. Nathawat, Dr. N. Patel, Dr. A.P. Krishna, Dr. A.K. Singh, Dr. R. Sivakumar, R Bhatnagar, V.S.Rathore, Participated in the Round Table Conference cum Workshop on "Know Yourself as a Teacher", 26 - 27 April, 2005 at BIT Mesra, Ranchi.
5. Mr.V.S.Rathore attended 3 days training programme on Basics of Rural Engineering, 25-27 July, 2005 at SIRD, Hehal, Ranchi.
6. R. Siva Kumar, R. Bhatnagar, MAP INDIA 2006, New Delhi.
7. A.C. Pandey, Graticule, 1st International Conference of GPS, Oct-3-5, New Delhi
8. R. Siva Kumar, Coordinates, 1st International Conference of GPS, Oct-3-5, New Delhi.
9. R. Bhatnagar, Advanced Training Workshop on Remote Sensing of Land & Ocean Surface in Cloud Prone & Rainy Areas (10-13 October 2005) and Procore International Training Workshop on Marine & Coastal GIS (13-15 October 2005, at The Chinese University of Hong Kong (CUHK), HKSAR, Shatin, Hong Kong.
10. P. Zahera, Two weeks training programme on Remote Sensing and GIS Applications for Natural Resources Management" 20th - 31st March 2006, RRSSC/ISRO Kharagpur Centre, IIT Campus.

(I) Award/Nomination of faculty by important organizations

1. Dr.M.S.Nathawat, Invited as UGC visiting professor at Panjab University, Chandigarh from 27th March 2006 to 31st March 2006
2. Dr. M.S.Nathawat, Nominated as Organizing Secretary, National Organizing Committee (ISRS05), 25th Indian Society of Remote Sensing Annual Convention and National Symposium on Emergence of Geo-informatics for Development: Trends & Opportunities (6-9 December 2005), BIT, Mesra.
3. Dr. M.S.Nathawat, Reviewer of National Journal "Indian Journal of Remote Sensing - Photonirvachak", published by the Indian Society of Remote Sensing.
4. Dr. N. Patel, Reviewer of International Journal "Journal of Spatial Hydrology", published from USA.
5. Dr. N. Patel, Reviewer of National Journal "Indian Journal of Remote Sensing - Photonirvachak", published by the Indian Society of Remote Sensing.

6. Dr. M.S.Nathawat and Dr.A.C.Pandey Invited to deliver a lecture on "Planning and Management of Natural Resources through remote sensing" in the Advanced Training Programme on "Natural Resource Planning and Management" held at the Institute of Science and Management, Pundag, Ranchi, 5th April, 2006.
7. Dr. N. Patel, Invited to deliver a lecture on "Role of Remote Sensing and GIS in Natural Resources Management" in the Advanced Training Programme on "Natural Resource Planning and Management" held at the Institute of Science and Management, Pundag, Ranchi, 8th April, 2006.
8. Dr. N. Patel, Member, Advisory Council, Roland Institute of Technology (Biju Pattnaik University of Technology of Orissa), Berhampur, Orissa.
9. Dr. A.P. Krishna, Member, Project Advisory Committee (PAC) on Environmental Management, Shastri Applied Research Projects (Indo-Canadian Projects funded by Canadian International Development Agency) and attended PAC meeting on March 18, 2006, New Delhi.
10. Dr. A.P. Krishna, Secretary, Local Organizing Committee (ISRS05), 25th Indian Society of Remote Sensing Annual Convention and National Symposium on Emergence of Geoinformatics for Development: Trends & Opportunities (6-9 December 2005), BIT, Mesra.
11. Dr. A.C. Pandey, Joint Secretary, Local Organizing Committee (ISRS05), 25th Indian Society of Remote Sensing Annual Convention and National Symposium on Emergence of Geoinformatics for Development: Trends & Opportunities (6-9 December 2005), BIT, Mesra.
12. Dr. R. Siva Kumar, Invited as Expert advisory committee member in Urban hydrology for Research and development plan for ESS DST, Govt of India programme held at Andhra university.
13. Dr. R. Siva Kumar, Nominated as Co-ordinator, India for International workshop on GIScience Education and Curriculum Development by Z_GIS centre for Geoinformatics University of Salzburg, Austria.
14. Dr. R. Siva Kumar, Chaired the Water resources technical session in International Conference, MapIndia 2006 on Geographic information technology and Applications.
15. Dr. R. Siva Kumar, Invited for Expert lecture on Geoinformatics and its applications over Resource management by GIS Institute, Noida.
16. R. Bhatnagar, Web Master & Web Designer of ISRS 2005 official website www.isrs2005.org and Member Local Organizing Committee (ISRS2005).

DEPARTMENT OF SPACE ENGINEERING AND 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, Combustion and Composite Materials.

In addition to the existing M.E. Programme in Space Engineering and Rocketry with two specialization, 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 session after getting it approved by AICTE.

Aerodynamics Division

Considerable progress has been made to obtain the detailed flow around aerospace vehicle shapes and related configurations in the Aerodynamics Division. Experiments were conducted to obtain the flow details at subsonic and supersonic speeds through measurement of static and unsteady pressures, visualisation of overall flow by oil flow, tuft and Schlieren techniques.

Computations were made to obtain the details through in-house developed software, as well using commercial software. Experimental study has also been made to obtain the details of flow field around fore body of an aerospace vehicle and effect due to the presence of vertical fences at different angles of attack in pitch and yaw plane at supersonic speed. The flow past protrusions of different shapes, e.g. circular cylinder, trapezoid, sharp fin, blunt fin, etc. were obtained at supersonic speed. Effects of various geometrical parameters governing the flow field were obtained. In addition, the interference effect due to the presence of similar body at different gaps have been obtained. A detail of flow field inside a supersonic air intake has been obtained through experiments as well as computations, and the effect of various parameters, like angle of attack, back pressure, etc. have also been obtained.

Flow field around slender body at large angles of attack has been studied through systematic measurement of static pressures in detail. Details of flow field around two dimensional circular cylinders in pair has been obtained through in-house developed Navier Stokes code, as also through experiments. Effect of various parameters, like diameter and gap has been obtained. In order to obtain the flow field around typical reusable launch vehicle at subsonic speed, experiments have been conducted to obtain the effect of angle of attack, ground proximity, etc., which is important during the landing phase.

Propellant Technology Division

A new propellant processing laboratory has been constructed and the relevant equipments for ingredient preparation, mixing under controlled conditions and casting are being installed.

The research on eco-friendly composite solid propellants has been oriented to tailor make oxidizer entity for better ignition and combustion characteristics using chlorine free oxidizers. The approach aims for cost effective conversion of easily available oxidizers to suit the requirements of fast burning propellants. A recently procured Simultaneous Thermal Analyser is being used to acquire and analyse the results on thermal decomposition behaviour of modified oxidizers and final propellant compositions.

A new Research & Development programme has been initiated to formulate virgin and metallized gelled propellants for reaction control systems for new generation missiles. The work on the scaling-up of the process using non-intrusive mixing methodology is under progress. The high shear rate rheological results are being obtained using a Capillary Rheometer and data acquisition system, which has been designed and developed in our laboratory.

Rocket Propulsion Division

Extensive Static Tests have been carried out to find the effect of various parameters on the performance characteristics of PVC-AP solid propellant motor using the Auto Firing Console and associated software. Erosive burning phenomenon has been recognized to affect the burning characteristics of large rocket motors. In view of this, efforts have been made to predict the effect of gas flow velocity and combustion chamber pressure on burn rate enhancement. Experiments on nozzle-less solid propellant rocket motors have been initiated. Extensive work has also been carried out to determine the effect of various parameters on the regression rate of PVC Plastisol and Paraffin Wax fuels, burning in the stream of gaseous oxygen.

A new laboratory, Cryogenic Propulsion Laboratory under Special Assistance programme (SAP) of UGC has been developed in the Department and new laboratory building has been completed to house the activity. 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 have already been procured, and the designs of static test stand and associated flow circuits have been completed.

Combustion Division

Numerical simulation of industrial combustion problems has been carried out. Prominent features such as High Temperature Air Combustion, Soot Combustion have been successfully simulated and validated with available experimental data from industry. These simulations include case studies of industrial burner systems, used in boilers and furnaces. Numerical simulations have been done with the help of advance computational code such as ANSYS-CFX. Advanced turbulence models like Shear Stress Transport model and Turbulence Chemistry Interaction models are accounted for enhancement in computational speed and precision to predict optimum performance and efficient burner design.

An experimental set up has been designed and fabricated to initiate droplet combustion studies of liquid fuel and propellant under varying environmental conditions and different pressures.

Composite Materials Division

Composite Materials are finding wider application for heat shields, fuselage design, leading edges, nose tip of entry vehicles, landing gear brakes, pads and such other critical components in military and civilian aircrafts. Information on mechanical and thermal properties of various composite materials, specially unidirectional and bi-directional CFRP and GFRP, under wide range of static and dynamic loading conditions are of immense importance towards safe structural design of aircraft and space vehicles. Extensive research is being carried out in this direction,

and studies related to fatigue failure, creep properties, crack propagation, residual strength after fixed cyclic load, elasto-buckling behaviour in adverse and corrosive environments have been conducted. Work has been carried out on determination of properties of stiffened composite plates and adhesive joints of composite plates also.

Degree /Diploma Offered

M.E. in Space Engg. and Rocketry

M. Tech. in Fuels & Combustion

Faculty Positions

Professor - 4

Lecturer - 4

Number of Students enrolled / Registered with the Department (as on Feb.2006)

Programme	Semester	Students Enrolled
M. E. Space Engineering and Rocketry	Semester II	12
	Semester IV	08
M. Tech. Fuels and Combustion	Semester II	06
	Semester IV	03
	Total	29

A. Ongoing Projects

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development of Cryogenic Propulsion System	UGC (SAP)	Apr. 2002	Rs. 49 Lakhs	5 years
2.	Experimental Investigation of Flow Field around Protrusions at Supersonic Speeds	AR&DB Ministry of Defence	July 2005	Rs. 8.26 Lakhs	2 years
3.	Investigation of Flow Field Interaction around Protrusions at Supersonic Speeds	RESPOND (ISRO) Dept. of Space	July 2004	Rs. 9.30 Lakhs	2 years
4.	Experimental Investigation of Flow Field around Slender Body at High Angles of Attack	AR&DB Ministry of Defence	June 2004	Rs. 7.22 Lakhs	2 years

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
5.	Propellant Technology and Combustion Facility	DST (FIST)	Jan. 2005	Rs. 25.00 Lakhs	5 years
6.	Development of Gel Propulsion System for Reaction Control System using UDMH & RFNA	DRDL Ministry of Defence	Nov. 2005	Rs. 23.00 Lakhs	1.5 years

B. Projects sanctioned during the year 2005-2006

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development of Gel Propulsion System for Reaction Control System using UDMH & RFNA	DRDL Ministry of Defence	Nov. 2005	Rs. 23.00 Lakhs	1.5 years

C. Projects completed during the year 2005-2006

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Investigation of Flow Field around Fore Body with Vertical Fences at Supersonic Speeds	DRDL Ministry of Defence	July 2004	Rs. 9.50 Lakhs	9 months

D. Projects submitted during the year 2005-2006

Sl. No.	Project Title	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Numerical and Experimental Investigation of Flow Field around Two Interfering Circular Cylinders, which are fixed or in rotation	AICTE	Sept. 2005	Rs. 7.82 Lakhs	3 years
2.	Studies on Properties of Aluminium/Glass Fibre Reinforced Composite (GLARE) under Adverse Environmental Condition	AR&DB	Mar. 2006	Rs. 9.20 Lakhs	2 years

F. Publication / Presentation in National and International Conferences by Faculty

Publication

1. Roy, A. and Bandyopadhyay, G., "Numerical Calculation of Separated Flow Past a Circular Cylinder Using Panel Technique", *Journal of Wind Engineering and Industrial Aerodynamics*, Volume 94, No.3, Mar 2006, pp. 131-149.
2. Roy, A. and Bandyopadhyay, G., "A Finite Volume Method for Viscous Incompressible Flows Using a Consistent Flux Reconstruction Scheme", *International Journal for Numerical Methods in Fluids*, published online on Feb 10, 2006.

Presentation in National and International Conferences

1. Varma, M. and Pandey, M., "Thermal Degradation of HTPB, AN, their Virgin and Catalyzed Propellants under Slow Decomposition Conditions", 5th International High Energy Materials Conference & Exhibit, Hyderabad, Nov 23-25, 2005.
2. Vikramaditya, N. S., Das, S., Roy, A. and Prasad, J. K., "Study of Flow Field around a Pair of Protrusions at Different Gaps at Supersonic Speed", 19th National Conference on Aerospace Engineers and National Seminar on "Indian Aerospace Engineering Perspective - 2020", Jaipur, Nov 19-20, 2005.
3. Omprakash, P., Roy, A., Das, S. and Prasad, J. K., "Computation of Incompressible Flow around Circular Cylinder", 19th National Conference on Aerospace Engineers and National Seminar on "Indian Aerospace Engineering Perspective - 2020", Jaipur, Nov 19-20, 2005.
4. Gupta, P., Roy, A., Das, S. and Prasad, J. K., "Behaviour of Flow Field around Sharp Fins at Different Angles at Supersonic Speed", 19th National Conference on Aerospace Engineers and National Seminar on "Indian Aerospace Engineering Perspective - 2020", Jaipur, Nov 19-20, 2005.
5. Omprakash, P., Roy, A., Das, S. and Prasad, J. K., "Investigation of Incompressible Flow Field around a Two Dimensional Wedge", 32nd National Conference on Fluid Mechanics & Fluid Power, Osmanabad, Dec 15-17, 2005.
6. Vikramaditya, N. S., Das, S., Roy, A. and Prasad, J. K., "Flow Field around Protrusions of Different Height and Leading Edge and Rear Face Angles at Supersonic Speed", 32nd National Conference on Fluid Mechanics & Fluid Power, Osmanabad, Dec 15-17, 2005.
7. Gupta, P., Roy, A., Das, S. and Prasad, J. K., "Flow field around Sharp Fins of Different Heights at Supersonic Speed", 32nd National Conference on Fluid Mechanics & Fluid Power, Osmanabad, Dec 15-17, 2005.
8. Omprakash, P., Roy, A., Das, S. and Prasad, J. K., "Effect of Wedge Angle on Incompressible Flow past a Two Dimensional Wedge", 50th Congress of Indian Society of Theoretical & Applied Mechanics - An International Meet, Kharagpur, Dec 14-17, 2005.
9. Vikramaditya, N. S., Das, S., Roy, A. and Prasad, J. K., "Effect of Width and Height Flow Field around Protrusion at Supersonic Speed", 50th Congress of Indian Society of Theoretical & Applied Mechanics - An International Meet, Kharagpur, Dec 14-17, 2005.

10. Gupta, P., Roy, A., Das, S. and Prasad, J. K., "Effect of Gap on the Flow Field around Sharp Fins at Supersonic Speed", 50th Congress of Indian Society of Theoretical & Applied Mechanics - An International Meet, Kharagpur, Dec 14-17, 2005.

G. Seminar/ Symposium/ Short Term Course attended by Faculty Member

1. Dr. A. K. Chatterjee

- I. 19th National Conference on Aerospace Engineers and National Seminar on "Indian Aerospace Engineering Perspective - 2020", Jaipur, Nov 19 - 20, 2005.
- II. 24th Engineering Congress on "Global Leadership in Engineering and Technology : India's Emergent Role", Kolkata, Dec 15 - 18, 2006.

2. Dr. Mohan Varma

- I. 5th International High Energy Materials Conference & Exhibit, Hyderabad, Nov 23-25, 2005.

3. Dr. J. K. Prasad

- I. 19th National Conference on Aerospace Engineers and National Seminar on "Indian Aerospace Engineering Perspective - 2020", Jaipur, Nov 19-20, 2005.
- II. 50th Congress of Indian Society of Theoretical & Applied Mechanics - An International Meet, Kharagpur, Dec 14-17, 2005

4. Dr. Arnab Roy

- I. 19th National Conference on Aerospace Engineers and National Seminar on "Indian Aerospace Engineering Perspective - 2020", Jaipur, Nov 19-20, 2005.
- II. 50th Congress of Indian Society of Theoretical & Applied Mechanics - An International Meet, Kharagpur, Dec 14-17, 2005.

5. Shri Sudip Das

- I. Fluent Training Programme, Pune, Dec 14-15, 2005
- II. 32nd National Conference on Fluid Mechanics & Fluid Power, Osmanabad, Dec 15-17, 2005

6. Shri Chetan R. Chodankar

- I. Ansys India Advanced Workshop, Bangalore, Dec 2-4, 2005.

H. Award/ Nomination of Faculty by important organizations

Dr. Mohan Varma : Distinguished Alumnus Award: May 2005 : conferred by Bareilly Collage, Bareilly (Agra University).

DEPT. OF ENVIRONMENTAL SCIENCE & ENGINEERING GROUP

The Environmental Science & Engineering Group (ESEG) was established in the year 2002. It offers a full time 2 years programme in M-Tech Environmental science & Engineering. The course has an intake of 18 seats and presently its running successfully with 16 students from different parts of the country. As a part of the curriculum the students undergo two semester Industrial training/research project in different National & private organizations. Presently some of our students are absorbed in organization of national repute like NPL (New Delhi), NCL(Pune), IIT (Delhi), IIT (Powai) & TERI (New Delhi). Our Current batch students are pursuing their M-tech in organizations like, Tata Steels, TERI & NEERI to name few. ESEG is emerging as a center of excellence in the field of environment. ESEG has well established laboratories in collaboration with the other departments of the institute. ESEG is also engaged in various research & developmental projects. ESEG has bagged UNICEF s project on "Water Quality Assessment & Mapping in Palamau & Garhwa with special focus on fluoride". The project deals with 10 major blocks in these districts. The group is also in progress to take some other major projects from state as well as other organizations. Dr. Gopal Pathak was also nominated by UNICEF for attending the International Meet on Arsenic/Fluoride Pollution in Bangladesh.

ESEG offers a Ph.D Programme in interdisciplinary mode. Researchers from most of the established central government organizations like Steel Authority of India, CMPDI, CCL & MECON Ltd are pursuing there Ph.D research in the field of environment Science & engineering. The key research areas are Ecosystem Management, Eco-Audit, Eco Designs & application of GIS in Environmental Management.

The group has also conducted a two days National Seminar on "Green Productivity & Sustainable Development" on 10th -11th March 2005.

Degree/Diploma offered

M-Tech Degree : Environmental Science & Engineering

Faculty position

Professor - 1

Assoc. Lecturer - 1

Research Fellow - 1

Faculties from other Departments Associated with the Group

Professor - 2

Reader - 1

Lecturer - 4

Senior Lecturer - 1

Number of student enrolled/registered with Department (as on Feb. 2006)

Course		Semster	No. of Student
M.Tech	ESE	II	16
M.Tech	ESE	IV	6
Total			22

Academic Innovations, Research & Development activities

A. Ongoing Project

Title : "A comprehensive survey on the water quality mapping of Daltonganj, Vishrampur, Chainpur & Pandu of Palamu district and Bhawnathpur, Ranka, Bhandaria, Kharandhi, Nagar, Maghiav of Garhwa district with focus on fluoride".

Agency : UNICEF

Amount : Rs.15lakhs

Duration: 6months

B. Project sanctioned during the year the year2005-2006

Title : "A comprehensive survey on the water quality mapping of Daltonganj, Vishrampur, Chainpur & Pandu of Palamu district and Bhawnathpur, Ranka, Bhandaria, Kharandhi, Nagar, Maghiav of Garhwa district with focus on fluoride".

Agency : UNICEF

Amount : Rs. 15 lakhs

Duration : 6months

Participation of Faculty

I. Dr. Gopal Pathak

1. Participated & presented a paper in the National Seminar on Emerging Environmental Issues and Technology Challenges during September 1-2, 2003 in Guru Jambheshwar University, Hisar, Haryana.
2. Appointed as a member of Scientific Advisory Board for the 19th Annual International Conference on Contaminated Soils, Sediments and Water held at University of Massachusetts, AMHERST, USA during Oct. 2003.
3. Participated & presented a paper in the National Conference in Advance in Environmental Science & Engineering during December 8-9,2003 in I.I.T, Powai, Mumbai.
4. Participated, presented a paper & 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.

5. 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 Oct. 2004.
6. Participated & 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.
7. Participated in the Delhi Sustainable Development summit, 2005 during 3-5 February 2005 in the Energy Research Institute Delhi (TERI).
8. 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

II. Mr. Kirti Avishek

1. Presented a Paper entitled "Sustainable Human Development in Jharkhand" in two days national seminar on "Green Productivity & Sustainable Development" organized by Environmental science & Engineering Group, BIT, Mesra, Ranchi, on 10th - 11th March, 2005.
2. Presented a Paper entitled "Ecosystem Monitoring & Green Productivity" in two days national seminar on "Green Productivity & Sustainable Development" organized by Environmental science & Engineering Group, BIT, Mesra, Ranchi, on 10th - 11th March, 2005.
3. Participated 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.
4. Human Intervention Analysis on Landscape Ecology using Geospatial Technology. 24th Annual Convention of Indian Society of Remote Sensing (ISRS 2004) at Jaipur, 3rd-5th Nov, 2004.
5. Ecotopic Changes due to Human Pressure on an Ecosystem - A Geoinformatics Approach. National Seminar on "Decentralized Planning for Better Governance". 7th-8th Oct 2004. BIT, Mesra, Ranchi.
6. Repercussions of Urbanization on the Wetlands of Ranchi MNC using Geospatial Technology. 7th International Conference of MAP INDIA 2004. 28th-30th Jan 2004.

D. Seminar/Symposium/Short term course attended by Faculty Member

I) Mr. Kirti Avishek

1. Rain water harvesting Technique in Urban Area, conducted by Centre for Science & Environment (CSE), New Delhi in June 2005.
2. National Symposium of ISRS 2005 conducted by Department of Remote Sensing. BIT, Mesra in December 2005.

E. Award /Nominations of faculty by important organizations

1. Dr. Gopal Pathak has been 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.
2. Dr.Gopal Pathak was nominated as a member to attend the International meet on Arsenic/ Fluoride contamination in Bangladesh in March 2006.

INDUSTRY INSTITUTE INTERACTION

Diploma Course For Tata Steel Employee

The Institute is running Two years Full Time sponsored Diploma Programme for Tata Steel employees in the discipline of Mechanical, Electrical & Electronics and Metallurgy. This diploma course is specifically designed to develop the skill and capabilities of Tata Steel employees. The total intake of students each year shall be minimum of 40 (forty) per batch inclusive of all the branches, with minimum of 10 students in each branch. First batch of 46 students have already joined on 31st October 05 and have completed their 1st Semester successfully.

TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME

The Technical Education Quality Improvement Programme (TEQIP) of Government of India (GOI) has been conceived in pursuance of the National Programme on Education (NPE)-1986 (as revised in 1992). The Programme aims to upscale and support ongoing efforts of GOI to improve quality of technical education and enhance existing capacities of the institutions to become dynamic, demand-driven, quality conscious, efficient and forward looking, responsive to rapid economic and technological developments occurring both at national and international levels.

The broad objectives of the Programme are to create an environment in which engineering institutions selected under the Programme can achieve their own set targets for excellence and sustain the same with autonomy and accountability, support development plans including synergistic networking and services to community and economy for achieving higher standards, and to improve efficiency and effectiveness of the technical education management system. The effort would provide a flexible platform to well performing institutions to acquire excellence in specialised areas and emerge as world-class institutions.

The Programme is implemented as a centrally coordinated, multi-state, long-term Programme in overlapping phases. Under each phase, there are 2 to 3 cycles of selection of well performing institutions in a competitive manner.

The Programme Components are:

Component-I: Institutional Development (funded on competitive basis) will undertake

- promotion of academic excellence in institutions
- networking for quality enhancement and resource sharing
- services to community and industry ;

Component -II: Systemic Management Capacity Improvement (funded on investment proposals).

Under second cycle of TEQIP-GOI, Birla Institute of Technology, Mesra has been identified as a leading Institution to for support. Three other Institutions viz., Birsa Institute of Texhnoogy, Sindri, Govt. Polytechnic, Ranchi and Govt. Polytechnic, Dumka are identified for networking with BIT, Mesra. The TEQIP-Cell, BIT, Mesra has started its activities from 2005.

Academic Reforms:

The following academic reforms towards academic excellence are introduced:

- All under graduate courses are being re-oriented.
- All Masters Programme M.E. and M.Tech Programme restructured to 4 Semester Programmed [from previous 3 Semester].
- Academic Reform Committee and Examination Reform Committee of the Institute are formed and their recommendations are being implemented from 2006 -2007 Session.
- Following new programmes are introduced:

- ❑ M.E. (Electronic and Communication)-Specialization: Wireless Communication
- ❑ M.E. (Polymer Engineering)
- ❑ M.Tech. Bio-Technology
- ❑ M.Tech. Bio-Informatics

Learning Resources:

The Institute has procured the following learning resources to Central CAD laboratory, Departments of Computer Science, Applied Chemistry, Electronics & Communication Engineering, Mechanical Engineering, Bio-Technology and Polymer Engineering:

- Central CAD Laboratory:
 - ❑ Autodesk: Civil and Mechanical Solution Sets
 - ❑ Ansys: Multiphysics Version 9.0
 - ❑ Fluent
 - ❑ Polyflow
 - ❑ Catia, V5
 - ❑ NX Manufacturing Bundle
 - ❑ Mold Wizard
 - ❑ Knowledge automation Studio Bundle
 - ❑ Extended Lingo
 - ❑ MATLAB 7.0
 - ❑ Molecular Modeling software TRIPOS
 - ❑ Accelrys software- MS Visualizer, MS Synthia, M S Blends,
- Department of Computer Science:
 - ❑ Oracle
 - ❑ Turbo C++
 - ❑ Borland C++, LISP
 - ❑ Visual Prolog 6.3
 - ❑ Adobe Creative Suite 8.0
 - ❑ Adobe Acrobat 7.0
 - ❑ Symant Coporate Edition 10
 - ❑ 3D Studio Max
 - ❑ MSDN Academic Alliance 7.0
 - ❑ IBM Rational Rose Suite

- Applied Chemistry: Chemoffice Ultra 2005
- Mechanical Engineering: ITI simulation,
- Electronics Engineering:
 - Cadence University Programme
 - Comm sim
 - Fidelity
 - MDSpice
 - BeamPro V,
- Bio Technology:
 - GCG Wisconsin Package
 - DSGeneStatic
 - Insight II LS
 - BioPolyme
 - Homology
- Polymer Engineering:
 - Paulsons Training Basic Injection Moulding,
 - Simtech,
 - Single Screw Extrusion,
 - Compounding with twin screw extruder

Modernisation of Laboratories

Many laboratories are upgraded and advanced experiments are introduced. Sophisticated equipments which required for different departments for advanced level of research are procured and installed under Central Instrumentation Facility.

- Applied Physics :
 - Magnetron Sputter Coating System,
 - Nd:YAG Laser,
 - Nitriding Unit,
 - Plasma Enhanced Chemical Vapour Deposition System (PECVD),
 - Current Balance,
 - Coupled Oscillator,
 - Mechanical Wave Driver,
 - Fresnel s Equations verification setup,

- ❑ Mechanical and Electrical Equivalent of heat,
 - ❑ Thermal Radiation setup,
 - ❑ Atomic Spectra of Gases
 - ❑ Spectroscopic Ellipsometer
- Applied Chemistry:
 - ❑ Gas Chromatograph,
 - ❑ Chemito, BOD Monitor,
 - ❑ Hach COD Monitor,
- Mechanical Engineering :
 - ❑ Computerized Maruti Zen Petrol Engine Test Rig,
 - ❑ Hydrogen Fuel stack System
- Production Engineering:
 - ❑ Dynamometer with Charge Amplifier,
 - ❑ Kistler, Plasma Welding and cutting unit,
 - ❑ MIG MAG welding machine with digital Display,
 - ❑ 5 Axis CNC Machining Centre
- Polymer Engineering:
 - ❑ Fused Deposition Modeling,
 - ❑ Stratasys,
 - ❑ Dynamic Mechanical Analyser,
 - ❑ Thermal Analyzer
- Remote Sensing : Differential GPS
- Space Engineering and Rocketry : Sigma Mixer
- Electronics and Communication Engineering:
 - ❑ Microwave Signal Generator,
 - ❑ Tunable Laser Source,
 - ❑ Optical Spectrum Analyzer,
 - ❑ Microprocessor system Hardware Training Module,
 - ❑ Optical time Domain Reflectometer,
- Central Instrumentation Facility
 - ❑ Scanning Electron Microscope
 - ❑ Atomic Force Microscope

- ❑ Thermogravimeter analysis (TGA)
- ❑ Fourier Transform Infrared (FTIR) Spectrometer
- ❑ Ellipsometer
- ❑ CHN Analyzer
- ❑ Surface Tensiometer(A) & (B)
- ❑ Color measurement system
- ❑ Porosity Analyzer
- ❑ Analytical Balance

Following workshops were organised support from TEQIP

- One day Workshop Academic Reforms for participating TEQIP Institutions of Jharkhand,
 Convener : Dr. P. K. Barhai
 Coordinator : Dr. J. T. Andrews
 Date : 15 December
 Venue : BIT Mesra
- Two day Workshop on Content Development for E Learning for participating TEQIP Institutions of Jharkhand
 Convener : Dr. G. Sahoo
 Date : 3-4 April,
 Venue : BIT Mesra.

Services to Community and Economy

- **Community**
 - ❑ Watershed development plan surrounding BIT campus(5 Km radius)
 - ❑ Water quality assessment of various ground & surface water resources in & around BIT, Mesra
 - ❑ Training on Renewable energy for cooking & Improved chulhas
 - ❑ Training on repairing & maintenance of household electrical appliances
 - ❑ Awareness & training workshop on earthquake resistive & cost-effective housing construction
 - ❑ Water Harvesting Solutions to Problems related to Ground water
 - ❑ Transfer of technology : Development of electronic gadgets for rural needs
 - ❑ Awareness on role of technical education in upliftment of society
 - ❑ Repair of fan, motor, heater, switchboard, fridge etc.

- ❑ Post harvest technology & plant protection
- ❑ Transfer of Technology (Oxen-driven pumps & generators, energy cakes, solar stills, biogas)
- ❑ Workshop on Biomass Technologies & for meeting energy needs
- **Unorganized Sector**
 - ❑ Training on Turning and Machining being conducted 15th to 20th May
 - ❑ Training on Welding and Fitting, to be conducted 22nd to 27th May
 - ❑ Training for use of electronic gadgets & repairing
 - ❑ Maintenance of electrical installation earthing, distributions panel, power & energy measurement
 - ❑ Development & Deployment of Agriculture information System
 - ❑ Training on PCB making
 - ❑ Training on Television Servicing
 - ❑ General maintenance & trouble shooting of hospital equipments e.g. X-ray machine, ECG, O.T equipment
- **Organized Sector**
 - ❑ Training Program for School teachers from the surrounding village community (Mesra, Nayatoli, Pancholi, Rudia etc) for the latest issues like Computer learning, Environmental Aspects, disaster Management, Inclusion etc.
 - ❑ Development & Deployment of School information System in Hindi
 - ❑ Retrofitting Actions for Creating Barrier Free Built Environment
 - ❑ CAE Training for industries.

DEPARTMENT OF PHYSICAL EDUCATION & SPORTS

Introduction

The Institute has a well equipped sports complex extending over approximately 110000 sq.mt of land. It comprises of a stadium with 400 meters track, Gymnasium with multigym facilities, Indoor Badminton hall with two courts and Spectators Gallery, Football Ground, Hockey Ground, Lawn Tennis Court, Volley Ball Court, Basket Ball Court, Cricket Ground, Kabaddi Court etc. The sports complex is fully updated with required infrastructural structures necessary for a premier institution for imparting physical education and encouraging sports activities.

Organization and Activities

National conference on "Role of Physical Education & Sports in Personality Development of Young Professionals" organized from 8-9th September, 2005 at B.I.T, Mesra.

Key note was given by Dr. R.Asthana , Sr. Medical Officer at L.N.I.P.E Gwalior, and Dr. Vachaspati Upadhyaya President A.I.U. was chief guest at validtry function.

Best physical Body building Competition was organized on 21.9.2005. Mr. Rahul Gaurav of B.I.T, 3rd semester won Mr. B.I.T, Championship.

This year the institute organized East Zone Inter University Football Tournament (M) 2005-06, sponsored by Association of Indian Universities. Eighteen university teams from East Zone participated in this Meet. His Excellency Governor of Jharkhand was the chief guest at the opening ceremony and Hon ble Minister, Youth Affairs & Sports, Govt. of Jharkhand was the chief guest at the closing ceremony.

The Chetan Devraj Memorial Inter Technical Cricket Tournament 2005-06 was organized in Jan. 2006. Nine Team participated in the tournament & B.I.T, Mesra won the championship.

B.I.T, Mesra football team participated in Inter Technical Football Tournament organized by I.S.M Dhanbad, and secured Runners up position.

B.I.T, Mesra Cricket team also participated in Inter Technical Cricket tournament held at I.S.M Dhanbad.

Seminar/Workshop/Nomination etc.

1. Dr. Rama Shankar Singh Sr. Sports Officer Presented paper in National Seminar/ Workshop on Adventure Sports and Career Building on Topic **"Trekking a sense of achievement"** held on 21 to 23rd October, 2005 organized by B.H.U. Varanasi.
2. Dr. Rama Shankar Singh presented paper on Topic **"Eco- tourism & Hospitality"** in National seminar on **"Hospitality Industry prospect and challenges in Jharkhand, with special reference to National Games 2007"** organized by B.I.T, Mesra, Ranchi.
3. Dr. Rama Shankar Singh presented two papers **"Cricket, Cancer of Indian Sports"** and **"Durgs in sports"** in the National conference on **"Role of Physical Education and Sports in personality Development of Young Professionals"** on 8th - 9th September, 2005 organized by B.I.T, Mesra, Ranchi.

4. Dr. Rama Shankar Singh was nominated as the Joint Secretary, Jharkhand Women s Hockey Association, President Ranchi Archery Association and president Youth Hostel Association of India, Ranchi Unit.
5. Sri Mahendra Kumar Lecturer in Physical Education Presented paper on topic, **“Role of Kinsiology and its influence on sports performance”** in the National conference on **“Role of Physical Education and Sports in personality Development of Young Professionals”** on 8th - 9th September, 2005 organized by B.I.T, Mesra, Ranchi.

NCC

3 Jharkhand Comp. Tech. Coy N.C.C. is an Unit of BIT Mesra, Ranchi, Main campus which imparts training to cadets enrolled for N.C.C. It has a strength of 200 cadets and gives physical and technical training in Engineers, E.M.E. signals and topics related to Army & Defence services. The cadets each year takes part in National day celebration parade for Republic day and Indipendance day. The cadets had also taken part for Adventure training on Para sailing, Tree plantation and Social activities.

Commanding officer	-	Col. G.K. Rai
		A NO S Maj. S. Samanta
		Maj. Ram Pal Singh
Care taker A NO S	-	Prof. Saranjit Singh

NATIONAL SERVICE SCHEME

Activities in year 2005 - 2006

1. July- 05 : Tree Plantation

150 volunteers had participated in tree plants. Trees had been distributed to Rudia, Nawa toli, Pancholi, Honbai villages. Around 1000 plants of Seesam, Gamhar, Neem, Lemon, Guava, etc, were distributed. At present 800 plants are in good condition, plants are damaged due to not availability of Gabian.

2. August- 05

- a. Patriotic song competition : 40 volunteers had participated in song competition on the eve of Independence Day.
- b. Prabhat Pheri : 360 persons, including 200 volunteers, professors, staffs, school children had participated in Prabhat Pheri on 15th August.

3. Sept- 05

- a. Literacy competition : competition had been organised for school children near by village. Kavita Path, Essay competition had been organised for the children. Around 100 students from various school had participated. Up to 5 rank prizes have been distributed.
- b. Vishwakarma Puja : 150 volunteers had participated for puja celebration.

4. Oct- 05

Blood donation camp had been organized on 2nd October. 150 volunteers had participated & 75 units of blood had been given to Apollo Hospital for needy person.

5. Nov- 05

Test, Quizes, Viva & Progressive evaluation had been taken for their course work.

6. Dec- 05

Special camp ha been organised from 8th Dec. to 17th Dec. 05 Survey report of handicapped person in adopted villages had been taken out, 55 volunteers had participated. Health care & family status of the villager s were the main point of discussion & implementation. Now villagers are caring about their health. In the next camp we are going to distribute solar cooker and self employed training like TV repair, Automobile repair etc.

7. Jan- 06

- a. Langer : Langer had been organised, 250 volunteers participated & around 3000 persons came for the lunch. Maximum persons were from adopted village, persons came from Ranchi.
- b. National Youth week celebration : various events like, essay writing on Swami Vivekananda, Patriotic song competition, Nukkad Natak etc were organised, 100 volunteers had participated.

c. Prabhat Pheri : On 26th January, 400 persons including 200 volunteers had participated.

8. Feb. - 06

Special camp had been organised from 28th Jan. to Feb.06, 2006 sports activities was the main agenda of this camp. Around 200 school children participated. Prizes were given up to 3rd rank. Event were 100 m, 400 m, 100x4 relays, 200x2 relays, toffy race for small kid etc, were organised. In village Sarswati Puja was organised in Rudia, Navatoli village & our volunteers in two groups were present in uja. Sports sprit had been developed in the school children in adopted village.

9. March - 06

Mid semester examination was going from 1st to 12th March after that Holi meet was organised by NSS volunteers for mess workers.

EXTENSION CENTRES

ALLAHABAD

The Extension Centre at Naini (Allahabad) is located at the Raymond crossing on 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 view of demand of trained computer and management personnel at National level and as also 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) | Bachelor 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 Electrical & Electronics laboratory, Microprocessor laboratory, Digital Electronics laboratory, Control Engg. laboratory, IC Engines laboratory, Manufacturing Processes laboratory, Non-conventional Energy laboratory, Surveying and Geotechnical Engg. 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 275,000 sq. ft. and the construction work is due to begin soon.

1. Brief Description of Different Departments

The Centre provides full time MCA, BCA and BBA Programme and part time B.Tech degree in various disciplines like Civil, Electrical & Electronics and Mechanical Engineering.

Department of Computer Science

The Computer Science Dept. has laboratories which is spread over an area of 342 sq. meter and equipped with Computers like DELL PIV (30 Nos), IBM PIV (15 Nos.), Compaq PIV (40 Nos), Compaq Celeron (15 Nos.), Compaq Proliant Server (1 No.), DELL PowerEdge Server(1 No.), Unix Server-PI (1 No.). The softwares that are used to train our students are like Windows NT, Windows 98, Windows SP, Windows 2000 Professional, Linux, Visual Studio, MS Office 2000, Oracle, Java, Rational etc. The Computer Centre is completely networked and has Broadband 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 books on various titles of management subjects are available in the library and a good number of technical journals are being subscribed by the Dept. The departments also extends its services to other departments.

Some of the projects which the students have under taken in recent past are as follows:

- Inventory Management using JIT Approach in TATA Motors, Jamshedpur
- Study of working capital management at National Fertilizers Ltd.
- An analysis of Training & Development Programme in Recron Synthetics Ltd., Allahabad

Department of Civil Engg

The department of Civil Engineering is at the developing stage and currently conducts only the B.Tech programme for the part time students. The department has moderately equipped Geotechnical and Surveying Laboratories. The students have done some live projects on irrigation, water supply & sewerage systems, environmental pollution control, low cost housing and rural link roads etc. The students of B.Tech (PT) course have prepared a Model plan of efficient traffic system for Allahabad city.

Department of Electrical & Electronics Engineering

The Department of Electrical and Electronics Engineering has Basic Electrical & Electronics Lab, electrical machines, digital electronics, microprocessor and control engineering laboratories equipped with MATLAB software and currently conduct only the B.Tech Programme for part time students. The students have done projects on high voltage transmission, modern communication system, energy saving devices etc.

Department of Mechanical Engg.

The Department of Mechanical Engineering has a well equipped laboratory in the Conventional area of Manufacturing and Mechanical fabrication. It has also a Non-Conventional Energy Resource Laboratory set-up with particular reference to Solar Energy.

The Department of Mechanical Engineering has a well equipped Internal Combustion Engines Laboratory with facilities for the measurement of engine parameters, monitoring the fuel and Exhaust gas conditions and Energy Auditing.

The Dept. of Mechanical Engineering trains students in the field of Design for Manufacturability, Fabrication, Integrated Manufacturing, Machine Tools Design etc. The facilities provided towards this include Conventional Machine Shops, Computer-aided Design (AUTO-CAD) Lab.

The Dept. maintains continuous interaction with industry with a view to keeping it in the dynamic industrial environment. The department also conducts Expert Lectures for students.

2. Degree / Diploma Offered

(A) Full time Programme

- (i) Master of Computer Applications (MCA)
- (ii) Bachelor of Computer Applications (BCA)
- (iii) Bachelor of Business Administration (BBA)

(B) Part Time Programme

- (i) B.Tech in Civil Engineering
- (ii) B.Tech in Electrical & Electronics Engineering
- (iii) B.Tech in Mechanical Engineering.

3. (I) Administrative Staff

- | | | | |
|----|-------------------|---|----------|
| 1. | Prof. B.N. Jha | - | Director |
| 2. | Prof. R. S. Yadav | - | OSD |
| 3. | Prof. G. Sahay | - | OSD |

(II) Faculty Position

Professor - 7	Lecturer - 3	Senior Lecturer - 3
Assoc. Lecturer - 7	Tutor - 1	

4. No. of Students Enrolled (as on February 2006)

Course	Semester	No. of Student
B.Tech	II	10
	IV	46
MCA	II	60
	IV	31
	VI	52
BCA	II	66
	IV	45
	VI	54
BBA	II	48
	IV	15
	VI	27
	Total	454

5. Academic Innovations, Research & Development activities

A. Publication by faculty

- (i) "Design and Development of Solar Air Heater as Renewable source of Energy for Drying of Hygroscopic Grains/Materials" Anil Kumar Singh, Dr. Shepherd, Dr. Nema, International Conference, Asia Pacific Drying Conference ADC-2005, Vol-II, Page 776-787.
- (ii) A paper on "Modeling of vehicular pollution a review" by B.K. Singh has been accepted in International Journal Atmospheric Environment .

B. Seminar/conference/short term course attended by faculty members

- (i) Prof. (Mrs.) A. Kushwaha, Lecturer, Department of Computer Science has participated in short term training programme on Linux conducted by the Computer Science Dept. from 21.11.2005 to 25.11.2005 at NITTTR, Chandigarh.
- (ii) Anil Kumar Singh has attended a National Seminar on "Advancement in Product Development APD-2006" at Motilal Nehru National Institute of Technology, MNNIT-Allahabad, India from 17th Feb. 06 to 18th Feb. 06.

C. Students Activities

The students activities for the session 2005-2006 was organized and managed by Prof. R.S. Pandey, Prof. In Charge students activities and it was assisted by Prof. (Mrs) Anita Kushwaha, the I/C cultural activities, Mr. Narendra Kumar, I/C Sports activities, as mentioned below :

- (i) BITEC Souvenir- 2005 published for better interaction of the outgoing students.
- (ii) 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.
- (iii) Conducted Annual athletic meet held at BITEC, Allahabad during 23.02.06 to 25.02.06.
- (iv) Participated in **BITOTSAV - 2006** held at BIT Ranchi during 12.02.06 to 15.02.06.
- (v) Participated in 19th Annual Sports of BIT Ranchi held at Ranchi during 27.01.06 to 28.01.06
- (vi) Participated in International “**DRISTANT - 2006**” held at BIT Ranchi during 06.02.06 to 09.02.06.
- (vii) Students of final semester (BCA & MCA) have attended one day seminar at MNNIT on 25.01.06.
- (viii) Cultural Meets were organized on 06-11-2005 and 21-03-2006.

Prizes won by students at BIT Ranchi

Roll No.	Name	Position	Event/Function
BCA/2001/03	Shailendra Kr. Pathak	IIIrd	Javelin throw
BBA/2011/04	Sonal Sharma	IIInd	Shotput/Annual sports
MCA/2003/05	Akansha Shively	IIInd	Rang de Basanti/ BITOTSAV-2006
MCA/2054/05	Anshu		
BBA/2006/05	Pallav Popli	Ist	Product Marketing/ BITOTSAV-2006
BCA/2031/04	Ankita Shah		
BBA/2006/05	Pallav	IIInd	Kataksh/BITOTSAV-2006
BBA/2002/04	Animesh &	Ist	Nukkad Natak / BITOTSAV-2006
BBA/2016/04	Rishi		
BBA/2002/04	Animesh	IIIrd	Samvad/BITOTSAV-2006
BBA/2006/05	Pallav	IIInd	Ad designing / BITOTSAV-2006
BBA/2002/04	Animesh		

D. Infrastructural facilities during the year 2005-06

Department of Computer Science

1. DELL PowerEdge Server - 1 No.
2. Networking of 19 ports with 24 port Dlink Switch
3. Rational Software - 1 Set
4. Broadband connection of 2MB

5. Window AC (1.5 ton) Voltas Make	-	3 Nos
6. UPS (600VA) Elent Make	-	4 Nos.
7. Inkjet Printer HP Make	-	4 Nos.
8. External CD Writer	-	2 Nos.
9. Internal CD Writer	-	1 No.
10. (10) Norton Antivirus 2006 Software	-	1 Set

Department of Electrical & Electronics Engineering

Basic Electrical Lab

Basic Electronics Lab

Department of Civil Engineering

Geotechnical Laboratory

Department of Mechanical Engineering

The Department has developed Non-Conventional Energy Lab Containing Solar Collector, Solar Pyramid driver, low temperature multistage driver, cooker, Hot water Magic Solar bucket etc.

E. Golden Jubilee Celebration

On the occasion of Golden Jubilee celebration of BIT Mesra Ranchi, Bhoomi Pujan ceremony for New Institute Building of Allahabad Extension Centre was performed by the Vice-Chancellor Emeritus Dr. H.C.Pande on 06-11-2005. On this occasion BITOSA meet was also organized at the Institute premises and Mementos were presented to old student. A cultural Programme was also organised on this occasion.

CHENNAI

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

BIT, Ranchi formerly accorded approval to AMET to conduct a four-year BE (Marine Engineering) programme from 2001. 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.

All courses of study offered at Chennai Port Centre are sector specific and are designed to equip the students with appropriate and adequate skills in specific fields.

The opening up of the Chennai centre has facilitated in bringing in Birla Institute of Technology, Ranchi into the state of Tamil Nadu, where none existed earlier.

The Chennai centre has already acquired 1.5 acres of land adjacent to the Academy of Maritime Education and Training and plans are on to acquire an additional 3.5 acres in the near future.

Degree / Diploma offered

BE (Marine Engineering)

B. Sc. (Nautical Science)

MBA (Shipping and Port Management)

Faculty Position

Professors - 2 Other faculty on deputation from AMET - 68.

Number of students enrolled

Programme/Semester	Nos.
B.Sc (Nautical Science)	
IInd Semester	93
IVth Semester	84
VIth Semester	91
B.E (Marine Engineering)	
IInd Semester	95
IVth Semester	92
VIth Semester	93
VIIIth Semester	93

Programme/Semester	Nos.
MBA (Shipping and Port management)	
MBA 3rd Trimester	35
MBA 6th Trimester	19
Total	695

Academic Innovations total research and developmental activities

1. Dr. P.K. Chatterjee and Prof. Awadh Prasad jointly published an article captioned "Engineering consultancy and Internal Marketing" in 'The Alternative - Journal of Management studies and Research" published by BIT, Mesra, April - September 05 Vol IV, No.2, PP.5-20.
2. Prof. Awadh Prasad and Dr. Hari Haran, Joint Director, MTI, Ranchi jointly guided Shri. Tarak Nath shaw of his thesis captioned "A study of the factors on effectiveness of Techno - Entrepreneurs".
3. Mr. J. Rengamani Department of Management rejoined AMET after successful completion of his project on "Customer Attitude" at Deakin University, Australia.

Student Activities

- (i) During the Academic year 2005 - 2006 BE (Marine Engineering) students were taken to various plants / workshops to give exposure to improve their practical knowledge and also to comply with the requirements of Director General of Shipping, Government of India. Sixth semester students attended the simulator course - MASSA Interface Maritime Academy and underwent afloat training at Chennai Port Trust on Tugs. Fourth semester BE (Marine Engineering) students undertook industrial visit viz Hindustan Shipyard, Vishakhapatnam. BE (Marine Engineering) Second semester students visited North Chennai Thermal Power station to have first hand knowledge of the system.
- (ii) During the academic year the MBA 2004 batch students, as apart of their academic activities visited the Goa Port and Goa Ship yard and gained practical inputs. They also visited the Chennai Petroleum Corporation Ltd (Ware House) to conceptualize the materials Management area. Apart from that, students has participated actively in various Management meets and seminars conducted in and around Chennai like Sri Sai Ram Engineering College (Research Methodology), Sri Ram Engineering College, Jeppiar Engineering College and won cash prizes. Students of both 1st year and 2nd year had participated the two day seminar convened by institute of Chartered ship brokers Chennai branch and BIMCO during Dec.2005. Our MBA 1ST year students undertook industrial visit to Mumbai Port Trust and visited JNPT during January 2006.
- (iii) Students from Chennai centre participated in the internal. Technical sports meet held at Ranchi on 27th and 28th Feb, 2006. All students performed well and to be precise under different categories five students obtained the first position, 12 students got the second

position and three students obtained third position as well. The overall championship award was given to Chennai centre.

- (iv) AMET Team participated in the open cultural event organized at BIT, Ranchi, Mesra and have bagged ten awards in debates, vocals, antragini, press conference, instrumental etc. The team secured first and second prize in four events and third price in two events.

JAIPUR

Technology, the foundation of the century, the power which rules the world, which converts dreams to reality and has made India a focus of global attention.

There is an ever-increasing requirement of competent technical know-how s; one of the premier institutes which moulds the young fresh minds straight from schools to technical geniuses of tomorrow is Birla Institute of Technology (BIT) For its outstanding standards in teaching and Research it finds a place in the Elite Top Ten Technical universities of India It is a full-fledged member of the association of Indian Universities. It attracts students from far and wide and its degree is recognized world over. The achievements of the institute, both in terms of research and excellent standards of academic programmes, led to its attaining the status of a Deemed university under section 3 of the UGC act of the government of India in 1986. Under the expansion plan the Institute has come up with the number of extension centers namely Kolkata, Lalpur, Allahabad, Bhimtal, Noida, Chennai and Jaipur, and three international centers -Muscat, Bahrain and Dubai.

The BIT Extension Center Jaipur was established in 1995 in the sprawling campus of the outstanding Birla Institute of scientific Research (BISR) successfully running since 1985. The center caters to the growing need of skilled IT professional through the pursuit of excellence in the field of Education, Research Consultancy and Training. Driven by the mission that technology will be the gateway to the future it is today one of the leading institutes of Rajasthan.

The courses being offered at Jaipur are MCA, MBA, BCA, BBA, B.Sc. (Animation & Multimedia), B.E. in two branches computer science and electronics and communication engineering. Thus the institute equips the students with necessary know how to face the competitive scenario of the current business &I.T. industry The students of all the above departments are required to undergo project work and summer training. They are deputed to reputed industrial houses on summer project assignment for specific durations during their training they are expected to learn the general functioning of the organization and to obtain specialized knowledge in the area if their interest by doing projects under the guidance and supervision of the company executives.

For an all round development extra curricular activities such as sports and fine arts are given due weightage along with academics. The students organize the activities and as a result improve their leadership skills. Cultural events Quizzes and Debates are organized at inter college and intra college levels to help them foster a sportive spirit so necessary for their all round development. Industrial visits are organized to impart real life experience to students Seminars & workshops are organized to prepare them for their professional life ahead and to enhance their confidence counseling and presentations are given to enhance their soft skills in communication and personality development.

With an aim to boost up acquisition of technical skills students are encouraged to appear & qualify in the Microsoft & Sun Solaris series of certifications. A student passing the examination in the first shot with 75% minimum qualifying standard is given full fee scholarship for the examination. This besides his/her acquiring a technical bench marking also is a moral booster and motivator to the deserving students. This step is taken in pursuit to promote quality education

and to emphasize on the aspects of consistency and labour that is a must to form the backbone of the students.

The internal seminars are conducted in the auditorium at BIT Jaipur premises. The entire purpose of the events is to give the students an adequate atmosphere where they can exercise their internal search and analysis skills and interact with their peers through a topic of their interest.

External Seminars are conducted from time to time. Eminent personalities from IT field are invited to deliver seminars on the latest developments and technologies. Such events open a world of knowledge to the students. The institute conducts software development competition each year, in which teams from engineering colleges all over the city participate.

Workshops and presentations are a regular feature of the institution. An annual feature organized with the objective to provide platform for the reunion of the old students with their prestigious alma mater. This also provides an opportunity for the old students to share their experiences and knowledge with the present students.

Sports meet is organized annually and emphasizes that, sports are as much a part of our lives as is academics. Intra-college competitions and outdoors sports viz. Cricket, Badminton, Volleyball as well as indoors games like table tennis, caroms are organized.

Most striking feature was the workshop organized from August 30 to 2nd September on Plasma Science & Technology: Industrial Applications & Diagnostics renowned personalities from India and abroad delivered valuable lectures and gave presentations, which were broadcasted by media.

Degree/Diploma offered

Undergraduate

BE (Computer Science)

BE (Electronics and Communication)

BBA

BCA and B.Sc. (Animation & Multimedia)

Upon successful completion of the Degree programme, one will be able to manage an animation or multimedia project, from its conceptual stage to the final presentation using industry standard tools. With the arrival of new computer animation technologies skilled animators are producing stunning visuals for computer games, multimedia, web, television and feature films etc. thus enabling the graduates with endless opportunities.

Postgraduate

MBA (Master of Business Administration)

The curriculum offers dual Functional Specialization along with Sectoral Specialization. Functional Specializations courses are offered in the broad areas of Finance, Human Resource Management, Information Technology and Marketing. The Sectoral specialization courses equip a student with specialized competencies for particular sectors of industry. However, the final decision as to what Functional Specializations and Sectoral Specializations will actually be offered depends on the number of students opting for them. Each student undertakes two

projects - one each during the fifth and sixth trimesters - under the guidance of faculty. The projects facilitate learning through practical application of the concepts.

MCA (Master of Computer Application)

Thus the MCA program here includes :

- a) A comprehensive knowledge of systems including their capabilities and limitations
- b) An appreciation of the application environment
- c) Skills for management of complex software projects, and
- d) A sound foundation of quantitative tools and techniques

Proposed Courses

Postgraduate

M. Tech Computer Science

M. Tech Scientific Computing

M. Tech Remote Sensing

M.S. (Animation and Multimedia)

Undergraduate

B.Sc (Art & Design; Musuilogy)

Bask (Financial Mathematics and Insurance)

Ph.D : In all the above disciplines.

Faculty position

Total no. of faculty - 50

No. of Students Registered (as on Feb 2006)

Course	Semester	No. of Student
MBA	III	36
MCA	VI	44
MCA	IV	73
MCA	II	42
BCA	VI	39
BCA	IV	22
BCA	II	47
BBA	VI	30
BBA	IV	39

Course	Semester	No. of Student
BBAI	II	67
B.E. (ECE)	IV	38
B.E. (CS)	IV	28
B.E. (ECE)	II	40
B.E. (CS)	II	40
B. Sc. (A&M)	II	55
	Total	640

Student Activities

Alumni Meet : An annual feature organized with the objective to provide platform to the reunion of the old students with their prestigious alma mater. This also provides an opportunity for the old students to share their experiences and knowledge with the present students.

Annual Function : Another annual feature of the institution that provides platform to the students and unveils many hidden talents. It encourages students to reveal their art and interact with their peers to share their creative interests.

Sports Meet : It is organized annually and emphasizes that sports are as much a part of our lives as is academics. Intra-college competitions for outdoor sports viz. Cricket, badminton, volleyball as well as for indoor games like table-tennis, chess, carom are organized.

Seminars and Inter-College Software Development Competition

The internal seminars are conducted in the auditorium at BIT Jaipur premises. The entire purpose of the event is to give the student an adequate atmosphere where they can exercise their internal search and analysis skills and interact with their peers through a topic of their interest.

External Seminars are conducted from time to time. Eminent personalities from IT field are invited to deliver seminars on the latest developments and technologies. Such events open a world of knowledge to the students. The institute conducts software development competition each year, in which teams from engineering colleges all over the city participate.

The Infrastructure

Library

The institution maintains a rich and extensive collection of books. It has over 10, 000 books on Computer Science, Electronics, English, Maths, Physics, Chemistry, Environmental science, Management, Animation & Multimedia, Biotechnology and projects related It satisfies the modern definition of library since it is associated with E-Library and Digital Library. An excellent section is devoted to Astronomy, Remote sensing, Advanced Mathematics, Statistics The Library subscribes to a wide spectrum of journals and Newspapers to help faculty and students to catch up to the latest trends in industry.

Book Bank

In book bank we have approx.ly 12,000 books for students of BE (CS&ECE), BCA, BBA, MCA MBA and B.Sc. (Animation & Multimedia) The books are issued for one semester after charging 25% of the cost of books

Computer Lab

The computer laboratory is geared with the state of the Art Machines and caters to the diverse needs of the student. There are five fully equipped computer labs, with servers viz. IBM Server, Compaq Rack Server and HP Server. The labs have latest software and continuous internet access at all computers. The other facilities include high quality flat bed scanner, Digitizer, Projectors, and A0 size plotter etc.

Engineering Drawing Lab

The institute has well equipped Engineering Drawing Lab. This facility provides appropriate practical training and knowledge to the students of graphic visualization. The student work under the able guidance of learned instructors, who enhance their capabilities and prune them properly for the modern technical scenario.

Electronics & Other Labs

A high precision and advanced electronic lab is maintained for B.E. students for digital and graphic analysis of electronic and electrical parameters. Apart from above labs institute has Chemistry and Physics labs. The students of BIT, Jaipur are also under the guidance of :

- Birla Institute of Scientific Research
- B.M. Birla Science and Technology Centre
- B.M. Birla Planetarium and Museum

Other Information

Preparatory Classes

The institute, viewing the felt need of the students to qualify in the all India Entrance Examinations, GRE, GMAT & TOFEL, has commenced preparatory classes for CAT, MAT, AIMCET aspirants. This facility is backed by qualified personals in their respective fields. The course has Multi fold structure, which deals with quantitative, aptitude, reasoning, and English. The aspirants will appear for the CAT and MAT exams in 2006. The teaching methodology adopted is through the aid of audio-visual presentations. This facility is been provided for the willing students of the institute only in order to guide the in the future endeavors.

Foreign Language Classes

Realizing the importance of foreign languages in corporate scenario, and globalization of economy, the institute has started diploma course in French. The course is open to students of all streams of engineering, management and information technology. This program is designed by our institution with an objective to give cutting edge to the students in the corporate world.

Encouragement to Students to acquire Technical Proficiency & Bench Making

With an aim to boost up acquisition of technical skills students are encouraged to appear & qualify in the Microsoft & Sun Solaris series of certifications. A student passing the examination in the first shot with 75% minimum qualifying standard is given full fee scholarship for the examination. This besides his/her acquiring technical bench marking also is a moral booster and motivator to the deserving students. This step is taken in pursuit to promote quality education and to emphasize on the aspects of consistency and labour that must form the backbone of the students.

Seminar/Workshop on Plasma Science

Plasma Science Society of India organized a national workshop on Plasma Science and Technology : Industrial Application and Diagnostics in the institute from Aug 30 to Sep 02, 2005. Eminent plasma scientist from our country and abroad attended and delivered lectures on Plasma technology. National media highlighted the entire proceedings of the seminar as well.

Campus Placements

The Placement Cell of the institution is doing wonderfully well to provide placements to students in leading industrial sectors. The cell assists in graduating students in securing jobs in reputed companies as well as providing contracts for higher education. Meetings for recruitment with prospective companies and campus interviews have been successfully organized. In addition, final year students proceed to the main campus at Mesra to participate in campus placement activities. Some companies that have recruited students from this center are Birla Soft, Wipro, NIC, HCL Technologies, TCS, Satyam, Honewell, Convergys Technologies, Siemens, Accenture, Impetus, Sapient etc.

KOLKATA

The Kolkata Extension Centre was established in 1995. This Centre offers academic programmes in Computer applications and Business Management. The Centre has most modern computer laboratories, a well-equipped library and other academic infrastructure. The Centre, located in the southern part of the city, is well connected with the rest of Kolkata. The extensive 21, 000 sq feet premises of the Centre includes a spacious computer laboratory with a server room, several lecture rooms, a seminar hall, and a well-equipped library with books, journals and an e-library. Students have free access to online journals through ACM, IEEE and Emerald-online. The whole Centre is networked and internet facilities are provided through a 128 kbps leased line.

The computer laboratory has 110 modern HP and Dell PC s, and another 30 Compaq machines. The Centre will very soon offer high-class professional multimedia courses, for which the Dell PC s are specially configured. The Laboratory has latest software ranging from C, Turbo C++, Java, VisualStudio.net, etc, to Oracle 9i, Photoshop 9, Adobe Writer, Flash 8, Dreamweaver 8 and Rational Rose. Platforms include Windows 2000, Windows 2003 Server, Windows Workstation version, Red Hat Linux 4, etc.

All students of last batch of MCA have secured campus placements in renowned software organizations such as Birlasoft, IBM Global, Accenture, Flextronics (HSS), Mahindra British Telecom, Wipro, Metalogic Systems. These students had 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, and Metalogic Systems. They had done projects on different platforms like R&D, Networking, Image Processing, VLSI design, Database software. The students are also encouraged to do in-house projects in their fifth/sixth semester under the guidance of the faculty members. They have also presented seminars in fifth semester.

The faculty at the Centre has a range of teaching, research and industry experience in Digital Image Processing, Mobile Computing, Distributed and Parallel Computing, Agile Programming, and Data Warehousing and Mining, Industrial Marketing, Corporate Finance, HR and Organizational Behaviour,

Entrepreneurship, Industrial Relations. Many of them are also actively involved in training and development programmes as well as consultancy for different and public sector organizations.

Guest lectures are also delivered regularly by eminent faculty from IIT Kharagpur, Jadavpur University, Burdwan University, B.E College (Shibpur), etc.

The BIT Kolkata Centre was a co-sponsor of the 1st International Conference On Information Systems Security (ICISS 2005) held December 18-21, 2005 jointly with the Centre For Distributed Computing at Jadavpur University. The Centre is also one of the major technical sponsors, along with the IEEE and IEE, of the forthcoming International Conference on Emerging Applications of IT (EAIT 2006) to be held at Kolkata from February 10 to 11, 2006. The conference is being organized by the Computer Society of India, Kolkata Chapter.

Computer Laboratory facility at BIT Kolkata Extension Centre

The Computer Laboratory facility at BIT Kolkata Extension Centre is one of the best that is available to the technical and professional student community, as well as the technical teaching community of this country. The facilities can certainly compare, or even best the ones available at other renowned technical institutes/Universities of this country. The Centre's Computer Laboratory currently boasts of a PC strength of 110 (soon to be expanded to a strength of 150+), all of renowned international brands like Compaq, Dell, etc. The Dell PCs are specially configured for high-class professional multimedia courses which the Centre is going to offer very soon. There are also two servers at present, one for Windows 2000 networking, the other for Linux networking. The entire Computer Laboratory is networked internally through high-performance Netgear switches, and the Centre is connected to VSNL's 128Kbps leased-line through a high-performance Cisco router. The Computer Laboratory also boasts of two high-quality laser printers, one with black & white prints, the other fully colour. There is also one colour inkjet printer, and two high-speed dot-matrix printers for the regular student community. The Computer Laboratory uses various softwares as part of the professional courses that it offers, like the standard language processors (viz., C, TurboC++, Java, VisualStudio.net, etc.), as well as industry strength softwares for multimedia, project development and for learning software engineering methodologies (specially required by the quality software and consultancy companies) like Rational Rose (from IBM Corporation), Oracle 9i Enterprise Version (from Oracle Corporation), Photoshop 9 & Adobe Writer (from Acrobat), Flash 8 & Dreamweaver 8 (both from Macromedia). There are also standard OS support platforms like Windows 2000 & 2003 Server and Workstation version, Red Hat Linux 4, etc. All in all, the Computer Laboratory at the Centre is fully equipped to cater to the rigorous demands of the present and future professional and academic community of students, teachers, and industry personnel.

Library Facilities at the Kolkata Extension Centre

The library currently has a stock of books for the following streams: BCA, BBA (1st batch) and MCA. It remains open for the purpose of reading from 10 hrs. to 17.30 hrs. Plan is on the anvil to increase the duration of reading upto 18 hrs. The total number of books counting upto 2350 (approx) cater 250 students. The books are segregated under three sections viz. general, reference and text. The library maintains one copy of all the titles for the reading section. There is another set of all the titles for reading and issuance by the faculty members only. The reference and textbooks are allowed to be issued for 3 days for UG and for 7 days for PG students. However, general books can be issued for two weeks. The library subscribes four magazines on computer science (monthly), three on management (weekly/bi-weekly) and three general magazines (weekly). Five newspapers are also subscribed. Most importantly there is a separate enclosure earmarked for the e-library. Students have free access to online journals through ACM, IEEE (fulltext) and Emerald-online (fulltext). This facility furthers research activities. The library also maintains an archive of students' projects since the inception of the Kolkata Centre. A software for day-to-day operations of the library has been developed. At a given time 50 students can comfortably sit and study. The management of the library is looked after by a Library co-ordinator, an Assistant Librarian and a supporting staff.

Degree / Diploma offered

MCA (PT)

MCA (FT)

BCA (FT)

Faculty Position

Faculty in charge - 1

Reader - 1

Lecturer - 5

Assoc. Lecturer - 2

Number of Student enrolled/registered in different courses

Course	Semester	No. of Students
MCA (FT)	III & IV	72
BCA (FT)	III & IV	23
MCA (PT)	IX (additional)	04
*MCA (FT)	I & II	97
* BCA (FT)	I & II	165
* BBA (FT)	I & II	123
	Total	484

Note : * Fresh Intake in the Monsoon-2005

Academic innovations, research & Development activities***A. Project Submitted***

The following projects has been submitted by Dr. Debangshu Chakraborty to The UGC for due consideration

Managing During Mergers

Problems of Cultural Transition

(A cross-organizational study)

The proposed duration of the project is two and half years. The amount sought for funding the project is Rs. 7.71 lakhs

B. Seminar/conference/short term course conducted by the Department**Report on 1st International Conference On Information Systems Security (ICISS 2005)**

The 1st International Conference On Information Systems Security (ICISS 2005) was held at Kolkata from December 18-21, jointly with the Centre For Distributed Computing at Jadavpur University, with Birla Institute Of Technology Mesra being one of the major sponsors. BIT Kolkata Extension Centre hosted the tutorials of ICISS 2005 on December 18, 2005. Prof. R.T. Goswami

of BIT Kolkata Extension Centre, and Mrs. Sharmistha Neogy of the Department of Computer Science & Engineering of Jadavpur University were the tutorial chairs.

The tutorials were held in two sessions- the morning session from 10 am to 1 pm, and the afternoon session from 2 pm to 5 pm. In between , the Centre hosted the tutorial lunch. Both the sessions had parallel tracks. The morning tutorial tracks were offered by Dr. Indrajit Ray of Colorado State University on Digital Forensics, and parallelly by Prof. Chandan Majumdar & Anirban Sengupta, both of Centre For Distributed Computing on Enterprise Information Security Management. The afternoon tracks were offered by Prof. A. Bagchi of ISI Kolkata on Recent Advances In Access Control Models (The Early Work)/Prof. S. Jajodia of George Mason University on Recent Advances In Access Control Models (tutorial type), and parallelly by Dr. Gautam Bhattacharya of The Calcutta Stock Exchange Association Ltd. on Information And System Security In Financial Services- The Indian Scenario.

All the sessions were well attended by the student community, the teaching community, as well as by people from the industry. Practically the entire PG student community of the Centre, the faculty members, and some faculty members of BIT, Mesra (including Prof. G. Sahoo, Head of the Department, Computer Science & Engineering, and Mr. B.B. Pant, Dean, Training & Placement at BIT Mesra) were present in the tutorial deliberations. All the sessions were lively, and highly interactive. The sessions were meaningful, academically stimulating, and generated a lot of interest amongst the students, as well as the faculty members. Ideas were exchanged, and it is highly possible the future will witness academic collaboration between BIT and some of the international institutes who were represented by their faculty members at the tutorials. It may be interesting to note here that for the first time, the Smart Board recently installed at the Centre was used successfully during the tutorial program by the lecturers.

Report on the International Conference on Emerging applications Of IT (EAIT 2006)

The International Conference on Emerging Applications of IT (EAIT 2006) will be held at Kolkata from February 10 to 11, 2006. In order to give recognition to the tremendous growth in the field of core and application areas of information technology, to provide a techno-academic forum to exchange ideas on the emerging areas of information technology, and to bring together technologists, application developers and researchers from the industry, academic institutions and R&D Laboratories, the conference is being organised by the Computer Society of India Kolkata Chapter. BIT Mesra Kolkata Extension Centre is one of the major technical sponsors along with internationally renowned professional societies like IEEE of USA, and IEE of UK.

The major areas of interest in the conference are as follows :

- | | |
|------------------------------|--|
| * Object Technology/Modeling | * IT Application Verticals |
| * Distributed System | * Banking, Insurance, Financial Applications |
| * Grid Computing | * e-Learning |
| * IT and Network Security | * VLSI |
| * Networking | * Image Processing |
| * Enterprise Applications | * Artificial Intelligence |

- | | |
|--------------------------------|---------------------------|
| * Software Design Patterns | * Pattern Recognition |
| * ERP/CRM/SCM | * RFID |
| * Software Testing and Quality | * e-Governance |
| * Extreme/Agile Programming | * Rural Applications |
| * Telemedicine | * Biomedical Applications |

It is expected that the conference is going to generate a lot of interest, not only from the Indian community, but also from the international community, as can already be seen from the member list of the Advisory & Program Committee. BIT Mesra's Vice-Chancellor Prof. S.K. Mukherjee is a member of the Advisory Committee, and Kolkata Extension Centre's Prof. R.T. Goswami is a member of the Program Committee. Some of the faculty members of the Department of Computer Science & Engineering are also going to present a few papers.

C. Publications by Faculty

Books/Monographs

Dr. Debangshu Chakraborty, Lecturer, Dept. of Management

Book

Co-author of Culture, Society and Leadership, The ICFAI University Press(2006)

Paper

Journal Corporate Values, Personal Values, Cultural Congruence and Ethics : A Critical Exploration in Metamorphosis (Vol.4, No.2, 2006) from IIM-Lucknow

Book Reviews

1. Alexander The Great's Art of Strategy by Partha Bose in Journal of Human Values(IIM, Calcutta) (Vol.11, No. 1, 2005)
2. Understanding Immotion at Work by Stephen Fineman in Management Review(IIM Bangalore)(Vol.17, No. 1, 2005)
3. Business Ethics by Biswanath Ghosh in Journal of Human Values(Vol. 12, No. 1, 2006)
4. I Too Had a Dream by Verghese Kurien in ASCI Journal of Management(Hyderabad) (Vol. 35, No. 1 & 2, 2006)

Case Study

"White Powder, Red Colour" in GROWTH (Vol. 33, No. 2, 2005) SAIL

Article By Prof. R. T. Goswami, Faculty In Charge, Dept. Comp. Sc

- * D. Jana, D Tarafdar and R T Goswami, "Delayed propagation of new technology from laboratory to field", CSI Communications, April, 2006.

D. Seminar / Symposium attended by faculty members

- * Prof. R. T. Goswami, Prof. S. Chaudhuri, Prof. A. Dutta, Prof. R. K. Chatterjee, Mrs Jayasri Ray attended International Conference on Information System Security Held during December 19-21, 2005 at BIT , Kolkata and Jadavpur University
- * Prof. R.T. Goswami, Prof. S. Chaudhuri, Mrs Jayasri Ray attended International Conference(EAIT) held during February 10-11, 2006

E. Short Term Course / Refresher Course

- * Sri Ambar Dutta and Sri Rohit Kamal Chatterjee from the department of Computer Science Participated in UGC sponsored refresher course in Foundations of Computer Science and Applications During February 6-25, 2006 organised by Department of Computer Science and Information Technology, Tezpur University and both of obtained Grade 'A (Top grade).

F. Award/Nomination of Faculty by Important organization

- * Dr. Debangshu Chakraborty, Department of Management has been invited to offer in-house training programmes Managerial Effectiveness By Human Values, Leadership and Fellowship and Stress Prevention for the Senior and Middle level Executives of the Companies like BPCL, IPCL, IFFCO, SAIL, Power Grid Corporation, NTPC

G. Student Activities

Our MCA and BCA students took part in almost all events of the Bitotsav 06 and Pailan Institute of Technology and Management. They have performed in both informal and formal events in front of the huge gatherings. They have been awarded with the certificates. One student stood first in quiz in Pailan fest, others are also bagged many prizes.

Our students won 10,000 cash prizes in ZEE BANGLA COMMON ROOM programme organized by ZEE Television.

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 undertakings 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 were started full time courses B.Sc. Computer Science and B.Sc. Electronics courses 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 1999, M.Sc. Information technology and M.Sc. Electronics and Telecommunication courses were introduced, for girls only. Currently the Lalpur Extension Centre has over 1759 students on its rolls of which almost 560 are post graduate students.

Department of Management

The department of Management was founded in 1979 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 its own highly qualified and experienced core faculty besides adjunct faculty drawn from the different departments of BIT. 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 paper spread over six trimesters. During the first trimester 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 specialization and their sectoral specialization. The students also undergo a two month 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 in their better placement in corporate world.

Department of Computer Science & Engineering

Dept. of Comp. Sc. & Engg. of the Institute was started with the BCA Programme, at Lalpur Extension Centre in 1999, and thereafter at the other Extension Centres. The Dept. provide students with necessary skills to make successful careers as IT professionals in competitive situations with satisfying jobs. It also prepares students with the requisite background to proceed with confidence for higher studies in the form of MCA, MIT, MS in Computers, MBA, etc. and thus acquire greater competency.

Extension Centre has well-equipped Computer Laboratories and a comprehensive Library. The computer laboratories have broadband connectivity and latest software. The libraries provide access to an exhaustive collection of books, Journals and magazines.

With the exponential growth in the IT sector in our country, and with the entry and FDI of various multi-national companies, it is reasonable to expect that the IT industry will require a large number of competent professionals in coming years, more so at the entry level. All the necessary foundation courses required for this is offered at the BCA, MCA & MIT level, starting from Mathematics which strengthens the background achieved at the 10+2 level, to Programming Languages and Data structures which hones the logical thinking and problem-solving capabilities, various application software to give an understanding and knowledge of the tools used in the IT industry, and even hardcore theory papers like Digital Logic, Computer Architecture and Operating Systems for understanding the inner workings of the computer system.

It is thus worth noting that the BCA, MCA & MIT Programmes in regard of aim and scope is very focused in its approach to preparing a student for IT and other professions.

Degree / Diploma offered

Full Time Courses	:	BCA (Bachelor of Computer Applications)
		BBA (Bachelor of Business Administration)
		M.Sc. (Information Technology)
		MCA (Master of Computer Applications)
		MBA (Master of Business Administration)
Part Time Courses	:	M.E. in Civil, Mechanical, Electrical, Electronics
		MBA (Master of Business Administration)
		MCA (Master of Computer Applications)
		M.Tech (Computer Science)

Faculty Position

Department	Reader	Lecturer	Assoc. Lecturer	Teaching Asstt.
Management Science		7		2
Computer Science & Engg.	1	9	3	2

Number of Student enrolled/registered in different courses : (as on March 2006)

Course	No. of Student
BBA - Girls	115
BBA - Boys	123
BCA - Girls	108

Course	No. of Student
BCA - Boys	117
MBA - PT	17
MBA - FT	56
MCA - FT	121
MIT	20
Total	677

Academic innovations, research & Development activities

A. Project Submitted

(During the year 2005-2006)

Project Title : Inventory Management & its effectiveness in small scale Industries of Jharkhand State.

Funding Agency : AICTE

Date of Submission : 2Feb., 2006

Submitted by : Dr. A.N. Jha

B. Publications

(During the year 2005-2006)

Paper by Dr. A.N. Jha : Role of Activity based costing in generating relevant for decision making.

Compiled by : Dr. A.K. Malviya

Paper publication in the book "Managerial Rainbow"

C. Seminar/conference conducted by the Department

Management Department, BITEC - Lalpur, Session 2006

Sl. No.	Name of Faculty Member	Conference Attended (Name)	Venue and Duration of the Conference
1.	Mrs. G. S. Vijaya	Attended Management Development Programme on Decision making and problem solving	SAIL, Ranchi 20th - 24th Feb. 2006
2.	Mr. T. K. Banerjee	Coal Mine Surviving	ISM Dhanbad 7 - 8 January, 2006
3.	Ms. Anupma Sahai	i) 5th National HR Conference - Future Crafting of HR	XLRI, Jamshedpur 28th Jan.-29th Jan., 2006

Sl. No.	Name of Faculty Member	Conference Attended (Name)	Venue and Duration of the Conference
	Ms. Anupma Sahai	ii) Induction Programme for young management faculties organized by IIM (K) & sponsored by AICTE iii) Conference on "Global Competitiveness"	IIM (K) 6th - 23rd March, '06 IIM (K) 24th - 25th March, '06
4.	Mr. A.K. Singh	Supply chain Mgt. for Global competitiveness (National Seminar)	ISM, Pundag 10th - 11th Feb., 2006
5.	Mr. Somnath Mukherjee	National Seminar on Supply chain Management (Presented a paper on e-supply chain Management)	ISM, Pundag 10th - 11th Feb., 2006
6.	Mr. Sushil Kumar	Supply chain Mgt. for Global competitiveness (National Seminar)	ISM, Pundag 10th - 11th Feb., 2006
7.	Mr. S.N. Sahdeo	Presented a paper on Supply Chain Management for Global Competitiveness in National Seminar on Supply Chain Management	ISM, Pundag 10th - 11th Feb., 2006

Computer Sc.& Engg. Department, BITEC - Lalpur, Session 2005 - 2006

Sl. No.	Name of Faculty Member	Conference Attended (Name)	Venue and Duration of the Conference	Details of the Paper (Title and Names of Authors)
1.	Dr. (Mrs.) V. Bhattacharjee	i) 8th International Conference on Information Technology CIT - 2005 ii) 1st National Conference on Soft Computing & Technology (SCT-2006) iii) Do	Bhubaneswar Dec. 20 - 23, 2005 NIT Rourkela March 25 - 26 Do	Software testing graph theoretic approach (V. Bhattacharjee, D. Suri & P. K. Mahanti) An expert case based framework for software cost estimation (V. Bhattacharjee & Sanjay Kumar) Session Chair (Technical Session IB)
2.	Mrs. A. Priyam	1st International Conference on Emerging application of Information Technology EAIT 2006	Kolkata February 10-11, 2006	Application of optimization technique for DNA sequence alignment (A. Priyam, G.Sahoo & BM Karan)

Sl. No.	Name of Faculty Member	Conference Attended (Name)	Venue and Duration of the Conference	Details of the Paper (Title and Names of Authors)
3.	Mr. N. P. Tiwari	Short Term Course on Linux	NITTR Chandigarh 21.11.2005 to 25.11.2005	NA
4.	Mr. Kumar Rajnish	i) International Conference on challenges and opportunities in IT industry ICC II - 2005 ii) 1st International Conference on Emerging application of information Technology EAIT 2006	Ludhiana 12 November 2005 Kolkata February 10-11, 2006	Maintenance of metrics through class inheritance hierarchy (Kumar Rajnish & V. Bhattacharjee) Class complexity - A Case Study (V. Bhattacharjee & K. Rajnish)
5.	Mr. Sanjay Kumar	International Conference on challenges and opportunities in IT industry ICC II - 2005	Ludhiana 12 November 2005	Fuzzy logic based models for software cost estimation (Sanjay Kumar & V. Bhattacharjee)
6.	Ms. Swati Shalini	International Conference on challenges and opportunities in IT industry ICC II - 2005	Ludhiana 12 November 2005	Object oriented Database Management System (Swati Shalini & V. Bhattacharjee)
7.	Mr. U. Prasad	Short term course on Linux	NITTR Chandigarh 21.11.2005 to 25.11.2005	NA

Student Activity

Sl. No.	Name of the Society	Objective	Event Organised
1.	Debating Society ("Break Out of Your Shell")	To provide a plat form to the students where they can interact with each other & enhance their public speaking skills.	(i) Catalyst '05 25th Sept. '05) (ii) Jamin '06
2.	Interact Society ("Breaking the Ice")	To provide students with facilities for enhancing the approach towards various problems faced in life. And giving a platform to the students to enhance there interactive skills & unproven there attrinde towards career & life	(i) Quest - 2K5 (28th October '05) (ii) Mok Test for MCA Aspirants '06 (iii) Meditation Programme for students and faculties on 10th April '06

Sl. No.	Name of the Society	Objective	Event Organised
3.	IT - Society ("Crack Your Brain")	To improve skill of software development & furnish details of day-to-day advancement in IT sector & to help the participants	(i) Techie of the Year 2005 (29th October '05) (ii) Tug of War (8th April '06)
4.	Fine Arts Society "Zoom Your Creativity"	in their future career prospects by providing them a platform To bring out the hidden creativity & giving them (students) a platform to exhibit it	(i) Forthcoming Events Srijan (Fine Arts Exhibition)
5.	NAPS ("Promote Talents")	To provide a platform to enhance the communication & writing skills. Which helps them to come up with and out standing performance in today s competition world.	(i) Business Bazigar '06 (8th Feb. '06) (ii) MOCK - CAT (25th March '06)

NOIDA

Having felt the urgent need of a centre for diversified and advanced educational research, consultancy and training of human resources in IT and Management in the Northern zone, BIT, Mesra in the year 1998, has established one of its extension centre at NOIDA. This is an advantageous position compared to other extension centres of BIT in terms of its location near capital region and gateway to many IT and other corporates at Greater NOIDA, Gurgaon and Delhi besides NOIDA itself. The curriculum of all the credit based flexible programs are carefully reviewed, updated, diversified in pace with the needs of the industry and business requirements of this country, with the help of BIT main campus.

The centre is located in Institutional area of NOIDA in Sector-1 which is situated adjacent to many important industrial houses like Indian Oil Corporation, Bharat Petroleum, Kribhco, PDIL, GAIL, Bhilwara Group, HCL etc. It is just 15 km. away from Delhi and is very well connected with Delhi, Faridabad, Gurgaon and Ghaziabad by road. There are frequent bus services of DTC and private carriers plying to this institute from all over the places of Delhi and its suburbs, Haryana and Uttar Pradesh.

Started with its humble beginning with a few students in BC course, the centre is now imparting quality education to about 900 students through various academic programs like BCA, MCA, BBA, MBA and B.Sc. (Animation & Multimedia).

The quality of education has mainly contributed for the phenomenal growth of this centre in a short period. The highly talented and skilled faculty, the advantageous location of the centre and above all, the direct advantage of the guidance, control and wide experiences of the main campus BIT Ranchi in the field of technical education are the main factors which have added to the quality of courses in general and MCA, MBA and Animation & Multimedia in particular.

The NOIDA Centre being situated in the vicinity of the National Capital Region has added responsibility of imparting excellent quality education which is the need of emerging corporates. The centre will have a creative role and prepare professionals in the areas of IT, Management and Animation & Multimedia to cater to the requirements of Business and Industrial sectors in the days to come.

Degree / Diploma offered

UG Courses

BBA (Bachelor of Business Administration)

BCA (Bachelor of Computer Application)

B.Sc. (Bachelor of Science in Animation & Multimedia)

PG Courses

MBA (Master of Business Administration)

MCA (Master of Computer Application)

Faculty Position

	Computer Science	Management	Animation & Multimedia
Professor		1	
Assoc. Professor		1	
Reader		1	
Lecturer	11	6	
Sr. Lecturer	2	2	
Assoc. Lecturer	5	1	
Lecturer (Sel. Gr.)	1		
Faculty			7

Number of Student enrolled/registered in different courses : (As on Feb. 2006)

Course	No. of Student
BBA II, IV & VI (Semester)	255
BCA II IV & VI (Semester)	164
MBA III & IV (Trimester)	96
MCA II, IV & VI (Semester)	155
B. Sc (A&M) II & III (Semester)	91
Total	761

Academic innovations, research & Development activities

A. Seminars/Conferences conducted by the Institute

- (i) 14th May 2005: "Animation and New Media: Emerging Trends and Technologies"
- (ii) 1st December 2005: "Current Trends in Mathematics and Computation" (Uses of formulae and models, computer technology and data security).
- (iii) 7th December 2005: "Rural India Calling: The emerging Markets"
- (iv) 6th February to 4th March, 2006: "Entrepreneurial Development Program for upcoming business". This was sponsored by Department of Science & Technology, New Delhi.
- (v) 15th April 2006 : "Current Trends in Software Technology" The Objective of this national seminar was to integrate industry, academics and R&D work. Experts from Jawaharlal Nehru University, IIT Delhi, Guru Govind Singh Indraprastha University, Delhi, Ministry of Communications and Information Technology, Siemens, Gurgaon, Patni Computers, NOIDA, and Connexant India Ltd., NOIDA participated actively in this national seminar.

Prof. JP Gupta ,Vice Chancellor, JP Institute of Technology, NOIDA was the Chief Guest. Other eminent persons in attendance were Prof. PC Saxena from Jawaharlal Nehru University, Dr. AB Patki, Deptt. Of Information Technology was the Guest of Honour. Speakers were Dr. Ela Kumar from IGNOU, Dr. Radhakrishnan, Principal, Comp.Sc., Krishna Engineering Institute, Dr. Ajay Rana, and Mr. Peeyush Agrawal.

Topics covered were Six Sigma and IT Governance, Defect estimation, Neural network, Software engineering, Artificial Intelligence, Software testing, Security Issues, Data mining.

(vi) 16th April 2006 : "India Animates-Next Hub 2010" It was a one-day seminar to expose the future of animation to the Students of B.Sc.(Animation & Multimedia). The speakers were :

- * Prof. GD Sharma, Director, Consortium of Educational Communication as Chairman of the seminar.
- * Prof. MM Pant, Former Vice Chancellor, IGNOU.
- * Mr. K. Rajesh Rao, Founder and CEO, Dhruva Interactive, Bangalore.
- * Mr. Rahul Bakshi, CEO of Phoebus Creations.
- * Mr. Paresh Mehta, Former Member and CEO of Gecko Animation Studio and Academy of Digital Arts, Delhi.
- * Mr. Anand Gurnani, Editor and Business Development Head, -Animation 'Xpress.
- * Dr. CP Srivastava, Educational advisor, Birla Institute of Technology a Coordinator.

B. Publications by faculty

Dr. Peeyush Tewari

"Analysis of a PVC pipe manufacturing plant in a medium Scale industry"- Pub.In "Productivity".

Mr. KN Mishra

- (i) Software Engineering (Vrinda Publications, New Delhi; in press)
- (ii) How to solve programming problems (Vrinda Publications, New Delhi; in press).

Mr. SK Ray

Formal Languages and Alternate theory (Vrinda Publications, New Delhi).

Dr. Ila Sahay

- (i) "Bifurcation of a gas bubble in the expansion of fluid flow in Rayleigh model"
- (ii) Controlling chaos in Fronde pendulum
- (iii) Controlling Chaos in Buckled beam
- (iv) On irregular and chaotic evolution of Duffing system
- (v) Filtering data and effect of noise on the evolution of a dynamical system.

Dr. Asha Prasad

"Power Sector reforms in India and human relations adjustment issues". (Ph.D. thesis)

"Effects of stress on health and its management" - The Alternative Journal of Management Studies in Research, Vol. IV No. 2 (April- September 2005).

Mr. Pranab Kumar

"Transfer of technology in small scale industries in India: Concepts, Methodology and implementation" - Alternative. Vol.IV, No. 2, PP-21- 41.2005.

Ms. Suparna Dutta

"Training students to communicate effectively: A wake-up call"- University news, Vol. 44 No. 17, April 24 - 30, 2006.

C. Short-term Course attended by faculty members

Mr. Pranab Kumar

Three-week refresher course in management at Jamia Millia Islamia, New Delhi.

Student Activities

October 2005 : Guitar + Sitar recital: Fusion of Indian and Western music, played by an eminent musician, Mr. Sharma from Mumbai. This was meant essentially for animation students, but witnessed and enjoyed by all students and staff.

10th February 2006 : BIT Utsav at Ranchi: Annual cultural festival at the main campus. BIT EC NOIDA team of students participated for the first time in this festival. One female student from NOIDA won the title of "Miss BIT".

18th February 2006 : Alumni meet. Past batches from NOI DA as well as Ranchi participated. This was followed by a small cultural program. Music teacher from Ranchi participated and gave Sitar recital.

1st April 2006 : NOIDA BIT Utsav (BCA, BAM III students)

5th April 2006 : NOIDA BIT Utsav (BBA, BAM II students)

22nd April 2006 : Final Utsav (MA,MCA and final participants short listed from earlier events)

Various societies like Social work, Sports & games, Digital, Dramatics, Arts & Creativity, Snapshots are working with respective in charges from management, computer and animation faculties.

Campus placements for 2007 passing out MCA batch was held at BIT NOIDA between 23rd April 2006 and 29th April 2006. Reputed companies like Accenture, Keane India Ltd, Birlasoft, Impetus,HL Technologies and other multinational companies participated.

Infrastructural facilities during the year 2005-06

An elevator for disabled students was installed at the rear of the building.

Auditorium with latest sound system was constructed.

Staff and faculty were given computers with internet facility. Lease line speed 512 kbps (1:4). 60 nos. Dell desktops (2005-06) installed. Various softwares were purchased, elated to animation and multimedia.

20 HP desktop for animation students were installed.

04 HP desktops for animation staff were installed.

Laser printer 2600 colour LaserJet and 1 HP Scanner were installed.

Animation studios were made with full sound proofing.

New laboratory for animation students with latest HP computer with 512 MB RAM capacity was installed.

2 nos. servers (1 Dell, 1 HP) were installed for the computer laboratories.

Centre website was published (www.bitnoida.in)

BAHRAIN

BRIEF DESCRIPTION OF THE DEPARTMENTS

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, Microprocessors, Digital Systems Design, Instrumentation and process control, Communications, 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.

Management Department

The department has fairly good facilities to offer BBA, MBA and B.Com. (E-Com) programmes. All these departments are currently engaged in conducting the educational programmes of the Institute.

Additional facilities created during the year

The following new facilities have been created/ existing facilities have been strengthened:

New facilities

Following new facilities have been created during the year:

- * Badminton
- * Table Tennis
- * Carrom
- * Musical Instruments for Creative Art

Strengthening of existing facilities

Over 950 books have been added to the library during the period

Courses offered

- B.E. (Bachelor of Engineering) in Computer Science
- B. Sc. (Bachelor of Science) in Information Technology

BBA (Bachelor of Business Administration)

MBA (Master of Business Administration)

B. Com (Bachelor of E-Commerce)

D. Tech. (Diploma in Technology) in Computer Science & Engineering and Production Engineering

Faculty Position

Professor	2
Assoc. Professor	2
Lecturer	5
Assoc. Lecturer	1
University Education Teacher	7
Workshop Trainer	1
Senior Mechanic	1
Technical Assistant	3
Computer Technician	1

Number of Student enrolled/registered in different courses

Course	Semester	No. of Students
B.E. - Computer Science	VIII	8
B.E. - Computer Science	VI	10
B.E. - Computer Science, ECE, Mech. Engg.	II	14
B.Sc. - Information Technology		113
Foundation Programme		7
B.B.A.	VI	9
B.B.A.	IV	33
B.B.A.	II	39
B. Com. (E-Com)	II	14
M.B.A.	Trimester-VI	4
M.B.A.	Trimester-III	14
	Grand Total	265

Academic innovations, Research & Developmental activities

A. Projects submitted during the year

A proposal to conduct a training programme Mechanical Maintenance of 1-year duration was been submitted to the Specific Council for Vocational Training, Kingdom of Bahrain, to train 25 candidates at a total cost of BD. 61250.

B. Projects sanctioned

A 1-year duration Mechanical Maintenance has been awarded to the institute by the Specific Council for Vocational Training, Kingdom of Bahrain, to train 25 candidates at a total cost of BD. 61250. The programme is expected to start in the month of June 2006.

C. Seminar, Conferences, Short term Training programmes

A full day seminar on 'Challenges before Managers' was organised at the Institute on 28th December 2005. His Excellency Mr. Balakrishna Shetty, Ambassador of Republic of India was the Chief Guest. Following papers were presented:

- a. Senseable Branding
- b. The Battle for Supremacy, 'GM Vs. Toyota
- c. Low Cost Carriers in Indian Aviation Industry
- d. Pester Power

D. Short term courses attended by the faculty members

Mr. N. Sarvanan and Mrs. Shanthi Sharavanan, both faculty members of the Institute, participated in the UAE Educational IT Challenge 2006 with the project entitled 'Effectiveness of ICT teaching- learning process' held on 4th March 2006 at the Ministry of Education, Dubai under the category of University Level Teachers.

Student Activities

The following activities were organised :

- a. Induction Day was organised on 4th September 2005 for the freshers
- b. Induction day for new entrants of B.Sc.(IT) evening programme was organised on 10th September 2005
- c. A group of MBA students participated in an International Management Festival 'Precipice-2005' organised by Sri Bhagawan Mahaveer College of Management, Bangalore, India, from 28th September to 2nd October 2005.
- d. Participated in the Career Expo at the Indian School, Kingdom of Bahrain, from 2nd December to 3rd December 2005.
- e. Table Tennis, Shuttlecock, Carrom, and Chess Tournaments were organised between 12th December 2005 and 26th December 2006.
- f. A group of MBA students participated in an International Management Festival

'Synergy-2006' organised by SDM College of Management, Mangalore, India, from 26th January to 28th January 2006

- g. Induction day for new entrants of B.Sc.(IT) evening programme was organised on 29th March 2006 .
- h. A debate competition was organised on 9th April 2006.
- i. A cultural function on 12th April 2006.
- j. Publication of the 2 News letters.

UAE

BIT entered in to an agreement with the Royal College of Applied Science & Technology (RCAST), Ras Al Khaimah (RAK) on November 22, 2004 wherein BIT is required to conduct its academic programs at RCAST, RAK Free Zone, RAK. BIT started MBA, B. Arch. BE (CS), BE (EC), BE (EE), BBA, BBM, B.Com and IE programs from 17th September 2005.

In February 2006 a second intake was made for regular BBA & MBA students, and preparatory course for BE and Executive MBA were commenced by BITIC, RAK

In academic year 2006-2007 (September), three new programs, viz., Bachelor of Hospital Administration, B.Sc. in Animation & Multimedia and B. Pharma are being proposed.

Infrastructure facilities

Existing teaching block : The existing teaching block is an eight storied leased building. Currently, BITIC has 11 class rooms, one computer lab with 60 computers (networked), 2 MB leased line for internet, a Chemistry lab, a Physics lab, an Electronics lab, a Mechanics lab, an Architecture Drawing lab, an Engineering Drawing Lab, Mechanical workshop, Library, offices for Director, Examination in charge, teaching faculty and administration staff, a Seminar hall, canteen and separate prayer rooms for girls and boys.

Preparations for construction work are in progress for the new building in a plot area of 5 acres with a 3 storied teaching block with conference room, prayer rooms, big library, computer laboratory, a Chemistry lab, a Physics lab, an Electronics lab, a Mechanics lab, an Architecture Drawing lab, an Engineering Drawing Lab and Mechanical workshop. The campus will also have hostels for boys and girls, a centrally located auditorium, and a Canteen. The total built up area of the building is 26,500 sq. meters.

Degree / Diploma offered

Sl.No.	Programme Name
1.	MBA
2.	e MBA
3.	BE (Electronics & Communication)
4.	BE (Computer Science)
5.	BE(Electronics & Electrical)
6.	B. Arch
7.	BBA
8.	BBM & allied specializations
9.	B. Com
10.	IE (Integrated Engineering)

Faculty Strength

Reader	1
Lecturer	13
Sr. Lecturer	3

Number of Student enrolled/registered in different courses

Course	No. of Student
BE Preparatory	6
E MBA	15
MBA	12
B. Arch	13
BE (EC)	27
BE (CS)	6
BE (EE)	7
BBA	28
BBM	5
B.Com	4
IE	30
Total	153

Events

A. Launching of BIT at Ras al Khaimah

Prof. (Dr.) S.K. Mukherjee, VC, Birla Institute of Technology, Ranchi launched the BIT courses and addressed the first intake of students on 3rd September 2006.

Prof. (Dr.) Mukherjee, VC, BIT Ranchi, Dr. Praveen Dhyani, Director BITIC, RAK, Prof. (Dr.) Jose James, Academic Dean, RCAST and Dr. K. Rajagopalan, Dean, RCAST had a short meeting with the locally recruited faculty team.

B. Seminars conducted

1. Dr. Praveen Dhyani spoke on "Higher Education in UAE : Emerging Trends and Scope" in Abu Dhabi, UAE on the 24th of November 2005.
2. Dr. Praveen Dhyani spoke on "Higher Education : Emerging Trends and Scope", a seminar conducted at Ras al Khaimah Indian association and subsequently at Fujairah Indian High School, Fujairah, UAE.
3. A workshop on "Time Management" for the teachers was conducted by Dr. Praveen Dhyani at The Gulf Asian School, Sharjah, UAE on April 13th 2006.

C. Guest lectures and discussions

- a. Mr. Srikanth, Manager, HAK Bank gave a lecture on "Corporate Banking" on 5th January 2006.
- b. Prof. (Dr.) Sharad Sarin, Ex Dean XLRI visited BIT IC on 25th April 2006 and lectured the MBA students on 'Globalization' and the BBA students on 'Management'.
- c. Mr. Balram, senior consultant, Bank of Baroda, visited the BIT IC on 2nd May 2006 and lectured the MBA students on "Quality Management"

D. Quizzes, debates and Literary competitions

Students conducted various quizzes, debates, elocution and literary competitions during the academic year 2005-2006.

ROYAL UTSAV was held on 26th and 28th of November 2005

The literary competitions were held on the 26th and the cultural competitions on 28th. The cultural competitions concentrated on light music, western music, Folk, classical and western dance, whereas the Literary competitions concentrated on poetry, essay writing, elocution, paper collage and face painting. The Royal Utsav came out to be a great success. The students with promising skills were exposed and were sent for inter collegiate competitions.

E. Entertainment programs and celebrations

- * Irrespective of any barrier, all the students celebrated important festivals during the academic year 2005-06.
- * Onam was celebrated with all its grandeur. The students took part in a floral design competition. The best design was rewarded
- * Diwali was celebrated with a grand celebration and cultural programs organized by the students.
- * An Iftar party was hosted by RCAST. The prominent people of Ras Al Khaimah attended the party.
- * X mas was celebrated with great zeal. The students presented choir songs and decorated the Xmas Tree.
- * On March 17 2006, the UEI group organized a Fest. The BIT IC Students showcased excellent performance in the UEI Fest. Students who excelled in the competitions organized within the campus were honored with certificates and medals.
- * On 17th March 2006, Dr. Praveen Dhyani released 'Reflections' the first Newsletter of RCAST.

F. Participation in Inter collegiate competitions

- * Students participated in the Spring Fiesta organized by American College of Dubai during April 2006
- * Three students from BIT IC took part in a Quiz competition on 13th April 2006 organized for the students of UAE. Our students ranked 5th in the region.
- * Students also participated in COLOURS - a cultural event organized by Knowledge Village Dubai during the month of April 2006.

MUSCAT

Waljat Colleges of Applied Sciences (WCAS) founded by H.E. Dr. Omar bin Abdul Muniem Al Zawawi in 2001, is a pioneering institution of technical education and research and occupies a pride of place among the technical colleges in the Sultanate of Oman. The college has been successful ever since its inception and the total number of students at the college have increased from 57 in 2001 to 1062 now.

The college has expanded its facilities by building a new four-storied teaching block that will have facilities for 40 classrooms, a state-of-the-art library, computer lab, staff rooms, and offices for administrative staff and facilities for disabled students.

Apart from the new teaching block, a multipurpose seminar hall, featuring the latest public address and audiovisual system with a capacity of 350 participants, is also being constructed. Adjacent to the seminar hall, a spacious canteen with common room facility has come up.

Located at Rusayl, in the upcoming premises of Knowledge Oasis Muscat, WCAS attracts students from all over Oman and also from neighbouring countries.

All the facilities provided by Waljat Colleges, are as per the norms laid down by the criteria for Private Colleges recommended by the Ministry of Higher Education.

Degree/Diploma Offered

Bachelor s Degree (3 Years)

1. Bachelor of Computer Applications
2. Bachelor of Business Administration

Bachelor s Degree (4 Years)

3. Bachelor of Engineering (BE) Computer Science
4. Bachelor of Engineering (BE) - Electronics & Communication
5. Bachelor of Engineering (BE) - Biotechnology
6. BBA & Accountancy
7. BBA & Banking
8. BBA & Human Resource Development
9. BBA & Commerce
10. BBA & Information Technology
11. BBA & Finance

Diploma (2 Years)

12. Business Administration
13. Computer Applications
14. Computer Engineering
15. Electronics & Communication Technology

Advance Diploma (3 Years)

- 16. Computer Engineering
- 17. Electronics & Communication Technology

Masters Degree Programmes (2 Years)

- 18. Masters in Business Administration
- 19. Executive MBA

Doctoral Programme

Two candidates have been enrolled in the Ph.D programme in Management.

Apart from the above, one year Foundation Programme is conducted for weak students in each of the above disciplines.

Faculty Position

Professor - 1	Assoc. Professor - 1	Reader - 1
Sr. Lecturer - 2	Lecturer - 25	Assoc. Lecturer - 6

UNIVERSITY POLYTECHNIC

UNIVERSITY POLYTECHNIC

1. Year 2005-2006 was marked by solidity in maintaining programmes and schedules.

The second batch 2002-2005 comprising of Automobile Engineering - 19, Electronics Engineering - 28, Computer Science - 18, and Manufacturing Engineering - 6 passed out in 2005. The students received their diploma at the last convocation held on 5th Feb. 2006. They received their diploma from Dr. S.K.Mukherjee, Vice-Chancellor, B.I.T. Mesra, Ranchi. His Excellency Governor Syed Sibti Razi, Governor of Jharkhand presided over the ceremony.

The third batch 2003-2006 results have been declared in 2006. This report however, confirms to the records of the second batch.

The second batch 2002-2005 was made up of 4 disciplines (i) Automobile Engineering (ii) Electronics Engineering (iii) Computer Science (iv) Manufacturing Engineering. Each discipline falls under separate departments.

The details of the students registered as in Spring 2006 is given in Item No. 2 of the report.

A new discipline - B.Sc. in Medical Lab. Technology began in 2006. The first batch comprises of 37 students.

All the students reside in hostels. There are girls and boys hostels. The students need for proper accommodation and good health is well looked after. Students are expected to stay maintaining an expected standard. Hostel committees are set to tackle any unsavoury incident.

The introduction would be incomplete if the achievements of the batch 2002-2005 were not stated. Particularly regarding their placement after the 3 years they studied for the diploma in their respective disciplines. 28 students opted for job. Company wise placement details are given in Item No. 5 of the report.

The students actively participate in sports. University Polytechnic has a good array of sportsmen and they have won several prizes. The list is so large that all the winners cannot be put in this report! Some of them are in Item No. 6 of the report.

All around development is emphasized. Various committees have been set up. Training & Placement Cell, Cultural Activities Committee, Sports & Games Committee, Examination Committee, Registration Committee, Creativity Forum and Hostel Committees for girls and boys.

The information pertaining to the Faculty in respect to work with the students and in their own capacity is in Item No 3 & 4 of the report.

2. Students registered at University Polytechnic in SP-2006

Course	Semester	No. of Student
B.Sc Medical Lab. Technology	I	37
Diploma All Branches 2005 batch	II	102
Diploma in Automobile Engineering	III	27
Diploma in Electronics Engineering	III	26
Diploma in Computer Science	III	24
Diploma in Manufacturing Technology	III	25
	Total	241

3. Academic Innovations, Research & Development activities

Automobile Engineering

1. One old unserviceable Maruti 800 Car made operational by the students.
2. Hero Honda CD 100 engine & transmission system cut section made.
3. Chassis of Fiat car made.
4. Old unserviceable generator set made operational.

Electronics Engineering

Department arranged Preliminary Project Seminar of the students to facilitate Project Presentation Techniques to help them rectify their mistakes.

An Industrial visit to Bokaro was arranged for students

Students of the Department were sent for training during vacations.

1. INDAL, Muri.
2. MIMEC Electronics Pvt. Ltd.
3. BSNL Mobile Division.
4. Phillips Service Centre.
5. Adonis Electronics Pvt. Ltd.

Computer Science

Mr. N.K. Singh submitted his Ph. D Thesis.

Mr. Abhay Kumar registered in Ph. D.

An Industrial visit to Bokaro Steel Plant, Bokaro was organised by the department.

Manufacturing Engineering

1. Fabrication of working model of "Weigh Bridge Machine"
2. Fabrication of working model "Belt drive surface grinding machine".
3. Fabrication of water tank for flow visualization.
4. Development of Blunt fin, Rimp, Cowl for Aerodynamic Lab.
5. Fabrication of Jigs & Fixture for making side minor role for the project entitled - "Effect of low temperature on mechanical properties of composites under A.R. and D.B. Project."
6. Fabrication of fixture for shear testing, composite testing and flexural testing.
7. Rakesh attended a course on CAD/CAM & ROBOTICS.

4. Training & Placement Cell

Students were sent for Vocational Training to :

1. Tata Tinplate Co. of India Ltd., Jamshedpur.
2. Usha Martin Industries Ltd., Namkum.

3. Maruti Udyog Ltd., Gurgaon.
4. Mimec Electronics Pvt. Ltd., Namkum.
5. INDAL, Muri
6. Tata Iron & Steel Co. Ltd., Jamshedpur
7. Heavy Engineering Corpr., Ranchi.
8. Basudeb Auto Ltd., Ranchi.
9. Adonis Electronics Pvt. Ltd., Ranchi.
10. Phillips Service Centre, Ranchi
11. B.S.N.L., Mobile Division, Ranchi.

Students were sent for Industrial Visits :

1. Schenck Process Pvt. Ltd., Ranchi
2. Premsons Motor Udyog Pvt. Ltd., Ranchi
3. H.E.C., Ranchi
4. Bokaro Steel Ltd., Bokaro.
5. MECON, Ranchi
6. TELCO, Jamshedpur.
7. TISCO, Jamshedpur.
8. Basudeb Auto Ltd., Ranchi.

An Interactive lecture was organized for the students

“Communication Skill & Personality Development” by Dr. P. K. David, B.I.T. Mesra, Ranchi.

Placement for the Batch 2002-2005

In 2002-2005 batch, 71 students were awarded diploma. 28 students opted for job. The company-wise placement details are as follows :

Sl.No.	Company	Students were placed
1.	Hero Honda Motors Ltd., Ranchi	11
2.	Schenk Process Pvt. Ltd., Ranchi	03
3.	Adonis Electronics Pvt. Ltd., Ranchi	05
4.	Miki Wire Works Pvt. Ltd., Ranchi	03
5.	CMC, Ranchi	02
6.	B.I.T. Mesra, Ranchi	04
Total		28

5. Sports & Games

The University Polytechnic is committed to impart quality with co-curricular and extra-curricular activities.

Students have fared exceptionally well in the year 2005-2006. Here are some of the highlights :

20th Annual Athletic Meet 2005-2006

- * Overall Women Championship to University Polytechnic
- * Individual Women Championship - Sunita Kujur
- * Some players represented the football team of B.I.T., Mesra Ranchi in a tournament held in ISM, Dhanbad. The team secured second place.

CENTRAL LIBRARY

CENTRAL LIBRARY

Introduction

The Central Library is one of the important central facilities of the institute. The library resources stand at about 1,11,710 volumes including books, back volumes of periodicals, standards, conference proceedings & non book materials such as CD -ROMS, audio video tapes, microfiche & microfilms. The library collection includes a large number of reference book, text book collection catering to the courses running in the institute& a book bank earmarked for the SC/ST students.

The Library serves the academic needs of about 8000 UG & PG students, nearly 400 faculty members and about 1100 technical & administrative support staff of our institute.

The Central Library being a member of AICTE INDEST consortium provides online access to IEEE/IEL ,ASCE, ASME journals, while several online journals are made available through UGC Infonet scheme.

All operations of the Library are automated with the help of an integrated software package LIBSys. The database for the entire collection has been created & is available through an On Line Access Catalogue (OPAC) to the users. Very soon this facility will be available to the users through Institute Intranet. Provision is being made for bar coded library cards also.

The working hours of the library

Monday to Friday 8:00 am to 8:00 pm

Saturday 8:00 am to 4:00 pm

Sunday 9:00 am to 1:00 pm

New Procurements

Online Journals

The University through INDEST consortium has continued the online subscription of following IEEE/IEL journals. By this more than 4000 publications which include conference, proceedings and standards are available online. ASCE (American Society of Civil Engineers) journals numbering 29 and ASME (American Society of Mechanical Engineers) journals numbering 18 were subscribed bringing the total number of on line journals subscription to 169.

The following online journals are available with access for full text

- * IEEE/IEL
- * ASCE
- * ASME

Journals available through UGC Infonet scheme

Kluwer Online and Springer Verlag	(1188 Journals)
Institute of Physics	(52 Journals)
American Institute of Physics	(9 Journals)
Taylor and Francis	(1197 Journals)
Annul Reviews	(40 Journals)
Project Muse	(354 Journals)
Cambridge University Press	(220 Journals)
Astrophysics Database (Full Text)	(42 Journals)
Astrophysics Database (Abstracts)	(3600 Journals)

Journals added during this year

Biomed	(199 Journals)
Blackwell Synergy	(800 Journals)
Oxford University Press	(193 Journals)
Nature	(37 Journals)
Project Euclid	(24 Journals)
American Physical Society	(11 Journals)
American Chemical Society	(31 Journals)
Indian Academy of Science	(11 Journals)
Portland press	(8 Journals)
Royal Society of Chemistry	(23 Journals)
Full Text	4608
Abstracts	3600
Total	8208

Facilities

Automation

The library has been computerized using **LIBSYS** Software. Acquisition and Circulation activities have been computerized. The books have bar coded accession numbers. Laser scanners are used for scanning the bar codes. The bar coding of membership is under progress. The readers can search for availability of books using the OPAC module. Search can be done by either title, author, subject, keywords or publisher.

Internet Facility

512 kbps DAMA VSAT connectivity has been installed in the library in the month of March 2004 for the sole purpose of using online resources. This has been provided by ERNET India under the UGC INFONET scheme of UGC.

Online IEL library

The university joined the INDEST consortium under MHRD of Central Government. Under the scheme the university subscribed for five user (parallel) online IEL library and hard copy of all society publications of IEEE. By this more than 4000 (four thousand) IEEE/IEL publications are available online. Conference proceedings and other publications are also available since 1950. The online library contains publications of IEEE USA and IEE UK. The online library is equipped with latest PCs facility for downloading on to CDs and laser printers.

CD-ROM Database Search Services :

IPA (International Pharmaceutical Abstracts)

IEEE (The Institute of Electrical and Electronics Engineers)

IMID (Institute of Management International Databases)

Total CDs available 996

Online resources from INFLIBNET

The university has been receiving online access under INFLIBNET of UGC. The resource from INFLIBNET covers basic sciences and management topics

Text Books

A student can borrow one Text Books for one day. Text books may be borrowed on all working days. A fine of Rs.1.00 per book per day is charged after the due date is over.

Inter Library Loan

BIT Library is a member of DELNET. There are more than 700 institutions covered under this network. Books, photocopies of articles can be borrowed/ supplied from any of these member libraries.

Photocopying Facility

The library has two photocopying machines to cater to the photocopying requirements of Students and Faculty.

Reading Room

The library has two large reading rooms total an area of 6500sft at ground floor and first floor levels. In addition reading room facility is also available in the text book and reference book sections.

TRAINING & PLACEMENT DIVISION

TRAINING & PLACEMENT DIVISION

The Vision of the Training & Placement Division is to be a nationally recognized and leading career services department, committed towards fulfilling the career aspirations of BIT student community as well as matching them appropriately with the needs of the Industry.

It informs students about career opportunities, current trends in the job market and evolving paradigm of the workplace, initiates and nurture contacts with the Industry covering the wider landscape of Industry-Academia interactions. It also supports students in the exploration, identification, pursuit, and integration of professional career goals through organising competency development programmes.

The Department offers centralized services in Mesra, plus services in each of the extension centres, to meet the diverse needs of the BIT student population.

Relationships with several leading organizations have grown over the years and have matured into areas beyond just the recruitment visits.

The Summer Internship Selections are initiated in January and the Campus Recruitment Programme is initiated in the last week of July every year when the undergraduate (BE) students have finished their 6th Semester.

Recruiters from different parts of the country visit the campus during this period and the Department facilitates the smooth conduct of the placement process. Campus recruitments have been very consistent and most of the companies visit year after year which reflects on the strengths of the students, both on academic as well as overall development.

A team of Student Placement Coordinators ensures the involvement of the student community towards the working of the T&P Office.

During the year 2005-06 the Training & Placement office initiated 2 major activities, first being the launch of the unique 'Mentorship Programme' through which senior alumni placed across the globe volunteered to become mentors for the 2nd/3rd year BE students and were connected 'online'. This programme became a huge success with the students and the participation of our alumni was indeed overwhelming. The other new addition was the launch of a 'Competency Development Programme' which aims at improving the 'Soft skills' of the students. More than 250 students participated in this programme and given the response, the Division intends to upscale this in the coming year.

Campus Placements touched a new high with more than 55 organisations visiting the campus and making 873 offers. Campus Placement activities were organised centrally at BIT Mesra as well as at the Noida & Jaipur Extension Centres. Approx 50 students got more than one offers.

Company Placements

Sl.No.	Company	Placed
1	Avaya Global Connect	3
2	Tata Motors	23

Sl.No.	Company	Placed
3	Telcon	2
4	Freescale	2
5	Oracle	13
6	Tata Consultancy Services (TCS)	204
7	CTS	82
8	Tata Steel	6
9	Wipro	35
10	Infosys	18
11	Satyam	42
12	Birlasoft	68
13	HCL Tech	4
14	Eicher	1
15	Mindtree	7
16	RIL	4
17	Amdocs	13
18	UTI TECH Services	6
19	Vedanta	1
20	CSC	14
21	Cummins	5
22	Induslogic	9
23	Zensar	19
24	Samtel	2
25	Flextronics	7
26	NEI	6
27	Accenture	17
28	Tata Ryerson	3
29	Aztec	12
30	L&T	3
31	HP	13
32	L&T ECC	1
33	Hero Honda	4

Sl.No.	Company	Placed
34	ITC Paperboard	3
35	JUSCO	3
36	BAXTER	5
37	LG	4
38	HCL INFOSYSTEMS	1
39	HCL Tech	1
40	Genom	35
41	Ispat	5
43	ICICI	31
44	Tavant Technologies	3
45	Star Paper Mills	1
46	HDFC	6
47	AVTEC	4
48	HCL Infosystems(2nd Visit)	4
49	CTS II	49
50	JSW Steel	3
51	UTI Bank	15
52	IDBI Bank	7
53	Genom Biotech	26
54	Reliance Infocomm	7
55	Iron	2
56	Visa Steel	2
57	Rameshwaram Constructions	5

Stream	Discipline/Branch	Placed
BE	Comp Sc	115
	Electronics & Comm.	121
	Electrical & Electronics	46
	IT	20
	Mechanical	91
	Production	18
	Polymer	5
	Civil	16
MCA	Computer Applications	176
M. Sc.	MIS	5
	MIT	11
M Tech	Computer Science	14
	Scientific Computing	2
	Remote Sensing	2
	Fuels & Combustion	
	Environmental Science & Engg.	
MBA	MBA	95
ME	Electronics	12
	Electrical & Electronics	7
	Mechanical	2
	Software Engg.	2
	Space Engg. & Rocketry	1
B. Pharm		20
BCA		49

STUDENTS CULTURAL ACTIVITIES

STUDENTS CULTURAL ACTIVITIES

1. The Annual Cultural Festival of the Institute, BITOTSAV 2006, was organised from 12th to 15th February 2006. The programme began with a Kavi Sammelan, "Kavyanjali". After that, came the Dance Nite (Thirkan), Music Nite (Malhar) and Core Nite (Core-Kshetra) respectively. There was active participation by students from extension centres also, and the whole festival was a well blended combination of both Technical and Cultural type of events.
2. The Annual Management Fest; SAMAGAM 2006, was organised from 24th to 26th February 2006. A Cultural programme was also organised by the Management students on 25th Feb during the Fest.
3. Achievements in the SPRING FEST of IIT Kharagpur held in January 2006 :
4. Music Competition (Eastern, Solo) : Sohini Roy Choudhary : IInd Position
5. Music Competition (Eastern, Group) : Sohini Roy Choudhary and Kaushik Sinha : IIIrd Position
6. Antarakshari Competition : Saurav Bhowmik and Sohini Roy Chowdhary : IInd Position
7. "BIT IDOL", a Music Competition, was organised by the Music Club on 1st October 2005 where Awadesh, a student of BIT Lalpur got the First position.
8. IEE Club organised technIEEK 2005, a grand Technical Fest in October 05 where more than 400 students from 5 different colleges actively participated. Mr. Saundaryarajan V. (Manager, Eastern Regional Office, National Stock Exchange, Kolkata) gave a guest lecture in the same.
9. Dance Club students participated in an intercollege programme at Governor House on 27th January 06.
10. "THE LAUGHTER CHALLENGE" was organised by the Dramatic Society on 26th October 2005.
11. A Parasailing Event was organised by the Highlanders Adventure Club (HAC) in October 2005. Around 150 students participated in the same.
12. Rotract Club organised FUGIYA 2005 on 25th September 2005 with the help of other clubs. "GAME ZONE" a fun extravaganza was also organised by the same at CAT during technIEEK 2005.
13. IEEE Club organised an event, SPARDHA 05 during 23rd - 24th September 05. This was an endeavor to sharpen the Technical and Analytical skills of BIT s students.
14. UNESCO Club organised a Technical Debate, TECH DICTUM during technIEEK 05. It also organised a GD KING and GD QUEEN Competition.
15. LEO Club organised a Personality Development Programme in August 05 with the help of Training and Placement Department of BIT Mesra. It also organised a Blood Donation Camp on 1st October 05 at BIT Dispensary. "Deepotsav"; a Diwali celebration programme, was also organised by the same.

16. SHIKDHOOM 2005 (Antarakshari) was organised where dignitaries of LIONS INTERNATIONAL CLUB had also participated.
17. HAM Club (Radio Amateur Club) organised a seminar on topic - "Amateur Radio (HAM): Past, Present and Future". The founder Director of Amateur Radio Society (Hydrabad), Mr. S. Suri, was the Honorable Chief Guest in the seminar.
18. Music Club and Dance Club organised Cultural events during FUGIYA 05.
19. Major Activities of NSS during the year : Tree Plantation Campaign (29th July to 6th August 05), Health Camp (2nd September 05), Blood Donation Camp organised by Appolo Hospital (1st October 05), Youth Week Celebration (12th to 18th January 2006), etc.
20. The Annual Body Building Competition, "The Champion of Champions", was organised on 21st September 05 where Rahul Gaurav of 2K4 batch was declared as Mr. BIT 05.
21. Mechanical Engineering Society (MESOC) organised a technical episode "YANTRIKI" on 4th October 2005.

ANNEXURE

MEMBERS OF THE GENERAL COUNCIL

Shri G. P. Birla	-	Chairman
Shri C.K. Birla	-	Founder Member
Shri S.L. Bhattar	-	Founder Member
Shri G.L. Bansal	-	Founder Member
Dr. A.K. Chatterjee	-	Founder Member
Shri Sarosh Ghandy	-	Founder Member
H.E. 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	-	Life Member
Shri Mohammed Yousif Jalal	-	Life Member
H.E. Dr. Omar bin Abdul Muniem Al-Zawawi, OSQ, WO	-	Life Member
Shri R. D. Sahay	-	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. Mridula Sinha, 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

MEMBERS OF THE BOARD OF GOVERNORS

Sri G. P. Birla :	-	Chairman
Sri C. K. Birla	-	Vice Chairman
Shri R. D. Sahay	-	Nominee of the 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 Technology Education
Ms. Mridula Sinha I.A.S.	-	Commissioner-cum-Secretary, Dept. of Science & Technology, Government of Jharkhand
Shri Sukhdeo Singh I.A.S.	-	Commissioner - cum - Secretary, Higher Education Government of Jharkhand
Shri R. S. Poddar I.A.S.	-	Commissioner, South Chhotanagpur, Jharkhand
Dr. Anil Wilson	-	Nominee of the Chancellor
Shri Deepak Chatterjee	-	Nominee of the Hindusthan Charity Trust
Dr. H. C. Pande	-	Nominee of the Hindusthan 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
Prof. S. K. Mukherjee	-	Vice Chancellor, B.I.T., Mesra
Dr.(Mrs.) M. Mukherjee	-	Teacher's Representative, B.I.T., Mesra
Shri Ramesh Chandra	-	Teacher's Representative, B.I.T., Mesra

MEMBERS OF THE 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	-	Honorary Treasurer, BIT Mesra
Prof. S.K. Mukherjee	-	Vice Chancellor, BIT Mesra , Ranchi

MEMBERS OF THE BUILDING & WORKS COMMITTEE

Chairman

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

Members

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

Treasurer, BIT, Mesra, Ranchi : Shri S. S. Jajodia

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

Representative of the State PWD : Nomination Awaited

Head, Department of Civil Engineering : Dr. K. V. Krishnamurthy

Member-Secretary

Registrar : Dr. K. V. Krishnamurthy

MEMBERS OF THE TECHNICAL COUNCIL

Chairman

Vice-Chancellor, : Prof. S.K. Mukherjee
BIT Mesra, Ranchi (Ex. Officio)

Members :

Chancellor s Nomminees : Shri Siddhi Nath Singh
: Dr. Madhukar S. Bhat
: Dr. Krishna Kumar
Director of Higher Education : Dr. K. K. Srivastava, Government of Jharkhand
(Ex. Offico)

Agrawal Dr. A.M.	Konar Dr. Swapan Kr.	Prasad Dr. J.K.
Barhai Dr. P.K.	Krishnamurty Dr. K. V.	Prasad Dr. R.C.
Bhatnagar Prof. S.P.	Kumar Dr. S.	Ray Prof. A.K.
Chatterjee Dr. A.K.	Kumar Prof. R. Sukesh	Roy Prof. B. P.
Das Dr. B.N.	Mahanti Dr. N.C.	Roy Dr. J.S.
Ghorai Dr. S.K.	Misra Dr. Ashok	Roychowdhury Prof. K. R.
Goel Prof. S.C.	Mukherjee Dr. (Mrs.) Mandira	Sahoo Dr. G.
Gupta (Mrs.) Nisha	Narayan Dr. R.K.	Sasmal Dr. D.
Jain Dr. S.K.	Nathawat Dr. M.S.	Sengupta Prof. S.
Jairath Dr. D.	Pal Dr. D.	Singh Prof. R.P.
Jha Dr.(Mrs.) Usha	Panpalia Dr. G.M.	Sinha Dr. A.N.
Joshi Dr. P.C.	Patel Dr. Nilanchal	Srivastava Dr. A.K.
Karan Dr. B.M.	Pathak Dr. Gopal	Varma Dr. Mohan
Khare Dr. Ajay	Prasad Prof. C.M.	Verma Dr. P.R.P.
		Vidyarthi Dr. A.S.

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

Academic Coordination	:	Dr. D. Sasmal
Academic Infrastructure	:	Dr. (Mrs.) Usha Jha
Admissions	:	Dr. D. Jairath
Development Programme	:	Dr. (Mrs.) M. Mukherjee
Doctoral Research	:	Dr. Ashok Misra
Extension Centres	:	Dr. A. M. Agarwal
Faculty Development	:	Dr. A. K. Chatterjee
Finance	:	Dr. P. C. Joshi
Post-Graduate Studies	:	Dr. Mohan Varma
Sponsored & Collaborative Research	:	Dr. P. K. Barhai
Students Welfare	:	Dr. Gopal Pathak
Under-Graduate Studies	:	Prof. C. M. Prasad

ASSOCIATE DEANS

Women Affairs	:	Mr. M. Chakraborty
Boys Affairs	:	Dr. A. K. Sinha

DEPARTMENTAL HEADS/ IN CHARGE

Architecture	:	Dr. Ajay Khare*
Applied Chemistry	:	Dr. (Mrs.) Usha Jha
Applied Mathematics	:	Dr. N. C. Mahanti
Applied Mechanics	:	Prof.. A. K. Ray
Applied Physics	:	Dr. P. K. Barhai

Bio-Medical Instrumentation	:	Prof. B. N. Das*
Bio-Technology	:	Dr. A. S. Vidyarthi*
Civil Engineering	:	Dr. K. V. Krishnamurthy
Computer Science & Engineering	:	Dr. G. Sahoo*
Electronics & Communication Engineering	:	Prof. R. Sukesh Kumar
Electrical & Electronics Engineering	:	Prof. D. Bhagat
Environmental Engineering & Science	:	Dr. Gopal Pathak
Hotel Management & Catering Technology	:	Dr. S. K. Mukherjee
Information Science	:	Dr. N. C. Mahanti*
Management	:	Dr. S. K. Mukherjee
Mechanical Engineering	:	Dr. Ashok Misra
Polymer Sciences Engineering	:	Dr. (Mrs.) M. Mukherjee
Production Engineering	:	Dr. S. Kumar
Pharmaceutical Sciences	:	Dr. D. Sasmal
Physical Education & Sports	:	Dr. Gopal Pathak*
Remote Sensing	:	Dr. M. S. Nathawat
Space Engineering & Rocketry	:	Dr. A. K. Chatterjee
Controller of Examination	:	Dr. S. K. Jain
Additional Registrar (Admn.)	:	Dr. A. K. Jha
Additional Registrar (Fin.)	:	Shri O. P. Bhagaria
Co-coordinator Semester Programme	:	Dr. D. Sasmal
Comptroller	:	Shri M. L. Verma
Chief Accountant	:	Shri G. S. Sharma
Library	:	Dr. (Mrs.) Usha Jha
Chief Medical Officer	:	Dr. Arjun Prasad Singh
Training & Placement	:	Shri B. B. Pant
Cultural Coordinator	:	Prof. Ram Pal Singh

ADVISORS

Planning & Development	:	Prof. P. P. Singh
International Wireless Research Centre	:	Dr. S. C. Goel
Students Projects ECE, IT, CSE	:	Dr. B. M. Karan
Technology Development & Transfer	:	Prof. S. P. Bhatnagar
Students Projects Production, Civil, Polymer	:	Dr. Surendra Kumar
Campus, Planning & Development	:	Prof. S. Sengupta

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. R. P. Bhatnagar |
| 3. Dr. R.K. Dey | 4. Mrs. Sumit Mishra |
| 5. Dr. (Mrs.) M. Mukherjee | 6. Dr. Mohan Verma |

Panel of Experts from outside of the Institute

- | | |
|--|---|
| 1. Dr. M. K. Mishra
Professor & Head
IIT, Mumbai | 2. Dr. M. K. Banerjee
Professor & Head
NIT, Jamshedpur |
| 3. Dr. M.N. Mishra
Professor & Head
ISM, Dhanbad | 4. Dr. C. R. Das
Retd. Professor of Chemistry
Environmental Advisor to
State Govt. of Orissa |

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

Under Graduate Programme

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Professor, University
College of Pharm. Sc.,
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(Formulation) Lupin (Ltd.)
46A/47A, Nande Village |
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Associate Director (Clinical
Pharmacology & Pharmacokinetics)
Ranbaxy, Research Laboratoryes
Udyog Vihar, Plot No. 20, Sector-18,
GURGAON-122001 | 4. Dr. Roop K. Khar
Professor, Hamdard
College Pharmacy,
Jamia Hamdard, Delhi |

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Dept. of Aerpc Engg.
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Integral University Lucknow |
| 3. Dr. U.K. Banerjee
Professor
IIT Khargapur | 4. Mr. A. Kumar (for UG only)
Arch En Design Centre
Lucknow |
| 5. Ar. A.S. Lal (For UG Only)
Alley and Associates, Kolkata | |

Department of Information Science

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

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| 3. Prof. H.K. Singh | |

Panel of Experts from outside the Institute

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Jadavpur University, Kolkata | 2. Prof. A. Mishra
NIT, Jamshedpur |
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Department of Hotel Management & Catering Technology

Chairman - Dr. A.M. Agrawal, Head of Dept.

- Member -
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| 3. Mr. Roshan Prasad | |

Panel of Experts from outside the Institute

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Principal, Institute of
Hotel Management, Mumbai | 2. Dr. B.K. Chakraborty
Ex. Principal, Institute of
Hotel Management, Patna |
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Chairman - Dr. B.N. Das

- Member -
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| 5. Dr. B.N. Sinha | 6. Dr. D. Pal |

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RMCH, Ranchi | 2. Dr. Anil Mishra
BMBHRC, Kolkata |
| 3. Dr. D.N. Tibarewala
RMCH Ranchi | 4. Dr. R.K. Jha
RIMS Ranchi |
| 5. Dr. A.K. Ray
BHU, Varanasi | |

IMPORTANT TELEPHONE NUMBER

S.N.	Name	Department	Phone No.	Fax
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2.	Dr. K. V. Krishnamurthy	Registrar	2276052	
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4.	Prof. Sukesh Kumar	Electronics & Comm.	2276185	
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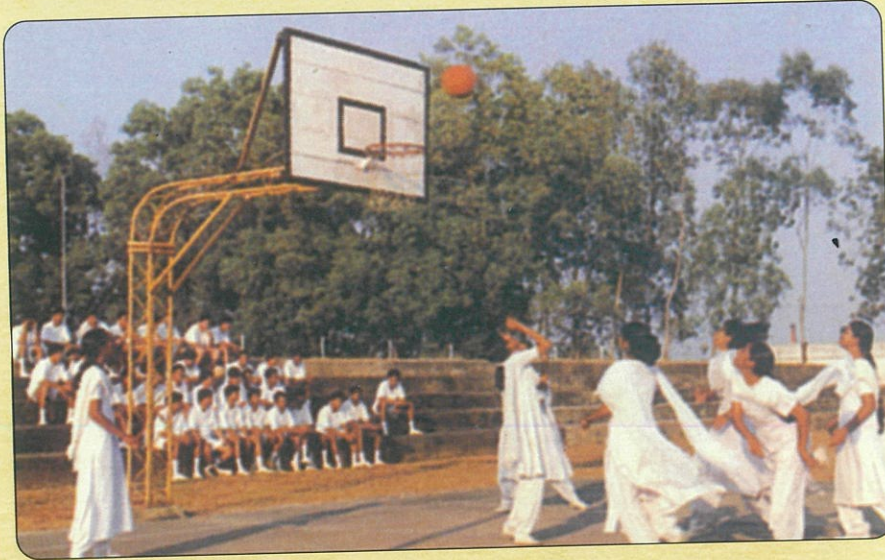
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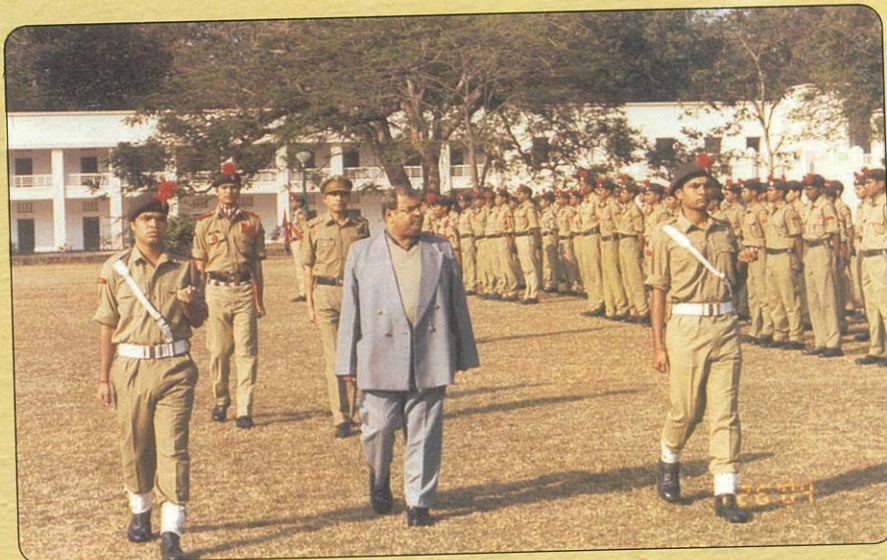
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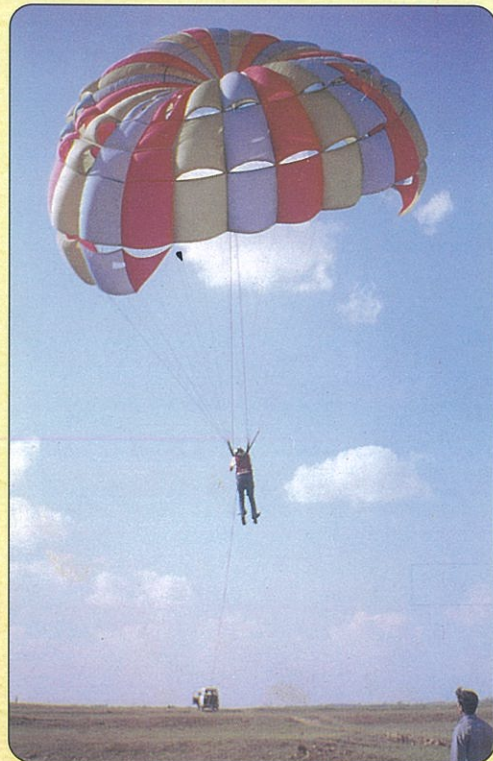
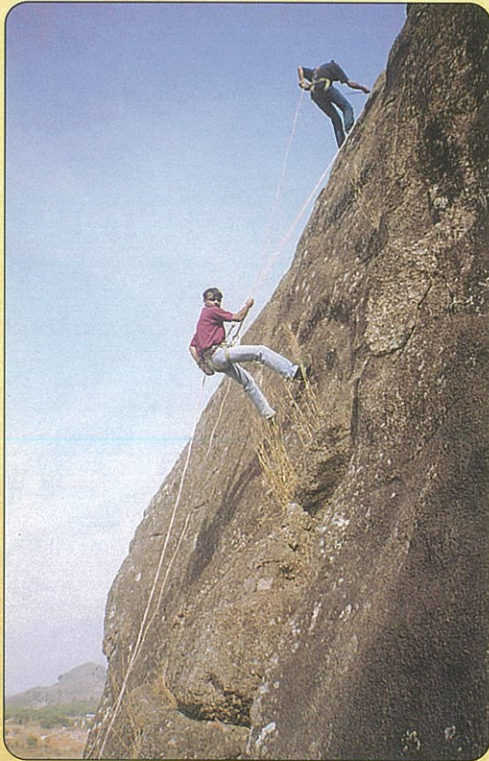


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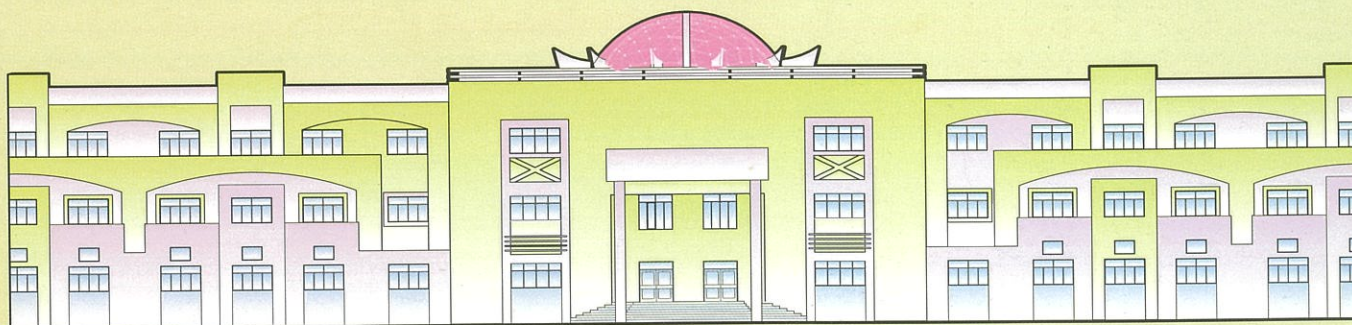
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