



North Eastern Regional Institute of Science & Technology (Deemed University)

Nirjuli (Itanagar), Arunachal Pradesh: 791109
(Under Ministry of Human Resource Development, Govt. of India)

For admission to M. Tech. & Ph.D. (By Research) : 2006 - 2007

Applications are invited from Indian citizens for admission to M. Tech. & Ph.D. (By Research) in the following Departments for the session commencing from January, 2007 as follows:

M. Tech. & Ph.D. (By Research) in Agricultural Engineering, Civil Engineering, Computer Science & Engineering, Electrical Engineering, Electronics & Communication Engineering, Mechanical Engineering and Ph.D. (By Research) in Forestry, Chemistry, Mathematics, Physics & Humanities and Social Sciences.

Minimum Qualification:

M. Tech (By Research): B.Tech. or equivalent with a CGPA 3.25 on a 5.00 point scale or 60% marks aggregate for General Category. 5% marks relaxation is to be given to SC/ST/PH category. The candidate must submit No Objection Certificate from employer, if working. Organization should be located within 50 km of NERIST. No GATE score is required. The admission to the M.Tech. (By Research) Programme will be based on the performance in the written test/and/or interview to be conducted by the Department concerned.

Ph.D. (By Research): Master's Degree in Engineering/Technology or Master's Degree in Science/Humanities or equivalent in relevant discipline with CGPA 3.25 on 5.00 point scale or 60% marks in aggregate for general category. 5% marks relaxation to be given to SC/ST/PH category. No objection Certificate from employer, if working will be required. No GATE score is required. However, candidates have to face the written test and/or interview, conducted by the Department. For Sponsored Part Time (By Research), Sponsoring Certificate from employer is required stating that period of study will be treated as on duty with usual salary/allowances and he/she will be relieved for the period of studies and all fees will be paid by the organization (sponsor). However, candidates have to face the written test and/ or interview, conducted by the Department.

How to apply : Information Brochure and Application form can be obtained either personally from the Office of the Asstt. Registrar (Academic), NERIST, Nirjuli, Arunachal Pradesh – 791109 on cash payment of Rs.500/- or by sending a request along with the Demand Draft of Rs.550/- (non-refundable) in favour of "DIRECTOR, NERIST" payable at State Bank of India, Nirjuli (Code No.9535). Brochure and forms will be issued from 15th January,2007. Detailed Information along with the Application form is available at the Institute Website: <http://www.nerist.ac.in>. The downloaded application form should be sent along with Demand Draft of Rs.500/- as mentioned above to the Assistant Registrar (Academic), NERIST, Nirjuli, Arunachal Pradesh – 791109 latest by 31st January, 2007.

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| • Date of availability of application form | : | 15 th January, 2007 |
| • Last date for submitting completed application form | : | 31 st January, 2007 |
| • Date of written test and/or interview
(Tentative)(for short-listed candidates) | : | 7 th –10 th February, 2007 |
| • Date of declaration of results of successful | : | 15 th February, 2007 |
| • Date of Joining/Registration | : | 28 th February, 2007 |

N.B.: The Institute reserves the right to drop any one of the programmes. Separate application form must be sent for each Department.

Deputy Registrar (Acad.)
No. Acad/M.Tech.-Ph.D/06/17

**Important dates
for admission to
M.Tech. (By Research) and Ph.D. (By Research), 2006-2007**

Date of availability of application form	:	15 th January, 2007
Last date for submitting completed application form	:	31 st January, 2007
Date of written test and/or interview (Tentative)(for short-listed candidates)	:	7 th –10 th February, 2007
Date of declaration of results of successful	:	15 th February, 2007
Date of Joining/Registration	:	28 th February, 2007

I. THE INSTITUTE

The North Eastern Regional Institute of Science and Technology (NERIST) was set up by the Government of India, initially as a project of the North Eastern Council, for providing a system of education to create technical manpower at various levels for the development of the North Eastern region of the country. NERIST came in to existence as a unique Institute of its kind in the country having unconventional and innovative academic programmes. The approach is to encourage a policy for vocationalisation at the 10+2 level and to allow only motivated students to go for the degree level while others go out of the Institute to enrich their profession with some years of industrial experience. From April 1, 1994, the Institute is totally funded and directly controlled by Ministry of Human Resource Development (MHRD), New Delhi. The institute is managed by a Board of Management comprising representatives of the MHRD, Govt. of India, and the eight beneficiary states of the North Eastern region, AICTE and eminent educationists.

The Departments are well equipped with laboratories having sophisticated equipments. The dynamism of the faculty and students is partly reflected by International and National Conferences, Seminars, Short-Term courses and Workshops that are being hosted by the Institute every year. Separate Central Facilities such as ACCF, ET Cell, CRF, Central Library etc. have been established. NERIST has been chosen by the Department of Electronics, Govt. of India for different courses like PCC Hardware etc., and also for "O level courses to the SC/ST candidates of the North Eastern Region. Ministry of Human resource Development, Govt. of India has chosen NERIST for setting up a Community Polytechnic to cater the Polytechnic ideas and views among the local SC/ST people and to develop the villages of this region. There is a Nodal Center (NTMIS) in this Institute to assets the trends in development of the manpower creation.

The Institute is making constant efforts to increase the interaction with the different industries. During the last five years, NERIST undertook sponsored R & D, MODROB and Thrust areas and Consultancy Projects of a total value of around 7.25 crores. 115 projects were sponsored by agencies like, DIT, DST, MHRD, DOE, ICAR, CSIR, Mac Arthur Foundation (UNESCO), GBPIHED, ICFRE, DBT, MOEF, KVIC, MOFPI, etc. 35 consultancy projects have been funded by BSNL, GALAXY Engg., NEEPCO, PWD, etc.

The foundation stone of the Institute was laid by late Giani Zail Singh, the then President of India, on 4th March, 1984 and the first batch of students was admitted to the Base Module in August, 1986. By July, 2006, fifteen batches of graduates with specialization in Agricultural Engineering, Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Electrical Engineering, Mechanical Engineering and Forestry, have come out. **THE NORTH EASTERN REGIONAL INSTITUTE OF SCIENCE AND TECHNOLOGY was notified as a Deemed University on May 31, 2005 by Ministry of Human Resource Development, Govt. of India; the revised MOA was accepted and registered on August 11, 2005; and the functioning as a Deemed University started with effect from December 13, 2005. Full time M. Tech. in Information Technology and M.B.A. have already started from July, 2006. A few more PG programmes are likely to start from next Academic Session.**

II. LOCATION

The Institute is located in a picturesque valley at the foothills of the Eastern Himalayas and is situated at Nirjuli in the Papum Pare district of Arunachal Pradesh, on National Highway 52A between Banderdewa (which is the entry point to Arunachal Pradesh and is 10 km from Nirjuli) and Itanagar. It is about 19 km away from Itanagar, the capital complex of Arunachal Pradesh. Arunachal Pradesh is the land of exotic orchids and lush green hills. It provides an ideal setting for a seat of technical education with a backdrop of quiet and pristine surroundings.

Located at a distance of 400 km from Guwahati, the Institute can be accessed by rail, road or air. Super Deluxe buses to and from Guwahati are available daily. Taxies can also be

hired at Guwahati for coming to the Institute. An overnight train connects Harmuty (the nearest railway station in Assam and is 15 km ahead of NERIST) to Guwahati. Pawan Hans provides a helicopter service 3 days a week. (Monday, Wednesday, and Friday) from Guwahati to Naharlagun (7 kms. from the Institute). Air services are also available from Lilabari Airport (about 47 kms. away from the Institute and 7 kms. away from the North Lakhimpur, Assam).

III. M.Tech (By Research) and Ph.D. (By Research) Programme

1. ADMISSION REQUIREMENT

(a) M.Tech (By Research)

- (i) B.Tech. or equivalent with a CGPA 3.25 on a 5.00 point scale or 60% marks aggregate for General Category. 5% marks relaxation is to be given to SC/ST/PH category.
- (ii) Candidate(s) must submit No Objection Certificate from employer, if working. Organization should be located within 50 km of NERIST. No GATE score required.
- (iii) The admission to the M.Tech.(By Research) Programme will be based on the basis of their performance in the written test and/or interview conducted by the Department concerned.

(b) Ph.D. (By Research)

For Part Time (By Research): Candidates having Master's Degree in Engineering/Technology or Master's Degree in Science/Humanities or equivalent in relevant discipline with CGPA 3.25 on 5.00 point scale or 60% marks in aggregate for general category. 5% marks relaxation is to be given to SC/ST/PH category. The admission to the Ph.D. Programme will be based on the basis of their performance in the written test and/or interview conducted by the Department concerned. No objection Certificate is required from employer for working candidate. No GATE/NET is score required.

For Sponsored, Part Time (By Research): Same as above. Sponsoring Certificate from employer is required stating that period of study will be treated as on duty with usual salary/allowances and he/she will be relieved for the period of studies and all fees will be paid by the organization (sponsor).

2. AREAS OF RESEARCH

Areas of research available in the different departments are given under departmental details.

3. ASSISTANTSHIP/FELLOWSHIP

An M.Tech. (By Research) and Ph.D. (By Research) student irrespective of the source of research Assistantship while pursuing course work must attend at least 75% of classes in each course in which he/she is registered. In case his/her attendance falls below 75% in any course during a month, he/she will not be paid Fellowship/Assistantship if any, for that month. Further, if his/her attendance again falls short of 75% in any course in any subsequent month in that semester, his/her studentship and Fellowship/Assistantship if any, will be terminated. A Research Scholar after having completed the course work must attend to his/her research work on all the working days and mark attendance except when he/she is on

duty/sanctioned leave. The requirement of 75% attendance will apply as above, on daily attendance except in the cases where longer leave has been duly sanctioned within the leave entitlement of the student.

4. **CONCESSION:**

All SC / ST candidates and NERIST faculty/staff members admitted to the M.Tech. (By Research) and Ph.D. (By Research) programmes are entitled to have 50% exemption of tuition fees.

5. **LEAVE**

M.Tech (By Research) : An M.Tech. (By Research) student during his/her stay at the Institute will be entitled to leave for 30 days (including leave on medical grounds), per academic year. He/she will not be entitled to mid-semester breaks, summer and winter vacations. He/she, however, may be permitted to avail of leave only up to 15 days during winter vacation at the end of the first semester.

The leave will be subject to approval of the Head of Department/Centre/Programme Coordinator concerned and a proper leave account of each student shall be maintained by the Department/Center concerned.

An M.Tech. student may be allowed to avail a maximum of 9 days extra leave without Fellowship/Assistantship during his entire stay at the Institute.

Ph.D. (By Research) : **During the Course work** : A full-time Ph.D. student, during his/her stay at the Institute will be entitled to leave for 30 days, including leave on medical grounds, per academic year. He/she will not be entitled to mid semester breaks, summer and winter vacations. He/she, however, may be permitted to avail of leave only up to 15 days during winter vacation at end of the 1st semester. Leave beyond 30 days in an academic year may be granted to a research scholar in exceptional cases subject to following conditions:

- (i) The leave beyond 30 days will be without Fellowship/Assistantship/Scholarship,
- (ii) Such an extension of up to additional 30 days will be granted only once during the programme of the scholar.

The leave may be subject to the approval of Head of the Department/Centre concerned on the recommendation of the supervisor; and a proper leave account of each scholar shall be maintained by the Department/Centre concerned.

After Completing the Course Work: A Ph.D student during his/her stay at the Institute will be entitled to leave for 30 days, per academic year. He/she will not be entitled to mid-semester breaks, summer and winter vacations. In addition, a Ph.D. scholar who has completed his/her course work may be granted leave on medical grounds up to 10 days per academic year.

The woman research scholars will be eligible for Maternity Leave with Fellowship/Assistantship for a period not exceeding 135 days once during the tenure of their award.

6. **FEES & DEPOSITS PAYABLE (Tentative):**

All candidates selected for admission under any of the categories shall be required to pay at the time of joining the tuition and other fees (not-refundable) and refundable Caution Money deposits, as stated below, which is under re-consideration.

Item	M.Tech.	Ph.D
1. Semester Fees (to be paid every semester)		
(a) Institute Fee		
1. Tuition fees	7,500* 3,750**	7,500* 3,750**
2. Examination fees	300	300
3. Regn./Enrolment fees	300	300
4. Gymkhana	100	100
5. Medical fees	50	50
6. Internet & Computer Charges	500	500
7. Transport Charges(campus bus service)	35	35
(b) Hostel fees		
1. Hostel seat Rent	1000	1000
2. Fan ,Electricity charges & Water charges	300	300
Total	10,085* 6,335**	10,085* 6,335**
1. Admission fees	150	150
2. Thesis fees	1,500	3,000
3. Grade card	150	-
4. Provisional Certificate	100	100
5. Students welfare fund	200	200
6. Modernization fees	500	500
7. Identity Card	50	50
8. Benevolent fund	100	100
9. Alumni Fees (By-non members only) (Training & Placement charges Rs.500/- are to be paid in 3rd semester of M.Tech & M.B.A)	1000	1000
Total	3,750	5,100
1. Institute caution deposits	1000	1000
2. Library deposits (@Rs.500/- per Card)	3000	4000
Total	4000	5000
Total fees payable at the time of admission	17,835* 14,085**	20,185* 16,435**

Note: (a) * All SC/ST students will get 50% Tuition fee exemption

(b) ** For NERIST Faculty/Staff only

© Tuition fees are subject to ratifications by the Academic Council.

7. (a) RESIDENTIAL REQUIREMENT

Married M. Tech. and Ph.D. scholar is expected to get a transit accommodation in the Institute to carry out their research work till the work is over and the thesis can be submitted, subject to availability of qtrs.

Bachelor male scholars will be provided individual room accommodation in the Post Graduate Boys Hostel; while female scholars will be provided in the Girls Hostel.

(b) SEMESTER REGISTRATION

Every scholar either working in the Institute or externally in an Industry after taking withdrawal or otherwise must do the semester registration in July and January of every year as notified and pay the prescribed semester fees.

IV. GENERAL INFORMATION

1. ADMISSION PROCEDURE

Application is to be made on the prescribed form and should be accompanied by

- One recent colour passport size attested photograph of the candidate
- Certificates and documents
- Original form along with Xerox Copies, are to be sent in one cover to the following address:

Assistant Registrar (Academic), NERIST, Nirjuli, Arunachal Pradesh - 791019
Or
Section Officer (Academic), NERIST, Nirjuli, Arunachal Pradesh - 791019

- Xerox Copies without the original form (duly purchased on payment of charges) are liable to be cancelled/rejected

2. WRITTEN TEST AND/OR INTERVIEW

All candidates seeking admission to M. Tech (By Research) and Ph.D. (By Research) will be required to appear before a Board for a Written Test and/or interview. The Board will assess the academic attainment and research experience, if any, of the candidates. In the case of self-supporting candidates the Department can also require them to qualify in written test held by it.

3. CERTIFICATES AND DOCUMENTS

The following certificates in original and one attested true copy of each of them are to be submitted at the time of written test and/ or interview, viz., Mark sheet, Certificate etc. Of all public examination passed, evidence of research experience, if any, be also furnished.

Detailed information with regard to the Departments/Centers and areas of research available in them are given below:

DEPARTMENTS

The Institute offers Degrees in six engineering disciplines and also Certificate & Degree programmes in applied Science (Forestry) streams. The Engineering disciplines are: Agricultural Engineering, Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering and Mechanical Engineering. The Applied Science stream offers programmes in Forestry.

Engineering Departments

1. Department of Agricultural Engineering

The Department of Agricultural Engineering started its B. Tech program in Agricultural Engineering in the year 1986. The department adopts modular pattern of education leading to the degree of B.Tech. in Agricultural Engineering, in three modules viz., Base (in two separate trades of (i) Food Processing and (ii) Tractor Mechanic), Diploma and Degree. Each module provides terminality corresponding to an occupational level and at the same time provides entry to the next higher module finally leading to Degree in Agricultural Engineering.

Agricultural Engineering is an interdisciplinary programme, comprising of specialization like Farm Machinery and Power, Soil and Water conservation Engineering, Irrigation and Drainage Engineering, Dairy and Food Engineering, Post Harvest Technology, Non Conventional Energy Sources and Agricultural Sciences. The primary aim of this Branch is to provide technical know-how to increase agricultural production and productivity through better management of land and water resources, appropriate use of more efficient agricultural machinery, better techniques of post harvest technology and improved methods of processing and preservation of foods. Courses offered are accordingly designed keeping in view of the AICTE and ICAR norms. In addition, there are number of related courses from sister disciplines. These enable students to specialize in their areas of interest.

Laboratory facilities exist for conducting practical classes in all professional subjects. The department has a well-maintained computational laboratory with Internet connection. Some of the laboratories are equipped with state of the art equipments like cut section of tractor, fluidised bed dryer, tray dryer, spectrophotometer, milk analyzer, freeze dryer, tilting flume channel etc.

Students of this discipline get an exposure to industrial training of 50 days during pre-final year. Further they get an opportunity to do research through a project. Students passing out from the Department are employed in Government, Semi- Government organization, NGO, Tea Estates, Tractor and Farm Machinery Industry, Food Processing Industry and teaching and research organizations.

The department provides consultancy and runs sponsored research projects (total 07 nos.) on emerging areas of Agricultural Engineering. Total research project grant received by the department amounts to Rs. 2.0 Crore. The Department plans to start Diploma and B. Tech in Food Technology and PG courses in Soil and Water Conservation Engineering, Process & Food Engineering and Farm Machinery & Power in near future.

Vision of the Department

- 1) To cater to the engineering needs of sustainable food production in the North-Eastern region under safe and protective environment.
- 2) To develop technical manpower in the areas of food processing and value addition for the region
- 3) To develop mechanized farming practices with due consideration to energy reduction, safety and comfort.
- 4) To develop technology for the conservation and management of natural resources of the region.

The projects relate to real problems of the region as well as of industry and also other emerging areas. Some of the recent topics in the fields of application of electronics in agriculture, environmental, remote sensing and GIS application for erosion, hazard assessment, drip emitter hydraulics, energy requirements in agriculture and ergonomics, studies on traditional force of NE region, solar drying of vegetables etc. form an integral part of the curriculum. This helps students to develop their self confidence to present technical matters and become entrepreneurs.

Areas of Research: Irrigation of water management; Watershed management; Stochastic hydrology and optimization techniques; Hydrological modeling; Remote sensing and GIS; Micro irrigation.

2. Department of Civil Engineering

The Department offers courses in Structural Engineering, Soil Mechanics and Foundation Engineering, Environmental Engineering, Transportation Engineering, Surveying, Engineering Drawing and Drafting, Building Science, Town Planning, System's Approach in Civil Engineering, Strength of Materials, Estimation and costing, Plastic Analysis and Design, Design of RCC and Pre-stressed concrete Structures.

Laboratories are well equipped with state-of-the art equipments. The Department has its own Computer Laboratory, which enables the students to work on different modern softwares available, with internet access. Projects are offered to the students keeping in view the requirements of the industry and recent developments in various fields of Civil Engineering.

Some important areas in which projects are offered includes: use of shell structures in footings and foundations, Computer Aided Design (CAD), water and wastewater quality monitoring planning and design, design and analysis of various waste containment systems; mitigation of natural disasters; design of hydraulic structures, geometric design of roadways, structural optimization using non traditional optimization; town and regional planning techniques, etc.

Areas of Research: Limit analysis of foundation structures, Soil-structure interaction; Structural engineering dynamics (Wind & Earthquakes) of structures (Bridges & Buildings), Renewable energy and environment/transportation; Sustainable development and disaster management; Machine foundations, dynamic soil structures interaction; wave propagation.

3. Department of Computer Science and Engineering

The Department of Computer Science and Engineering offers a unique combination of courses and projects that help its students to cope with the recent advancements in the computer and information technology. It offers regular courses like Computer Organization, Data Structures, Application soft wares, Operating Systems, Discrete Mathematics, Digital Electronics, Microprocessors, Data Base Management System, Compiler Design, Data

Communications, Computer Networks, Design and Analysis of Algorithms to name a few of them. Apart from the regular courses a few of the important courses offered are Artificial

Intelligence, VLSI Design, Image Processing, Fault Tolerant Computing, Information Theory, Distributed Processing etc.

The Department has well equipped laboratories with state-of-the art machines. The Systems Laboratory is mainly for working in UNIX environment equipped with servers and terminals. Though, one can also work in DoS and Windows Platforms. Hands on exposure to various programming softwares such as C, C++, FORTRAN etc. and RDBMS softwares like Oracle and SQL are available in this Lab. The students are also given access to INTERNET and E-mail facilities and are encouraged to do Computer Network related projects.

The PC laboratory is well equipped with sophisticated present day computers. The students get exposure to various types of application softwares such as Visual Basic, D-Base, LOTUS, Visual C++, etc. In this lab. basic computer training for the students of all the Departments of NERIST is also given here. Training in various types of Microprocessors and Computer hardware is imparted in Microprocessor kits and hardware related equipment. It also has the facility for training in digital electronics, which is the basis of every computer.

The projects are offered looking into the rapid advancements in the Computer Industry and Information Technology (IT). The students of the Department carry out projects in fields like Computer Networks, Neural Networks, JAVA Implementation, CORBA, COM-DCOM, Cluster Computing in PVM Platform, Website Development, parallel and distributed Processing etc.

The Department holds short-term courses and seminars from time to time to keep the students, faculty members, and people of this region enlightened with the recent developments in the fields of Computers.

The faculty members of the Department are engaged in research work through a number of sponsored and students' projects. At present there are three R&D projects sponsored by MHRD, Govt. of India in various fields of Computer Science. Recently DIT, Govt. of India, has sanctioned a project for security analysis and setting up of a test bed on mobile-ad-hoc networks.

Areas of Research: Computer Networks; algorithms; distributed processing; computer architecture; WDM optical networks; advanced operating systems; high performance computing.

4. Department of Electrical Engineering

The Department of Electrical Engineering came into existence right at the inception of the Institute. The first batch of the graduates passed out in 1992. The courses offered by the Department following the modular pattern are structured in such a way so as (i) to train the Base Module students in the art of finding faults, servicing and maintenance, (ii) to impart enough supervisory and guiding skills to the Diploma Module students, (iii) to provide sound knowledge to the Degree Module students to enable them to analyze, design and lead with innovative ideas in the subject of Electrical Engineering suitable for the current need of modern industries and public sectors.

The Department offers a wide range of courses like Workshop Practice, Repair & Maintenance including Microprocessor and Computer applications in the areas of Electrical Machines and Drives, Power Systems, Control and Instrumentation, Power Electronics, Energy Systems etc.

The Department of Electrical Engineering offers courses in the field of Electrical Machines, Power Systems, Power Electronics Instrumentation, Bio-Medical applications, Control Systems, Electromagnetic Fields, Networks Theory, Reliability and System Engineering. The

support facilities include electrical workshops, maintenance laboratory, machines laboratory, power system laboratory, power electronics laboratory, control systems laboratory and PC laboratory.

Some of the projects undertaken by the students are: Single Phase Load Frequency controller for Micro Hydel Power Plants, Design of robot and Motor Controllers (i8085 based), Neural networks implementation study (in electrical Power systems), Microprocessor Controller vs. Inverter for Motors, Design of Power Transformers. The curriculum provides in depth subject knowledge while seminars and training update the students to state of the art engineering and industrial practices. The students are made conversant with computers and microprocessors.

The Department plans to start four semester P.G. course in Energy Management in near future. The Department also provides consultancy services to industries in the area of Energy Management, Energy Audit, Electrical Hazards and Safety Measures etc.

Currently three projects sponsored by MHRD in the Department are in progress. A well developed departmental computer centre caters to the requirements of the students. The Department has a well equipped computer laboratory along with Internet connectivity. Faculty members and students make use of this facility to carryout their academic & research activities. The Department has guided a number of Ph. D. students and is well known for industry-institute interaction.

Areas of Research: Reliability engineering; SCADA; Power system; Control systems; Biomedical instrumentation; Electrical machines and drives; Power system engineering and High voltage engineering.

5. Department of Electronics and Communication Engineering

The Department of Electronics and Communication Engineering (ECE) offers a wide range of basic electronics, Audio Video Systems, Electronic Instrumentation Theory, Microwave Engineering, Antenna & Radar Engineering, Advanced Microprocessors and peripherals, Telecom Switching, Optical Communication, Computer Communication Networks, BOISDN, ATM, DSP etc. Stress is given on subjects like Advance Microprocessors, Computer Architecture, Data Communication, Optical Communication & DSP, Microwave, Antenna and Radar Engineering. The Department has well equipped laboratories with modern equipment like spectrum analyzers, Radars, DSP equipments, advanced microprocessors, pneumatic control, EPABX & LANs etc. The students get ample exposure to various application softwares e.g., Novel net, Unix, C, C++, EPABX Systems, Digital and Analogue Communication Kits, Pulsed RADAR, Doppler Radar Experiments, Microwave Benches, DSP work stations, etc.

The projects offered encompass the recent advancements in the fields of IT, Microwave, Digital Communication and Semiconductor Physics, e.g. Data & Computer Communication Networks, ATM Switching Fabric, GSM & Radio Networks, Non-linear optics, Coherent Communications, passive and active Micro strip Antenna & Devices, Speech Recognition, Digital Signal Processing and VSNL Design, Data Acquisition Systems etc. The Department of Electronics Engineering has also conducted several workshops, symposiums.

A well developed departmental computer centre caters to the requirements of the students as well as faculty members. The department has 22 nos. of computers, plotter, CD writer, along with Internet connectivity. Most of the project done in B.Tech. level is computer based where the students get exposed to extensive computational skill. Apart from this, students and faculty members of this Department use computer extensively to browse academic materials and literature from Scientific Societies. Networking, Web Page Design, Internet & E-mail related projects, application of neural networks for antenna design, VLSI design; DSP related projects and speech processing are the more computational oriented projects offered in the department apart from some other hardware related projects.

Areas of Research: Mixed and Analog Signal Processing; VLSI; Micro controller based system design; Devices; Mixed Signal VLSI design; Switched capacitor and Data converters; Cellular Mobile Communications, Channel Modeling; Wireless Networks & Security, Image Processing; Biometric Security; Neural Networks & Wavelets and Pattern recognition; Embedded Systems; Information theory & Coding.

6. Department of Mechanical Engineering

The Mechanical Engineering Department offers courses to train the Base Module students in the art of servicing, maintenance and trouble shooting, to impart enough supervisory skills to the Diploma Module students and to provide the Degree Module students with a sound knowledge in the subject of engineering areas suitable for the current need of modern industries. The course curriculum for the Degree Module is at par with that of the premier Institutions of the country. Moreover, laboratories and workshops are fully equipped with advanced imported equipments with numerically controlled machines, viz, FMS, Copier milling machine, wind tunnel, computer linked fluidized bed, vibration and noise control, computer controlled refrigeration and air conditioning equipments etc. Major emphasis is laid on two way traffic of Industry-Institute relationship and regular training and educational tours. For the Degree Module, the projects are offered in the advanced areas of Mechanical Engineering to get the students acquainted with the emerging research areas suitable for the industrial applications. The department plans to start a 4-Semester PG course in CAD and CAM. The Department also provides consultancy services to the industries in the areas of ISO 9000, Total Quality Management (TQM), Zero Defect, Just-in-time and on Condition Monitoring.

Five MHRD sponsored projects (Rs.60 lacks) are currently running in the Department. A Cyclone Refrigerator has been invented by the faculty members and students of the Department. Indian patent application for the same has been filed. The Department is developing a Library and Students' Activity Cell of its own. Active research is going on at Post Graduate and Doctoral levels. Students of this Department have been awarded the prestigious I.N.A.E.(Indian National Academy of Engineering) Award for the best Dissertation/ Project of the year 1999, ISTE Awards in 2002 and 2004. Our students have also bagged a number of prizes in technical paper writing contests all over India. Four ISTE-AICTE, STTP have been organized in the Department during 2002 and 2003.

A well developed departmental computer centre caters to the requirements of the students as well as faculty members. The department has 33 nos. of computers along with Internet connectivity. Faculty members and students make use of this facility to carryout their academic & research activities.

Areas of Research: Holonic manufacturing Systems; Industrial Engineering; Computational Fluid Dynamics and Non-conventional Machining.

7. Department of Forestry

The Department of Forestry since the establishment of NERIST has been developing its infrastructure facilities and imparts good Forestry Education in the form of Certificate and Degree Courses to the students of the North Eastern Region especially.

In Applied Science Stream only one discipline is being offered : Forestry Certificate level in Forestry is at par with 10+2 level vocational courses designed by NCERT. As the candidates move up to higher modules they get exposure to more technical and management aspects of forestry making them suitable for taking up activities related to sustainable management of Forest. Department of Forestry has been engaged in taking interdisciplinary courses for PG programme in Environmental Science and Engineering. A post graduate course in Forest Technology is approved by AICTE and it is under the process of revision to include Environmental Management aspects also.

Laboratories of Forestry are equipped with essential instruments and apparatus for conducting different experiments for practical classes.

Apart from teaching, the members of faculty of Applied Science are also actively involved in conducting research projects funded by various agencies like MHRD, DST, CSIR, Ministry of Environment & Forestry, UNESCO, GBPIHED, ICAR DST etc. The department has also produced so far 4 doctoral theses leading to Ph.D. degrees.

Although Faculty of Applied Science was envisaged to start many programmes, like Horticulture & Plantation crops, soil science etc. the only programme that is being offered under the banner of Applied Science presently is Forestry. Forestry Department is engaged in imparting Forestry education at certificate and Degree levels. This is a professional course with multidisciplinary approach. The course assumes great significance as the North Eastern region harbours a rich biodiversity in its forested land and it is required conserved and utilized sustainably. It is hoped that the forestry courses offered in NERIST will help generate man power with better understanding of conservation aspects of forests and sustainable utilization of forest products.

Apart from a good nursery plot (1 hac.), the Department has indoor facilities like, mist chamber, seed germinator, BOD, portable leaf area meter(Licor), laminar air-flow chamber, rotatory shaker, refrigerated centrifuge, refrigerator, deep freezer, hot air oven, muffle furnace, spectrophotometer, flame photometer, colony counter, autoclave, electronic balance, research microscope (Leica), stereo microscope, wood microtome, circular saw etc. and a good computing facility.

The students are given exposure and training in various forest-based aspects through project work on the ecological problems of north-east India such as, eco-restoration of degraded land, alternative to shifting cultivation, traditional practices of resource utilization, inventory and biodiversity conservation, biological management of soil fertility, good properties variations, wood anatomical changes due to environmental fluctuation and Silviculture treatments, tree physiology, nursery technology, plant pathology, wildlife and entomology. Students completing B.Sc. Course in Forestry are placed in state Civil Services, private concerns and in NGOs engaged in Forestry activities.

The Department has potential faculty members who could mobilize funds from various funding agencies for their research activities in specialized fields. Various projects have been sanctioned to the faculty members e.g. Soil biology and biochemistry in degraded sites, role of microbial biomass in soil fertility management in agro ecosystem (CSIR), Impact of landslides and shifting cultivation on soil (ICFRE); conservation strategies for rudraksh, Biosystematics of Piper species from Arunachal Pradesh, role of bamboos in eco-restoration of degraded lands, Collection of Citrus germplasm from Arunachal Pradesh (DST); Agri-silvi-horticultural system as an alternative to shifting cultivation, biodiversity evaluation and ecological studies of some wild species of pakhui wild life sanctuary (MOEF); tissue culture of medicinally important species (MHRD); Inventory and ecology of biological diversity(Mac-Arthur Foundation). The Department has also received one time grants to strengthen the research facilities (ICFRE) and to establish a botanical garden with special emphasis on conservation of endangered species (MOEF). The Department has a good coordination with the outside agencies like State forest Department, State Forest Research Institute (SFRI), Institute of rain and moist deciduous forest, and State Remote Sensing Centre, G.B. Pant Institute of Himalayan Environment & Development etc.

The faculty members of the Department have earned distinctions, young scientist and other awards and fellowships. Some have served as editorial board members and reviewers of reputed journals. A few faculty members have edited books on various aspects of Forest. The faculty and research scholars have published a number of research articles. Some have attended international conferences in India and abroad.

A well developed departmental computer centre caters to the requirements of the students as well as faculty members. The department has 10 nos. of computers, 01 CD Writer and 05 nos. of Printers (Dot. Matrix, Inkjet & LaserJet) along with Internet/E-mail connectivity.

Faculty members and students make use of this facility to carry out their academic and research activities.

Areas of Research: Biosystematics; Cytogenetics; Aromatics medicinal plants; Forest ecology; Biodiversity conservation; Forest tree regeneration; Wildlife and fish micro-dynamics; Wood Science & technology; Forest products utilization; Forest measurement; Restoration ecology; Shifting agriculture; Organic farming; Natural resource management; Ecological economics; Remote sensing & GIS; Biodiversity informatics; Traditional knowledge systems; Microbial aerobiology; Plant-Microbe interaction,; Soil biotechnology; Crop residue management; Ecosystem management; Wetland ecology; Bioremediation; Plant diversity & taxonomy; Ethno botany medicinal plants; NTFP; Plant ecology; Biodiversity; Ecology & biochemistry of bamboo; Animal behavioral ecology; Wildlife conservation & management; Plant biotechnology; Soil microbiology & microbial molecular ecology.

Science Departments

Apart from the seven degree awarding Departments, the Institute has four supporting Departments, viz, Chemistry, Mathematics, Physics and Humanities and Social Sciences (HSS).

8. Department of Chemistry

The faculty members of the Department of Chemistry are actively pursuing multi-dimensional research works including basic and applied aspects of Chemistry. The major fields of research work are as under:

(I) Inorganic Chemistry: Novel bi-metallic and poly-metallic transition and non-transition metal complexes as low dimensional conductors and quasi 2D material are being characterized by different physicochemical techniques like CHN Analysis, Magnetic, IR, UV, X-ray, NMR ESR etc. The DC and AC electrical behaviour are being studied along with their thermal properties using different experimental techniques like TGA, DTA, and DSC. The kinetic parameters and quantitative aspects of decomposition steps, catalytic activity of intermediate and end product of the decomposition reactions are being studied. The macro cyclic complexes of transition metal complexes are also being studied.

(II) Physical Chemistry: Synthesis of valence compensated perovskite oxides and their electrical, dielectric and magnetic properties are being studied. The removal of heavy metals from different water sources and industrial effluents using organic adsorbents are being carried out.

(III) Organic Chemistry: The organic synthesis work is also being done. A new research area involving selenium catalyzed oxidation of 1,4-Dimethoxyarenes to 1,4-quinones has been developed with reference to the synthesis of Vitamin K₃. A rapid and one flask synthesis of one saturated azlactones and their ready conversion into 2-Oxazolin-5 ones based bio potential products have been investigated maintaining Green Chemistry Methodology.

Six research projects from CSIR, New Delhi, MHRD, Ministry of Environment and Forest, Govt. of India, worth of Rs.42.85 lakhs were successfully completed in the Department. One research project namely 'Properties and characterization of glass ceramics prepared by chemical route' from CSIR New Delhi is currently undergoing in the Department.

Faculty members of this Department have achieved national and international recognition for their valuable research contributions. Some faculty members have visited reputed laboratories abroad under International Academy Exchange Programme (INSA-Polish Academy of Science Exchange Programme) to Poland and Nehru Centenary British fellowship to U.K. The faculty members are actively engaged in research work and have

published their research papers in national and international journals and are members of different Scientific Societies.

The Department has 02 computers and 03 Printers (LaserJet, Dot-matrix and DeskJet) along with Internet/E-mail connectivity. There are three laboratories in the department namely Chemistry Lab-I, Chemistry Lab-II and Chemistry Lab-III, meant for conducting the practical classes of Engineering and Technology and Applied Science students. The laboratories are well equipped with facilities for undertaking the practical classes of different modules. Chemistry Lab-III is developed as an instrumentation laboratory with UV/VIS Spectrophotometer(Perkin-Elmer), differential Scanning calorimeter (DSC-60, Simadzu Japan), LCR meter (Hoikii, Japan) and Magnetic Susceptibility balance.

Areas of Research: Synthetics organic chemistry (Steroidal transformations, Heterocyclic chemistry & amines and amino acids); Synthetic inorganic/organic chemistry (Biomolecules and catalysis); Environmental analytical chemistry; Nuclear & Radiochemistry; Thermal analysis of Inorganic compound; Synthetic mechanistic organ chemistry; Synthetic organic chemistry & natural products; Organ metallic chemistry.

9. Department of Mathematics

The Department of Mathematics came into existence as a full-fledged Department in 1993. Earlier it was under the umbrella of the Physical Science Group since the inception of the Institute in 1986. The department has highly qualified faculty members with a wide variety of specializations with a mix of both pure and applied mathematics. This is a rare combination even in most of the universities of the country. Besides teaching, the faculty members are actively engaged in research. The Department is a member of NBHM, Department of Atomic Energy, Govt. of India, which provides new books and journals free of charge regularly.

The Department is offering the following Twenty (20) core courses and three(03) elective courses spanning over three different modules, viz., Base, Diploma and Degree, in Technology and Forestry.

The Department has highly qualified faculty with a wide variety of specialization like Continuum Mechanics, Gas Dynamics, Number Theory, Complex Analysis, Approximation Theory, Algebra, Projective Geometry, Combinatorics, Graph Theory, Operations Research and Discrete Mathematics in Pure group. This is a rare combination even in most of the Universities in the country. The Department offers eighteen courses on the regular basis and audit/elective courses for the students at different levels (Base, Diploma and Degree) of Engineering and Applied Science streams. Besides teaching, the faculty members are actively involved in research activities and have been publishing papers in both national and international journals and a few of them are reviewers to reputed international journals including Mathematical Review published by American Mathematical Society.

The department has 03 computers and 03 Printers (Dot-matrix, Inkjet & LaserJet) along Internet/E-mail connectivity. The Department has also a Plotter.

Areas of Research: Number theory; Graph theory & combinatorics; Soft computing; Continuum mechanics; Sub-surface flow; Gasdynamics; Magneto hydrodynamics & shock waves; Special functions; Sampling technique; Wavelet transform.

10. Department of Physics

The Department of Physics, fully aware of its role in training students according to their needs in physics education, offers eight core courses for the undergraduate students at different levels (Base, Diploma, and Degree modules) of Engineering and Applied Science Streams. Apart from this, the department has proposed to launch M. Sc. Tech. (Material Science) course for the Postgraduate students.

In addition to teaching, the faculty members are actively involved in research activities and have been publishing research papers in both national and international journals. The field of specialization of physics faculty cover a wide spectrum of theoretical and experimental physics viz. x-ray diffraction, polymer physics, plasma physics, experimental and theoretical nuclear physics, liquid crystal, solid state ionics, electronic filters, mathematical physics, semiconductor physics and superconductivity. Also, some of the faculty members have acted as reviewers of DST and CSIR projects by other scientists for possible funding and Ph. D. thesis adjudicators.

Six sponsored research projects funded by DST, CSIR, and Third World Academy of science (TW AS), Italy, have been completed in the field of liquid crystals and solid state ionics. Currently, Six research projects funded by DST (2), and MHRD (3) and one in-House are under progress.

Two BOYSCAST fellowships of DST, New Delhi and **three** bilateral exchange fellowship of INSA, New Delhi -RSL & INSA- JSPS have been awarded to the faculty members of the department to pursue their collaborative research with scientists abroad. Three Ph. D degrees (two in liquid crystals and one in solid state ionics) have been awarded by NEHU, Shillong to the research students. Currently, two more students are working for their Ph. D. degrees.

LABORATORIES

(a) Teaching Laboratories:

The department conducts the practical classes of all the courses offered in two laboratories. Physics laboratory 1 and Physics laboratory 2

(b) Computer Facility:

The department of Physics has two computers (one IBM and one HP) coupled with printers (LASERJET and a dot matrix printer), one scanner and one CD writer. One PC is connected via LAN for the e-mail and internet browsing.

(c) Research Laboratories:

- (i) Liquid Crystal Research Laboratory,
- (ii) Solid State Ionics Research Laboratory,
- (iii) Solid State Electronic Materials and Devices Laboratory,
- (iv) Material Science Laboratory,
- (v) High Temperature Furnace Facility, **which** can operate up to 1200°C.

The procurement of a high temperature furnace is underway.

In addition to teaching, the faculty members are actively involved in research activities and have been publishing research paper both in National and International Journals. The fields of specialization of Physics faculty cover a wide spectrum of experimental and theoretical Physics, viz, X-ray diffraction, Polymer Physics, Plasma Physics, Experimental & Theoretical Nuclear Physics, Liquid Crystals, Solid State Ionics, Electronic Filters, Quantum Field Theory and Semiconductor Physics. Also, some of the faculty members have acted as Ph. D thesis adjudicators and as reviewers of DST & CSIR projects by other scientists for possible funding.

The department has 02 nos. of computers and 01 Printer (LaserJet) along with Internet/E-mail connectivity.

Areas of Research: Experimental nuclear physics & theoretical plasma physics; X-ray diffraction, Polymer physics; Liquid Crystals; Theoretical Nuclear Physics; Electronic filters; Mathematical physics; Superconductivity; Luminescence Spectroscopy; Laser Spectroscopy

11. Department of Humanities and Social Sciences

The Department of Humanities & Social Sciences (HSS) at presents offers 27 courses in the disciplines: English, Economics, Psychology, and Sociology. The Department has well qualified and experienced faculty members who use innovative teaching methods for the holistic intellectual development of students in all the three modules (Base, Diploma and Degree) of under graduate programmes. In addition to the regular teaching assignments various short-term and need based programmes for executives and teachers are also offered by this Department from time to time. Considering the growing needs of organizations for consultancy, the faculty members of this Department are gearing up to provide consultancy services to various small and medium scale industries in the North Eastern Region.

The Department is well set to launch a P. G. Programme (MBA) from August 5, 2006 to cater to the long pending demand of the people of this region.

The faculty members are also playing an active role in developing case studies/course material which can be used for dissemination of knowledge to executives/students for their academic/professional development. The faculty members of the Department are also maintaining close linkages and leasing with business and other organizations. Further, most of the faculty members of the Department are actively involved in sponsored research projects and so far the Department has completed 07 research projects and 04 more projects are under progress.

The faculty members have published a good number of research papers in reputed Journals. The Department faculty members are also supervising research scholars for their Ph.D. Degrees. Ph. D Degree has been awarded to a research scholar by Rajiv Gandhi University, Arunachal Pradesh, one scholar has submitted his thesis in Dibrugarh University, Assam, for Ph. D. Degree and presently 02 more scholars are registered for their Ph.D. Degrees.

The Department has organized 04 National level seminars/ workshops and 04 ISTE sponsored STTPs. The Department has a well equipped computer laboratory with 05 computers and 03 nos. of Printers (LaserJet & Dot Matrix) along with Internet connectivity. Department has 04 laboratories i.e. Psychology Lab., Communication Lab., Extension Education Lab. And Management Laboratory with modern teaching aids like LCD projection facilities, OHPs, VCR,TV, Management games etc, to strengthen its academic programmes.

Areas of Research: Human Resource/Marketing management; Organizing business; Agricultural, Tribal & Rural development; Co-operative Sector for economic development; Horticulture development; Migration and its impact on Socio-economic development of the region; Planning & development; Indian English fiction & theory; Basic needs planning and approach to economic development; Development economics; Rural economics; Rural & Tribal development; Poverty; Marketing; Rural credit & Finance; Cottage & Small scale industries and Agricultural economics.

Advanced Central Computing Facility (ACCF)

ACCF was established in 1996 with the objectives of promoting research by faculty members and encouraging advanced computer studies and interested students. Today ACCF plays a key role in the field of computer education not only at the Institute but

outside the campus too. The laboratory of ACCF has now 15 computer terminals for use of students and faculty members. The laboratory is provided with Internet and E-mail connections. The computing facility will be extended up to 25 terminals.

Other than scheduled classes of Computer Programming and Computer Aided Design included in NERIST Academic Programmes, the ACCF conducts Software Training as an extension programme. Apart from NERIST students, faculty members and staff, local public, officers and staff of government and private establishments outside NERIST make use of such programmes.

ACCF laboratory is effectively used by all students for their computer based projects. The laboratory has 15 Nos. P4 computers & Color Laser Printer, Digital photo printer, Scanner, LCD Projector, Digital camera and many software (Visual Studio Net, Adobe Collection, Corel Draw, Adobe After effect, 3D Max, Orgin, Shree Lipi, J Builder, Fortran V90 etc.)

The NERIST has state of art laboratories that give it an edge over others in the area of teaching, research and consultancy services and put it in the orbit of 'Centres of Excellence'. It has developed its infrastructure and facilities with utmost care and in a planned manner. With excellent communication facilities like internet, VSAT, E-Mail, Fax, Electronic Library and a highly sophisticated and modern centralized computing facility along with LAN, the Institute is poised to impart technical education at the highest level and can boast of one of the excellent centres of learning in this remote/difficult location.

Educational Technology Cell

Educational Technology Cell (ET Cell) was established as an MHRD project with an objective to improve the teaching learning process. Another objective of the cell is to create a facility to prepare educational resources in the form of study material, video lectures, to cater the needs of the students. The cell has two Seminar Halls equipped with modern facilities like Audio Video Equipments, Digital Camera, LCD projector etc. A studio is under development, which currently takes up the indoor/outdoor recording of Institute functions. Apart from this, ET Cell looks after the Local Area Network (LAN) of the Institute, comprising of 400 nodes spreading various departments and sections. Another 600 nodes are likely to be added in the network within a short period.

Institute LAN is based on Gigabit Ethernet. The LAN is connected to Internet through 2MBPS bandwidth Leased Line from BSNL to provide faster network access. Currently this section has 4 Servers which caters to the connectivity of the campus network. The section has recently procured another two Xeon dual processor high end Servers (Model: HCL 4700 HW), 3.16 GHZ, which are to be installed in the system for providing the better services and security. E.T. Cell is having a broadband section where the Institute family takes the advantage of broadband facility.

The section is providing support to conduct internal and external (State Govt., NGO's etc.) seminars, conferences and short term courses. Departments are using Seminar Halls to conduct classes, which require modern audio video equipments. Training and Placement seminars and Campus Interviews are also being conducted by the T&P Cell in the Seminar Hall. A library is being developed in the section with the books and journals related to Internet/ Networking.

HIGHLIGHTS:

2MBPS (BSNL) leased line & Broadband lines currently working properly. Two Seminar Halls equipped with modern audio & video systems. These equipments are being used for Seminars, Conferences, Workshops and special lectures by faculty members and professionals from various Institutions and Industries.

The cell has been established as a project sponsored by MHRD, with an objective to increase the effectiveness of teaching-learning process with the help of the modern audio-visual equipments. The cell has 15 nos. of Pentium-computer, 01 Laptop and 02 nos. of servers.

Internet & e-mail Section

The Institute is well connected to INTERNET through a permanent VSAT line to ERNET. It provides Internet and e-mail services to all the members. Faculty members and students make use of this facility to carryout their academic & research activities. This section has networked various departments and research labs through its LAN and user can avail above services from terminals available in various labs. Institute has its own domain nerist.ac.in and its web page is hosted by its own server from this section. These act as gateway to international academic world.

Institute Library

The Central Library, with a collection of over 41,000 books and 193 periodicals, subscribes to 49 international, 144 national journals including informative popular magazines. In addition to the above, it subscribes to 12 national and regional dailies to provide a base for enhanced learning. CAPS(Content, Abstracts & Photocopy service of INSDOC), CML (Current Mathematical literature), CCEL(Current Civil Engineering Literature), Research Alert are important supporting services for the readers. NERIST is also the institutional member of Indian Liquid Crystal Society, Bangalore & Kaziranga wild Life Society of Assam to provide literature and information services. The NERIST is the core member of INDEST CONSORTIUM provided by MHRD, Govt. of India through which the Institute is getting online electronic Journals. The Library has procured a full set of standards (BIS Codes) as used by faculty and students; and houses a large number of CD's being used as teaching aids.

The library has 08 nos. of computers, CD Writer & Net Server (E-800series), along with Printers (Laser Jet & Dot Matrix). The library has developed a database for books through CDS/ISIS 3.07 Version and has proposed for library automation in near future. The library is also having Internet & E-mail connectivity. The library has SC/ST book bank, and also Xeroxing facility on payment.

The Faculty

A highly qualified, motivated, young and energetic faculty (consisting of 133 lecturers/Asst. Professors/Professors) from the premier institutes of the country, ably led by the Director, Prof. Kalyan Kumar has helped the Institute to grow into a vibrant seat of education catering to all sections of the society. The very energetic, sincere and hardworking faculty members, officers and dedicated staff are the real strength of the Institute. About 25 more faculty members are likely to join very soon.

Majority of the faculty members are having Post-Graduate degrees/Ph.D. Degrees from abroad, IITs, IISc and other leading institutions of the country. The faculty members have published large number of research papers in the reputed International/National Journals and some of them have received awards for their academic and research activities.

This Institute has carried out several prestigious projects and sponsored research for reputed organizations like DST, CSIR, DoE, ICAR, Ministry of HRD, Environment, Tribal Affairs, Social Justice & Empowerment, Govt. of India and NEC etc. The NERIST would play its spirited and pioneering role to face the challenges in the 21st Century and would continue to give its dedicated services in nation building.

A good number of the faculty members having the experience of guiding Doctoral level programmes are engaged in individual research projects funded by CSIR,DST, ICAR, MHRD, Ministry of Tribal Affairs, Social Justice and Empowerment, Environment and Forestry, Govt. of India, and NEC, Shillong etc. and quite a few have gone abroad on various prestigious fellowships such as BOYSCAST Fellowship, INSA Nehru Centenary Fellowship, SERC Fellowship, Nehru Centenary British Fellowship, BOYSCAST programme to work in overseas laboratories.

The Students

The NERIST students who join this Institute at a tender age are highly disciplined, well behaved, sincere and hardworking. They have also earned lot of laurels for the Institute in India and abroad and are well placed in public and private sectors. NERIST currently has strength of over 1100 UG & PG students. The Institute is fully residential, and to accommodate these students, Institute has eight Hostel Blocks which include four double storied and four single storied hostels. Amongst the four double storied hostels, one is exclusively for girls. A large percentage of students hail from the North Eastern States of the country, viz., Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, but a number of them also come from different parts of the country. NERIST students have made a mark in different spheres of engineering profession and earned a good reputation for NERIST. A good number of NERIST students go for higher studies; viz. M. Tech./MBA in premier institutes like IITs and IIMs and some of them go abroad for higher studies. In GATE'95, a NERIST student of Electronics Engineering Department topped the east zone with GATE score of 99.92 percentile. In 1999-2000, under-graduates qualifying in the GATE were 22 out of 61 who sat for the examination. In other national level competitive examinations such as CAT, XLRI, NERIST students have performed well in past and got selected. NERIST students also actively participate and win prizes in debate & quiz's competitions organized at various national and regional levels.

Gymkhana

The students' gymkhana is the center of co-curricular activities of the students of NERIST. It provides facilities to them for their all round development in the field of sports, culture, hobbies and creativity. Each student pays Rs.350/- per annum towards gymkhana activities. The Institute provides the matching grant of equal amount. All the students' activities are organized by two bodies, namely a) Recreational and Creative Activity Forum (RACAF), b) NERIST Sports Club (NSC), each headed by a secretary who is a student. Each body has various clubs and sub-clubs, which are under the charge of a student member.

All activities are conducted under the control and guidance of the Chairman and a Vice-chairman, Gymkhana who are faculty members. The Gymkhana has a sports Officer to look after the sports activities. The Sports Officer is assisted by other supporting staff.

Recreational and Creative Activity Forum (RACAF)

Gymkhana has variety of musical instruments like tabla, harmonium, dholki, kongo, guitars, key boards etc. and possesses infrastructures like auditorium with adequate screens and curtains, PA system, lights and lighting systems, etc., and other accessories for conducting drama, photography and fine arts. The facilities are upgraded every year.

The RACAF conducts all the creative and cultural activities. During the RACAF meet, competitions on songs, music, dance, drama, debate, quiz, photography, fine art and creative writings are held.

Sports Activity

The Gymkhana has a large play ground for football, cricket and athletics, indoor stadium for badminton and table tennis, and courts for basketball, volleyball and lawn tennis. Students can play indoor games like chess, carom and take part in sports like arm wrestling, boxing, tea-kown-do etc. NERIST has also developed a well equipped multigym facility (16 stations). Separate facilities for badminton, basketball and table tennis are provided in the girls' hostel. Gymkhana Also replenishes the sports items which enable students to conduct and participate in tournaments round the year. Gymkhana organizes various training programmes in different games.

Activities and Achievements

The NERIST sports Club conducts all the major games Hostel Block-wise throughout the year including the Annual Athletics Meet. Apart from these some memorial Trophies are also organized with the help of NSC in football, Basketball & Volleyball.

The NERIST Cricket team reached up to semi-final in the 7th Chetan Devraj Memorial East-Zone Inter Technical Institute/College cricket Tournament organized by BIT Measra, Ranchi (Jharkhand) in January, 2000. The NERIST Football team got the Runners-up trophy in the late Bharam Boruah and Bhadeswar Gogai Memorial football trophy at Nowboicha, North Lakhimpur (Assam) in February, 2000. Apart from the above achievements, NERIST is always winner in all the local tournaments like football, Volleyball, and Cricket etc.

Campus Amenities

The Institute has a Sub Post Office (with Speed Post), a branch of State Bank of India, a Co-operative store, NERIST employees Thrift & Credit Co-operative Society, mini Co-operative supper market, Co-operative medical store, NERIST Health Unit, a police out-post, a Kendriya vidyalaya up to 12th Class and Kinder Garden School for Children. There are also clubs for the ladies, staff and faculty in the campus. There is also canteen for students and staff. The Institute houses a telephone exchange on the campus and has its own EPABX of over 1000 lines; SBI-ATM is coming up shortly in NERIST campus.

There are 08 Hostel Blocks in the campus to accommodate about 1250 boys and 200 girls. The campus is residential with the provision of accommodation for about 75% of its employees.

Training & Placement Cell

Right from its inception in 1991 the Training & Placement Cell has been functioning actively in providing Training, Placement and Career development opportunities to the students and also rendering valuable services in the counseling of students on continuous basis. Besides the above, the Cell now extends its activities in the following areas:

- * Industry-Institute Interaction activities
- * Public Awareness and Relations
- * Entrepreneurship Development Programme
- * Student's Career Counseling
- * Short Term Courses/Workshop to prepare
- * Students for various Interviews

The Cell also organizes industrial training or field training for a period of 50 days at the end of the pre-final year during summer vacation, which is a compulsory requirement in partial fulfillment of the curriculum. Some of the organizations where NERIST students go for their training are:

Ashok Leyland, BHEL, BEL, BRPL, C-DOT, CEERI, CMC, ESCORTS, HAL, HCL-HP, Hind Motors, HPC, IDPL, IA, IAF, INA, INFOSYS, Indian Airlines, IOC, ISRO, ITI, L & T, MBT, METRO Railways, Mindtree, NEEPCO, NIC, NSTL, NBCC, OIL, ONGC, PRAGA, TOOLS, SAIL, SIEMENS, TATA, TELCO, TOOLS, UNIYSIS, ERDL, DRDL, ADA, NAL, DENSO Haryana (P) Ltd., GAMMON INDIA etc.

The Training and Placement (T & P) Cell also guides and helps the final year students in securing jobs commensurate with their knowledge and other achievements, by organizing campus interviews and exploring various avenues for their placement. The Cell also organizes regular workshops for pre-final and final year students. The basic objective of these workshops is to provide sufficient exposure to the students in the areas related to recruitment, selection and personality development, to facilitate their entry into leading and highly professional organizations. Such workshops provide information and guidance for preparing bio-data and better communication skills. It also provides necessary guidance for participating in group discussion and interview facing skills.

All facilities are provided to the officials conducting campus interviews on NERIST campus. Arrangement can also be made for conducting interviews at Guwahati on weekends and holidays. The organizations which recently came to conduct campus interviews include: APTECH, CMC, EIL, GAIL, HCL-HP, Hindustan Papers Corporation, Indian Army, IOC, OIL, Siemens Software, Powergrid, Tata-Telecom, Wipro Infotech, TERI, PRADAN, CAPART, etc.

NERIST students are serving in prestigious industries/organizations such as: ABB (Asia Brown boveri); APTECH Computer Education; AT&T Bells Laboratory; Texas instruments, Ericsson (USA); CDC; C-DOT; CMC Ltd., Crompton Greaves; Fujitsu, Network Switching of America, Inc.; HCL-HP Ltd., Hero Cycles; Hewlett-Packard (Hong Kong) Ltd.; Hindustan Cables; Hindustan Paper Corporation; Indian Railways (Through Indian Engineering Services); Modi Olivetti; Motorola (India) Electronics Pvt. Ltd.; National Informatics Centre; NIIT; Oil India Ltd.; PCL; Philips India; Reliance Industries, Shipping Corporation of India Ltd.; Siemens; Steel Authority of India Ltd., Tata Telecom; TCS; Videocon, Wipro Ltd.

Regarding placement and training of NERIST students, the Training and Placement Cell, NERIST, may be contacted at the following numbers:

Office : (0360) 2257418, 2257401-413
(Extn-6304, 6301)
E-mail : tandp@nerist.ernet.in
Fax : (0360) 2257872, 2244307

North Eastern Regional Institute of Science & Technology

Deemed University
(Under Section 3 of the UGC act, 1956)
Nirjuli :: Arunachal Prdaesh



Affix here on
attested
passport size
recent colour
photograph

APPLICATION FOR ADMISSION TO M. Tech. (By Research) and Ph.D. (By Research)

In the Semester Session

1. Category

Sponsored Self Financing

2. In the Department

3. If interested to apply for admission in more than One Dept., 2 additional choice of Depts. in order of preference

(i)

(ii)

4. NAME OF THE APPLICANT (In BLOCK LETTERS)

.....

5. Name of the Father/Husband

6. Complete Postal Address:

(i) Present

.....

.....PIN.....Telephone No.....

(ii) Permanent

.....

.....PIN.....Telephone No.....

7. Whether SC/ST ? : **YES/NO**

8. Date of birth 9. Nationality

10. Details of Academic Record starting from Higher Secondary Examination:
(Attested copies of the certificates to be enclosed)

Examination	Year	Name of the	Percentage of	Class	Branch/subjects
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Passed		University/Institute	aggregate marks/CGPA obtained	placed in	studied

11. Experience, if any, of service and/or research including present position held:

Name & Add. of employer	Year of joining	Total period as on date	Designation held	Nature of work*	Salary drawn	Remarks

(* Please attach additional sheet to submit the detail of the nature of your work, academic/project activities, if any)

12. Publication, if any :
 (Please attach additional sheet to submit the detail of the nature of your work, academic/project activities, if any)

13. Occupation:

14. Whether the applicant is sponsored by any organization? **YES/NO**
 (not under QIP Scheme)

15. If "YES" the name and address of Sponsoring Organization

16. Consent of the competent authority

17. Topic for research for the M.Tech./Ph.D. Degree

18. Name of the proposed Supervisor & Co-supervisor (if any)

19. **Course Work:** Completed/not completed **CGPA** **Grade**

20. Name of two references with contact addresses and telephones nos:

(a) _____	(b) _____
_____	_____
_____	_____

Declaration of the Applicant

I hereby declare that all the particulars furnished by me are correct. I understood that my association direct or indirect with any unlawful organization is forbidden. I am aware that any incorrect information may lead to cancellation of my admission/selection. If selected for admission, I promise to abide by the Rules and Regulations of the Institute.

Date :..... Signature of Candidate in full

Consent from the Supervisor/Co-supervisor

I agree to supervise the work of the candidate and the facilities are available in the Department or at Institute level for executing the proposed research

Signature of the Supervisors

Recommendation of Head of the Department

Certified that all original certificates in support of the above particulars have been verified. Admission of the candidate in the Department has been/has not been recommended by the Admission Committee taking into consideration the prescribed requirements.

Office Seal

Signature of the Head of the Department

Date :

To be filled by the Proposed Supervisor/Co-Supervisor

I/We agree to supervise the work of the candidate. At present I/We am/are supervising the work of _____ Research Scholars and out of this _____ Research Scholars have completed two years from the date of their registration. My/Our bio-data is given below (Please give the number of Research Scholars of presently working under you).

1. Name
2. Date of birth 3. Designation
3. Institute/University/Department
4. Date of Retirement/Repatriation
5. Permanent Address
 P.O.
 Dist Pin
6. Present or mailing Address
 P.O.
 Dist Pin
7. Educational Qualification
8. Experience (in years)
 a) Research b) Teaching
- c) No. of students already guided for Ph.D.
9. Area of specialization
10. Number of publications/Books/etc.
11. Any other information

Date :

Signature of Supervisor(s)

- NOTE :**
- (i) The Faculty of NERIST, who is going to retire or whose term of deputation is going to expire within 2 years from the date of registration of Research Scholar concerned.
 - (ii) The person working in NERIST recommended for appointment as Supervisor or Co-supervisor to guide research must be a faculty who possesses a degree of the Doctorate and published work of high standard of Research and has put up 3 years of continuous service in NERIST.

