

Indian Institute of Information Technology Allahabad

(A University under Section 3 of UGC Act 1956,

Vide Notification No. F.9- 4/99-U.3 Dated 4/8/2000 of the Govt. of India)

(A Centre of Excellence in Information Technology, established by Govt. of India)

Devghat, Jhalwa, Allahabad – 211 012 Uttar Pradesh (INDIA)

Ph. 91-532-2922025; Fax: 91-532-2430006/2431689; Web: www.iiita.ac.in; E-mail: contact@iiita.ac.in

Academic session 2010-2011



Information Brochure~CUM~Application Form

FOR

M.TECH. (IT)

Specialization in

WCC/ BI /SE / IS/ RO/ HCI / MI

Academic Session 2010-2011



INSIDE FRONT COVER PAGE

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M.Tech. Programs : 2010-2011

A Centre of Excellence in Information Technology IIIT-Allahabad has been established by Ministry of HRD, Govt. of India, New Delhi, to nurture talent in the field of Information Technology and allied areas. With all the complex and State-of-the-art infrastructure in place, IIIT-Allahabad announces admissions for its M.Tech (2 Years Full Time Post Graduate Programs) in following Specialisations:

Sl. No.	Name of Program (Specialization)	Date & Time of Entrance Test (Interview)	Total No. of Seats* available							Qualifying Degrees / Examinations
			SC	ST	OBC	Gen	PH	SN /NRI	Total	
01.	M.Tech. in Information Technology (Software Engineering)	01-06-2010 10 – 12 noon (02-06-2010)	3	2	6	11	1	5*	28	Candidates having BE / B.Tech. / MCA/ M.Sc. /B.Pharm. Degrees in any Engineering & its equivalent followed by a valid GATE score in respective disciplines.
02	M.Tech. in Information Technology (Wireless Communications & Computing)	03-06-2010 3 - 5 pm (04-06-2010)	3	2	6	11	1	5*	28	
03.	M.Tech. in Information Technology (Intelligent Systems)	05-06-2010 10 – 12 noon (06-06-2010)	2	1	4	6	1	5*	19	
04.	M.Tech. in Information Technology (Robotics)	07-06-2010 3 – 5 pm (08-06-2010)	2	1	4	6	1	5*	19	
05.	M.Tech. in Information Technology (Human Computer Interaction)	09-06-2010 10 –12 noon (10-06-2010)	3	1	4	7	1	5*	21	
06.	M.Tech. in Information Technology (Microelectronics)	11-06-2010 3 – 5 pm (12-06-2010)	3	1	4	7	1	5*	21	
07.	M.Tech. in Information Technology (Bioinformatics)**	11-06-2010 3 - 5 pm (12-06-2010)	3	2	6	11	1	5*	28	

(* Includes upto 3 seats for sponsored candidates & upto 2 seats for Foreign Nationals/ NRI's. Valid GRE Scores are required from Foreign National & NRI candidates in lieu of GATE Scores. There is no Separate Quota for these categories & if suitable candidates are not available, seats shall be open to General Category candidates.** In addition, MBBS,BDS and BVSc&AH Candidates are also eligible for this Program (for whom NO GATE Score is required). For details refer Information Brochure).

- IIIT-Allahabad has taken up an initiative to offer research oriented M.Tech. (Information Technology) programs with Specialisations as above.
- All Reservations for various categories as per GoI guidelines apply. In case application of reservation is brought in force and likewise seats have to be increased; necessary changes may then be incorporated.
- All GATE qualified and MBBS, BDS and BVSc&AH candidates shall be eligible for a monthly teaching assistantship of Rs.8000/-.
- Candidates appearing in Qualifying Degree Examinations may also apply.
- Separate Form has to be filled for each program in case candidate is interested to apply for more than one program.

How to apply: Application Form-cum-Information Brochure can be obtained from the Institute in person or on request. The request letter must be superscribed "**Request for M.Tech. (IT) Programme Application Form**". Complete Application form together with Brochure is also available from the Institute website www.iiita.ac.in. Cost of application form is Rs.600/- (Rs.300/-for SC/ST/OBC candidates) to be paid in cash or through DD of any nationalized bank drawn in favour of 'IIIT-Allahabad' payable at Allahabad. In case of downloaded forms from website, DD may accompany the completed application form, without which it shall be summarily rejected.

Important Dates

- | | |
|--|------------------------------------|
| • Sale of Application Form-cum-Information Brochure begins
Together with availability of Forms for free download from Institute Website | 10th March, 2010 |
| • Last date for issuing (in person) & receiving
Completed application forms at IIIT-A counter | 30th April, 2010 |

Mission

The mission of Indian Institute of Information Technology, Allahabad (IIIT-A) is to be a unique and world class nucleating “Apex Centre of Excellence” in the area of Information Technology and Allied Sciences for enhancing India’s technological strength in IT and becoming a pace-setting institution for other similar institutes to be established in future. IIIT-A seeks to derive its strength from a linkage with sound Indian traditions of centuries past and sets out to create knowledge-based resources in regional languages.

Charter

- To train and educate, at certificate, diploma, undergraduate, postgraduate and doctoral levels, engineers of outstanding quality who may become leaders in the IT industry and profession.
- To carry out advanced research and development in leading edge technology areas in computer hardware & software, that can be useful on a long term basis.
- To develop and promote national and international linkages through partnership in research, student exchange, induction of adjunct faculty, credit transfer and joint degrees.
- To work for the creation and development of resource databases, associated software and courseware for all important domains of IT, so as to ensure future availability of newer software technologies for Hindi and other Indian languages.

The Institute

The Indian Institute of Information Technology, Allahabad was established in 1999, as a centre of excellence in Information Technology and allied areas. The Institute was conferred the ‘Deemed University’ status by Govt. of India in the year 2000. The Institute thus became empowered to award degrees subsequent to the conduct of its own examinations.

IIIT-A has been conceived with the ambitious objective of developing professional expertise and skilled manpower in Information Technology (IT) and related areas. This will enable the country to exploit efficiently emerging opportunities and meet economic challenges being thrown up by the rapid global IT revolution, which is influencing virtually every area of development and social activity. As an apex nucleating institute in the area of IT, the establishment of IIIT-A is a major step of Govt. of India towards strengthening the indigenous capability necessary for exploiting profitably and harnessing multi-dimensional facets of IT at all levels and attaining expertise to enable the country to emerge as a leading player in the global arena.

From the session 2002-2003, IIIT-A has shifted to its own permanent site at Deoghat, Jhalwa, Allahabad. The beautiful 100 acre campus, designed meticulously on the Penrose Geometry pattern, has been further topped by fine landscaping to give an all round soothing effect to create a stimulating environment to indulge in the true pursuit of excellence in the field of Information Technology and Allied Sciences. The campus is envisaged to be a fully residential one, with all its faculty, staff and students housed within it. All academic and residential areas are serviced by Internet (50mpbs leased line) and LAN.

Each academic year consists of two semesters and a summer term. While the education system is broadly organized on the pattern of other IIT’s, a Relative Grading System with credits allotted for each course is followed. This, while enabling continuous evaluation of students’ performance, also provides students the desired flexibility to choose courses as per their own interests. Each course is assigned specified credits, depending upon its relative importance in the field of Information Technology. Minimum of Pass Grade in each individual paper and a minimum of 5.5 Semester Grade Point Average is required to be promoted to the next semester. To boost creativity among students, mini and major projects, in their chosen fields of interest, form an integral part of the course curriculum at the Institute. Normally one theory course credit is of 15 hours of lectures in one semester and one laboratory course credit is of 30 hours of laboratory work.

One of the salient features of the training imparted to the students is the hands-on computer assembly training. Almost all of the Institute's computers have been assembled by the students themselves, under guidance of the specially trained technical staff. This has not only enabled the Institute in bringing down the cost of new computers, but has also made almost 100% instant trouble shooting of any faults, resulting in no requirement of any computer related AMC's.

It is in these contexts that this Institute promises to play a crucial role to generate requisite high level technical manpower to meet national goals in critical areas like defense, weather forecasting, space programmes, economic development and social transformation, to gain from the emerging IT revolution. Keeping these in view, the Courses of the Institute have been designed with a lot of operational flexibilities of additions and subtractions according to the need of the society.

Infrastructure

The striking feature of the Institute is the stimulating teaching and learning environment in its laboratories. They are available for experimentation in the area of Analog/ Digital Electronics, Control System Engineering, Image Processing, Machine Learning, Language Technology, Multimedia, Data Communication, Robotics, AI, Physics and Mathematics. It has comprehensive infrastructure with several servers running on different operating system and more than 250 workstations. Latest version of various software is available to students on their workstations. The whole campus is networked and the labs are open for 7 days a week and 24 hours a day.

Research Labs at IIIT-A

Advanced Programming Labs

To facilitate students to gain practical knowledge of subjects and to carry out advanced research and development activities in the field of wireless communication, state-of-the-art laboratories have been set up particularly to cater to the needs of M. Tech. students. The labs are equipped with the following hi-tech gadgets: Routers, Switches, ADSL Modems and Routers, Cable Modems and Routers, ISDN Routers, 802.11b Wireless LAN Access Points, PCI and PCMCIA cards, PDAs with Bluetooth ports etc. In this laboratory each student is required to work on a project either in Network Simulator, Net beans (JAVA, J2ME), etc. Armed with such profound and exhaustive knowledge of Wireless, Mobile and Networking in general, students are ready to fit in with ease into commercial as well as research-oriented organizations.

Bioinformatics Lab [Indo-Russian Centre for Biotechnology (IRCB)]

Programming languages: C++, Perl, Python, Mysql, PHP, MAT lab

Softwares: Dock, Autodock, GCG, Molegro, Ligbuilder, Gold, Flex-X, Modeler, PD-Quest, Quantity one & M-fold.

Hardware: HP xeon server, clusters, Silicon-Graphics, High end computers.

Projects related to protein modeling, novel drug designing, structure prediction, sequence analysis, Bioinformatics tools regarding miRNA prediction, protein secondary prediction, biomedical image processing using SVM, neural networks, data mining and analysis.

In Bioinformatics the research work is going on topics like Si-RNA, micro-RNA predictions, Protein structure prediction, drug designing and interaction etc. The studies are carried out on various diseases (cancer) and for agricultural (Transgenics) purposes. Medical signal processing, like ECG signal based work, has been under progress. The main aim of the research program is to utilize various existing software and databases that are evaluated through different means including lab experiments like genetic engineering and drug testing experiments.

The Image and Natural Language Processing Lab

It supports the research of a number of faculty, research scholars, graduate and undergraduate students in the areas of pattern recognition, image processing, computer vision, text mining, etc.

The Image Processing Lab (IP Lab) is equipped with state-of-the-art technology to digitize, store, process, stream and display digital video and images.

Current research projects include Multilayer Image Classification, Visual attendance system, intelligent surveillance and tracking system, Cross Lingual Information Retrieval, Object Tracking, Information Extraction, Information Retrieval for Indian Languages, Machine Translation, Optical Character Recognition and many more.

Research Focus: Image Recognition, Computer Vision, Image Classification, Content Based Image Retrieval System, Natural Language Processing, Text Mining, etc.

Wireless Sensor Networks Lab

As computing technology advances and novel sensing materials are developed, miniature smart sensor nodes will become ubiquitous low-cost devices. A realistic expectation is that in the near future sensor nodes with wireless communication capabilities will be widely deployed for many different purposes.

In the Wireless Sensors Networks (WSN) Lab, we are helping make this hope a reality. We are developing wireless networking protocols for specific sensor types, such as disaster management system. In particular, we are developing networking solutions to support wireless sensors for audio visual transmission. We are also developing wireless protocols to support the Location based applications.

Besides these specific sensor application areas, we are also designing new protocols for generic wireless sensor networks. Issues being studied include routing, localization, remote reprogramming, scalability and energy-efficient operation.

Research Focus: Multi-hop Re-programming, Localization for Disaster management application, Audio Visual Transmission, Bluetooth Security for WSN, Audio Streaming, Statistical Routing, 3D Geographic Routing.

Facilities: Tiny OS platform for configuring sensor nodes, Mica-2 motes sensor nodes, Mica-Z motes sensor nodes, TelosB mote, On-board controller, Sensor base-station, GSM base-station, Bluetooth simulator, NCTU ns network Simulator, ns2 network Simulator, MATLAB tool.

Human Computer Interaction Lab

DST, Ministry of Science & Technology supports Human-Computer Interaction Lab under 'FIST' program. The following instruments and systems are being processed to develop, study and evaluate various aspects of Virtual Reality, Human-Computer Interfaces and Human signal processing.

A long term goal of HCI is to design systems that minimize the barrier between the human's cognitive model of what they want to accomplish and the computer's understanding of the user's task. Professional practitioners in HCI are usually designers concerned with the practical application of design methodologies to real-world problems. Their work often revolves around designing graphical user interfaces and web interfaces. Researchers in HCI are interested in developing new design methodologies, experimenting with new hardware devices, prototyping new software systems, exploring new paradigms for interaction and developing models and theories of interaction.

Facilities:

1. 4 sets Virtual Reality System
2. 2 sets VR Platform
3. Neural/ brain Signal Capture System
4. Smell, Taste Sensor & associated
5. 3D Projector system
6. 3D Scanner system
7. Other supportive devices

Microelectronics Lab

The new microelectronics lab facilitates students to work on design and analysis of VLSI circuits and systems. Special emphasis is given to design at the FPGA level. Simulation of tasks for designing microelectronics circuits at micron and sub-micron level can be done.

The Institute has signed MoU with EPFL, Switzerland for establishment of centre of excellence in Microelectronics supported by Department of Science and Technology Govt. Accordingly the lab is being developed to become one of the best labs with up-to-date facilities in Microelectronics.

Robotics and Artificial Intelligence Lab

The main vision of the laboratory is to nurture young minds towards creativity and steer their talents towards high quality research in different areas of Robotics and Intelligent Systems using Information Technology.

The laboratory provides state-of-the-art facilities to learn complex concepts of Artificial Intelligence. Students are encouraged to learn by doing it through many available development environments like Humanoid Open Architecture Platform (HOAP), Interactive Graphics Robot Instruction Program (IGRIP), Humanoid & Mobile Robot Simulation Platform, WEBOT, where students can create and control different kinds of robots using both C++ and Java. Apart from that we have hardware robots which include Humanoid robot HOAP-2, manipulating robots like Robix, SCARA and LEGO Mind storm kits.

Our mission is to create an international standard for research and teaching, excel in the area of robotics and cognitive sciences, produce high quality engineers having self confidence and who can take part in nation's knowledge building endeavor and create a brand name for the Institute as a temple of learning. At present the laboratory has a number of collaborations like with Bio inspired robotics group of EPFL, Switzerland, Artificial Limb Manufacturing Corporations (ALIMCO), Kanpur.

Following are some of the project modules –

- Development of Adaptive Modular Active Leg (AMAL)
- Maneuvering Robotics Arm using Robix Software
- Implementing technology on Humanoid Open Architecture Platform (HOAP)
- Implementing Programmable Logic Controller (PLC) for designing industrial automation
- Simulation and fast prototyping of humanoid robot actions on Webots

Universal Digital Library (UDL) Mega Center

The Universal Digital Library has the vision “A Million Books To The Web Assembling – The World's Biggest Library on Everybody's Desktop”. The basic motive of the Universal Digital Library (UDL) project is to provide access to the rich repository of knowledge to everybody. The initiative was taken by a group of institutions spread across different parts of the country together with the Carnegie Mellon University (USA). The IIT-A was designated as a mega-center in the project. The major objective is to capture and store more than a million books in the digital format and to develop the required language technologies.

The UDL project also involves a significant amount of research and development work in all areas related to Digital Libraries. These include development of optical character recognition systems for Indian scripts, development of machine translation systems, document summarization, information retrieval, development of workflow for digital libraries etc.

Library

The sun pattern has been chosen for the lay-out of the library. The IIIT-A library is stocked with books that cater to the student's academic and research requirements. Audio and multimedia versions of some course modules are also available. In addition, dictionaries, thesaurus and encyclopedias are provided for reference purposes. Present is an electronic library that provides students with connectivity to the latest technological material through networked workstations. There will be a total of 140 systems distributed over two floors. Reading space will also be provided at convenient locations. This new library has already acquired around 23,500 books on various courses and latest IT related books. The library uses web-based software, developed in-house, for maintaining the database and circulation related to daily operations. Besides, IIIT-A is also the member of INDEST consortium, through which all ACM Digital Library, Capitalize, Emerald Full-text, ABI Business Dateline, ABI Trade & Industry, EBSCO Business Sources, JCCC Case studies etc. and various tutorials and journals are accessible throughout the campus, in digital form.

International Institutional Collaborations

- Carnegie Mellon University, Pittsburgh, USA
- University of California, Riverside, USA
- GIST, Korea
- ETZ Zurich, Switzerland
- Ghana Institute of Management and Public Administration (GIMPA), Ghana
- CTIF Aalborg University, Denmark
- Massachusetts Institute of Technology, Boston, USA
- Canberra University, Canberra, Australia
- EPFL, Lausanne, Switzerland
- Sunny Buffalo, USA
- Purvanchal University, Nepal

Few Campus Recruiters

- * Microsoft-IDC, Hyderabad, India
- * Google, Hyderabad, India
- * Amazon, Bangalore, India
- * Rediff, India
- * Oracle, Bangalore, India
- * Intel, Bangalore, India
- * Motorola, Hyderabad, India
- * Amdocs, India
- * Newgen, India
- * Flextronics, Hyderabad and Gurgaon, India
- * NIS Sprata, New Delhi, India
- * HCL, Noida, India
- * TCS, India
- * Wipro, India
- * Siemens, India
- * Pricewaterhouse Coopers, India
- * ZS Associates, India
- * De Shaw, India
- * IBM-GS, Gurgaon, India
- * Hewlett Packard, India

Student Activities

At IIIT-A, the focus is on developing individuals – capable of taking the initiative in varied social and professional activities. A number of clubs related to extracurricular activities are active in IIIT-A. The clubs remain active throughout the year in organizing varied events and activities. The clubs are as follows –

- Sports club
- Literary club
- Robita – The Robotics club
- Tech club
- Rang Tarangani – Dramatics club
- Virtuosi – The Music club
- Thunderbolt – The Audio and Lights club
- Sports club – Higher, Faster, Stronger
- Ushma – Dance club
- STAMBH – Program Management and Publicity club

Apart from the above clubs, our MBA students have a regular E-magazine '**B-Cognizance**'.

Indian Institute of Information Technology, Allahabad

Salient Features at a Glance

- ✓ Hard furnished separate Hostels for Boys & Girls.
- ✓ 24 hours Internet Connection through 50mbps Leased Line.
- ✓ All computer points backed by 100% Uninterrupted Power Supply.
- ✓ All students encouraged to undertake research in cutting edge areas under active supervision of faculty members.
- ✓ Academic Regulations as being practiced at other IIT's are broadly followed at the Institute mutatis mutandii.
- ✓ Adequate flexibility is offered within each program.
- ✓ Students also encouraged to undertake industrial training / project during vacations.
- ✓ All courses are envisaged to be delivered by leading experts in the area.
- ✓ State-of-the-art facilities for all labs.
- ✓ All academic and administrative areas are fully air conditioned.
- ✓ Unique opportunity to participate and contribute in leading National and International sponsored projects.
- ✓ Selected students may also get opportunity to work in foreign universities under special Institutional MoU's with them.
- ✓ Students of last batches placed successfully in reputed national / multinational companies.

Courses in which Admissions are offered

Sl.No.	Name of Program (Specialization)	Total No. of Seats* available	Qualifying Degrees / Examination
01.	M. Tech. in Information Technology (Wireless Communications & Computing)	28	Candidates having BE / B. Tech. / M. Sc./ MCA/ B. Pharm. Degrees in any Engineering & its equivalent followed by a valid GATE score in respective disciplines.
02.	M. Tech. in Information Technology (Software Engineering)	28	
03.	M. Tech. in Information Technology (Intelligent Systems)	19	
04.	M. Tech. in Information Technology (Robotics)	19	
05.	M. Tech. in Information Technology (Human Computer Interaction)	21	
06.	M. Tech. in Information Technology (Microelectronics)	21	
07.	M. Tech. in Information Technology (Bioinformatics)**	28	

(* Includes upto 3 seats for sponsored candidates & upto 2 seats for Foreign Nationals/ NRI's. Valid GRE Scores are required from Foreign National & NRI candidates in lieu of GATE Scores. There is no Separate Quota for these categories and if suitable candidates are not available then the seats shall be open to General Category candidates. ** In additions, MBBS/BDS and BVSc &AH Candidates are also eligible for this Program (for whom NO GATE Score is required).

Important: Since Entrance Exam for Specialization in Microelectronics and Bioinformatics shall be held in parallel, so a candidate can choose only one of the two choices.

Important Dates

01.	Sale of Application Form-cum-Information Brochure begins			10th March, 2010
02.	Last date for issuing (in person) & receiving completed Application Form at IIIT-A counter			30th April, 2010
03.	Date of Coding Test, Written Test & Interview (at IIIT-Allahabad only) for screened-in applicants only.			
	Program Name (Specialization)	Coding and Written Test Date (Time)	Interview Date for candidates qualifying the Coding and Written Test	Result Declaration & Fees Deposition Date
	M. Tech. in I.T. (SE)	01-06-2010	02-06-2010	02-06-2010
	M. Tech. in I.T. (WCC)	03-06-2010	04-06-2010	04-06-2010
	M. Tech. in I.T. (IS)	05-06-2010	06-06-2010	06-06-2010
	M. Tech. in I.T. (RO)	07-06-2010	08-06-2010	08-06-2010
	M. Tech. in I.T. (HCI)	09-06-2010	10-06-2010	10-06-2010
	M.Tech. in I.T. (MI)	11-06-2010	12-06-2010	12-06-2010
	M. Tech. in I.T. (BI)	11-06-2010	12-06-2010	12-06-2010
04.	Date of Commencement of Academic Session – (For latest update please visit www.iiita.ac.in)			9th July, 2010

Admission Procedure for M. Tech. Programs at IIIT-A

(For General and Reserved Categories only)

- Only GATE Qualified candidates are eligible to apply (Except for MBBS/BDS, BVSc&AH and Sponsored candidates). GATE Exam can be in any of the disciplines covered under the ambit of GATE and may not necessarily correspond to the candidates basic discipline.
- GATE scores will be used for initial short listing.
- Final Merit List for admissions shall be prepared using the following procedure –
 - *Initial screening will be done based on GATE Score*
 - *Short listed candidates will be called for the practical examination and written examination.*
 - *Only those candidates who qualify in the practical examination and written examination, will be interviewed by the designated board*
 - *Merit list will be prepared based on the recommendation of the concerned designated board for each specialization.*

(For NRI / Foreign Nationals)

- Only candidates who have passed the specified qualifying degree examination B.S. /M. Sc. / B.E. from abroad with 70% marks (Aggregate of whole Degree Exams) or equivalent Grade Points and possessing valid GRE Scores shall be eligible. Certified conversion formula from Degree Granting Institution to be provided by the candidate. Certified conversion Formula Certificate MUST accompany the filled in application form on the letter head of the Degree granting Institution or else the application shall be rejected summarily.
- The Candidate himself / herself has to be an NRI / Foreign National. The sponsorship is accepted by guardian, parents or relative of the candidate settled abroad only if it is for the whole program.
- Fee of US\$ 4000/- (US\$ Four thousand only) per year and other dues (Hostel, annual charges, etc.) in Indian Rupees.
- Academic criteria and assessment rules during the duration of the M. Tech. Program for candidates belonging to this category shall be the same as those for other General admission candidates.
- Hostel Accommodation will be available.
- Final Merit List for admissions shall be prepared using the same procedure as mentioned for the General and Reserved category candidates except that the GRE score will be used instead of the GATE score for the initial screening.

(For Sponsored Candidates)

- Candidates MUST have working experience of at least one year from an Institution / Organization / Industry of repute.
- Experience in all above cases means experience obtained after successful completion of the said Qualifying Degree.
- Only candidates having at least 60% marks (Aggregate of whole Degree Exams) or equivalent Grade Points. Certified conversion formula from Degree Granting Institution to be provided by the candidate. Certified conversion Formula Certificate MUST accompany the filled in application form on the letter head of the Degree granting Institution or else the application shall be rejected summarily.

- Academic criteria and assessment rules during the duration of the M. Tech. Program for sponsored candidates shall be same as those for other General admission candidates.
- Sponsorship certificate, in the format specified, from Competent Authorities of the concerned organization on their letter head must accompany the application form.
- Sponsored candidates should write the name and contact number of the organization and also attach a letter with the application from Head of the organization on official letter pad regarding the terms and condition of the sponsorship and experience of the candidate. The original copy should be produced during interview if necessary.
- While upon initial selection into the program, the candidate shall be required to pay the fees etc. as per rules laid down for General candidates for payment of routine Semester fees & other dues, candidates shall personally be responsible to make sure that all necessary dues are got deposited by their respective sponsors in time. If dues are not cleared, the name of defaulting candidate shall be struck off the rolls.
- Sponsored candidates shall not be eligible for any Institute Assistantship.
- Three letters of reference (sealed) must reach IIIT-Allahabad before the interview, in the format annexed.
- Hostel Accommodation will be available.
- Final Merit List for admissions shall be prepared using the same procedure as mentioned for the General and Reserved category candidates except that the score in the qualifying degree examination will be used instead of the GATE score for the initial screening.

(For MBBS/BDS Candidates – For M. Tech. in Bioinformatics Specialization only)

- Only candidates from MCI approved institutions are eligible.
- For MBBS Degree holders Candidates must have at least 55% marks or equivalent Grade Points. Certified conversion formula from Degree Granting Institution to be provided by the candidate. Certified conversion Formula Certificate MUST accompany the filled in application form on the letter head of the Degree granting Institution or else the application shall be rejected summarily.
- All rules pertaining to courses of study, payment of fees, etc. shall be as applicable to the General Category Admissions.
- Final Merit List for admissions shall be prepared using the same procedure as mentioned for the General and Reserved category candidates except that the score in the qualifying degree examination will be used instead of the GATE score for the initial screening.

(For BVSc&AH Candidates – For M. Tech. in Bioinformatics Specialization only)

- Only candidates from Veterinary Council of India approved institutions are eligible.
- Candidates must have at least 60% marks or equivalent Grade Points. Certificate showing the equivalence of Grade Points must accompany the application, or else the application shall be rejected outright.
- All rules pertaining to courses of study, payment of fees, etc. shall be as applicable to the General Category Admissions.
- Final Merit List for admissions shall be prepared using the same procedure as mentioned for the General and Reserved category candidates except that the score in the qualifying degree examination will be used instead of the GATE score for the initial screening.

For candidates of all categories:

All Certificates in Original MUST be presented at the time of admissions, failing which offer of admission shall stand cancelled.

- Candidates screened in shall have to appear for Institute Entrance Examination at IIIT-Allahabad as per the schedule (List of screened candidates shall be available on Institute website www.iiita.ac.in w.e.f. 10th May, 2010).
- All short listed candidates shall be required to appear in the Institute Entrance Examination.
- The Institute Entrance Examination will consist of a practical (coding) examination, a written examination, as well as interview.
- List of provisionally selected candidates for admission shall be displayed on Institute Notice Board in the evening of the day the interviews are held by the designated board.
- Medical fitness certificate in the form annexed shall have to be produced MANDATORILY by all the candidates, irrespective of the category, before Interview or else the candidature shall be cancelled summarily.
- Fees by all selected candidates, irrespective of the category, shall have to be deposited in cash or by MICR type Demand Draft drawn in favor of 'IIIT-Allahabad' and made payable at Allahabad, necessarily by 2.00 pm of the next day or else candidates from the waiting list shall be offered the admission in order of merit. In no case fee will be refunded once the candidate has taken admission in the Institute.
- All selected candidates, irrespective of the category, shall have to submit all documents in Original & 3 passport sized colored photographs at the time of admission. Since the same Photograph shall continue to be printed on all your grade cards and Degree certificate, so good quality colored photographs should be brought (preferably digital)
- IIIT-Allahabad reserves all rights regarding admissions.

2. Which of the following is not an output device?
 - (a) Scanner
 - (b) Printer
 - (c) Flat Screen
 - (d) Touch Screen

3. Genbank is a,
 - a. Human Genome database
 - b. DNA sequence database
 - c. 3-D protein structure database
 - d. GEO database

4. The operator + in a+=4 means,
 - a. a=a+4
 - b. a+4=a
 - c. a=4
 - d. a=4+4

5. Which one of the following is not an output devices?
 - a. Scanner
 - b. Printer
 - c. Flat screen
 - d. Touch screen

Specialization in Software Engineering:

Computer programming in C/C++ on Windows/ Linux, fundamentals of computer organization, data and file structures, operating systems, algorithm design, compiler design, visual computing, system analysis and design, object oriented programming and methodology, database management systems, network programming, basic knowledge of software engineering.

Sample Questions

1. The supply voltage to TTL gates is
 - (a) 12V
 - (b) 3V
 - (c) 5V
 - (d) 4.75V to 5.25V

2. End to end connectivity is provided between the hosts by
 - (a) Data link layer
 - (b) Session layer
 - (c) Network layer
 - (d) Transport layer

3. Which of the popular session key creator protocol that requires an authentication
 - a) Server and a ticket server?
 - b) KDC
 - c) Kerberos
 - d) CA

4. The complexity of Binary search algorithm is
 - a) O(n)
 - b) O(log)
 - c) O(n²)
 - d) O(n log n)

5. For large networks----- topology is used.
 - a) Bus
 - b) Star
 - c) Ring
 - d) Tree

Specialization in Intelligent Systems:

Computer programming in C/C++ on Windows/ Linux, fundamentals of computer organization, data and file structures, operating systems, algorithm design, computer graphics, automata theory, design of compilers, object oriented programming and methodologies, knowledge based intelligent systems, rule based expert systems, frame based expert systems, soft computing tools, hybrid intelligent systems.

Sample Questions

1. To end and open session without terminating the FTP shell we use the command:
(a) pause (b) quit (c) bye (d) close

2. How many times will the following loop execute?
for (j=1; j<=10; j - =1);
(a) 1 (b) forever (c) never (d) 10

3. Consider the following code in C

```
Structure node *nPtr, *sPtr; /* pointers for a linked. */  
for (nPtr = nPtr; nPtr; nPtr=nPtr->next)  
{  
Free (nPtr);  
}
```

The sample code above release memory from a linked list. Which choice below accurately describes how it will work?

- (a) It will work correctly since the for loop covers the entire list
- (b) It may fail since each node "nPtr" is freed before its next address can be accessed
- (c) In the for loop, the assignment "nPtr->next" should be changed to "nPtr=nPtr->next".
- (d) This is invalid syntax for freeing memory.

4. After the following code fragment, what is the value in a?

```
String s;  
int a;  
s= "foolish boy.";  
a= s. indexOf ("fool");
```

- (a) -1
- (b) 0
- (c) 4
- (d) Random value

Specialization in Robotics:

Computer programming in C/C++ on Windows/ Linux, Basic Electronics, Fundamentals of Programming using Object Oriented Methodologies, Fundamentals of Computer Organisation, Operating Systems, Analysis and design of Algorithms, Artificial Intelligence, Computer Graphics, Fundamentals of Real Time Systems, Computer Controlled Systems..

Sample Questions

1. Suppose bag is a template class. What is the syntax for declaring a bag b of Integers?
(a) bag b (b) bag < int > b (c) bag of Int b (d) Int bag b

2. For an Orthogonal Transformation Matrix A, which of the following is correct?
(a) $A=A^{-1}$ (b) $A=A^T$ (c) $A^T = A^{-1}$ (d) $\det |A| = 0$

3. What is the output of the following code?

```
#include <stdio.h>
void main ()
{
int s=0;
while (s++<10)
{
if (s<4 && s<9)
continue;
printf ("\n%d\t",s);
}
}
```

- (a) 1 2 3 4 5 6 7 8 9
- (b) 1 2 3 10
- (c) 4 5 6 7 8 9 10
- (d) 4 5 6 7 8 9

4. The continue command cannot be used with

- a) for
- b)switch
- c)do
- d)while

5. The standard C++ comment

- a)/
- a)//
- c)/*and */
- d) none of these

Specialization in Human Computer Interaction:

Computer programming in C/C++ on Windows/ Linux including Object Oriented Programming , Data and File structures, Algorithm design and analysis, Computer Organization and Computer Networks, Artificial Intelligence, Rule Based Systems and Learning Systems, Statistical AI techniques, Markov Models, Discrete Signal Processing, Sampling and Quantization, Fourier Transform , Computer Graphics and User Interfaces

Sample Questions

1. Which of the following statement is true :

- a. Space Complexity of BFS is $O(n^2)$
- (b)Heap data structure can be used to implement priority queue
- b. Dynamic programming approach always gives optimal solution.
- (c) Graph is a special case of tree.

2. Discrete Fourier Transform of discretized signal is:

- a) A linear transform
- (b) A non- linear transform
- (c) Simple decomposition of signals into coefficients
- (d) A multilevel transform

3. The total number of paths in a tree with branching b and depth d is:

- (a) $b \log_2 d$
- (b) $b.d$
- (c) d^b
- (d) b^d

4. Which of the following data structure store can't store non-homogeneous data elements?

- (a) Arrays
- (b) Records
- (c) Pointers
- (d) None

5. Which of the following tests is about intelligence?

- (a) Turing Machine
- (b) Turing Test
- (c) Hypothesis Test
- (d) Chi- Square Test

Specialization in Microelectronics:

Computer programming in C/C++ on Windows/ Linux, Fundamentals of Programming, Data and File structures, Algorithms design and analysis, Computer Organization, Digital and Analog circuits, Microprocessors and Microcontrollers, Fabrication of Bipolar and MOS Devices, Semiconductor Physics, Simulation and Analysis of Digital Circuits.

Sample Questions

1. What bit pattern 10110100 represent if interpreted as :
 - a) a signed binary number in sign-magnitude format
 - b) a signed binary number in two's complement format
 - c) an unsigned binary number
 - d) an unsigned BCD (binary coded decimal) number.

2. In a microprocessor- circuits are not included.
 - a) Memory
 - b) logic
 - c) computational
 - d) All

3. The currents driving capacity of MOS as compared to BJT is
 - a) High
 - b) Very High
 - c) Less
 - d) Equal

4. The IC 741 OPAMP has how many pins
 - a) 6
 - b) 8
 - c) 10
 - d) 12

5. The period of the signal $x(t) = \cos \pi t/4 (t-1)$ is
 - a) 1/8
 - b) 8
 - c) 4
 - d) 1/4

INSIDE BACK COVER PAGE

Details of Fees, etc. for M.Tech. in IT Programs							
Sl. No.	Particulars	1 st Sem.		2 nd & 4 th Sem.		3 rd Sem.	
		Amount (Rs.)	Sponsored Amount (Rs.)	Amount (Rs.)	Sponsored Amount (Rs.)	Amount (Rs.)	Sponsored Amount (Rs.)
1.	Alumni Fund	8000.00	8000.00	---	---	---	---
2.	Tuition Fees	25000.00	50000.00	25000.00	50000.00	25000.00	50000.00
3.	Admission Fee	1000.00	1000.00	---	---	1000.00	1000.00
4.	Provisional Certificate Fee	500.00	500.00	---	---	500.00	500.00
5.	Identity Card Fee	500.00	500.00	---	---	500.00	500.00
6.	Medical Fee	1000.00	1000.00	---	---	1000.00	1000.00
7.	Student Benevolent fund	500.00	500.00	---	---	500.00	500.00
8.	Sports Fee	500.00	500.00	---	---	500.00	500.00
9.	* Hostel Rent (Single occupancy Rs. 6000/- per semester and Double occupancy Rs. 3000/- per semester)	3000.00	3000.00	3000.00	3000.00	3000.00	3000.00
10.	Grade Card Fee	500.00	500.00	500.00	500.00	500.00	500.00
Total		40500.00	65500.00	28500.00	53500.00	32500.00	57500.00

**Only Hostel & Mess Fees are refundable in case of withdrawal from admission.*

**Selected candidates MUST clear their dues on the date of declaration of the results of entrance examination.*

**Fees etc. can be paid in cash/ Demand Draft drawn in favour of 'IIT-Allahabad' & made payable at Allahabad (drawn on any nationalized bank), at the time of admission.*

OUTSIDE BACK COVER PAGE

01.	Sale of Application Form-cum-Information Brochure begins	10th March, 2010		
02.	Last date for issuing (in person) & receiving completed application Forms at IIIT-A counter	30th April, 2010		
Date of Written Test & Interview (at IIIT-Allahabad only) for screened-in applicants only.				
03.	Program Name	Written Test Date (Time)	Interview Date	Result Declaration & Fees Deposition Date
	M.Tech. in I.T. (SE)	01-06-2010 10 – 12 noon	02-06-2010	02-06-2010
	M.Tech. in I.T. (WCC)	03-06-2010 3 - 5 pm	04-06-2010	04-06-2010
	M.Tech. in I.T. (IS)	05-06-2010 10 – 12 noon	06-06-2010	06-06-2010
	M.Tech. in I.T. (RO)	07-06-2010 3 – 5 pm	08-06-2010	08-06-2010
	M.Tech. in I.T. (HCI)	09-06-2010 10 –12 noon	10-06-2010	10-06-2010
	M.Tech. in I.T. (MI)	11-06-2010 3 – 5 pm	12-06-2010	12-06-2010
	M.Tech. in I.T. (BI)	11-06-2010 3 - 5 pm	12-06-2010	12-06-2010
	04.	Date of Commencement of Academic Session (For latest update Pl. see website www.iita.ac.in)		9th July, 2010

**Imp: Result declaration may be in late evening, so candidates should come prepared accordingly. For stay during Entrance Examination period, hostel accommodation (including bedding) shall be available on payment of moderate charges.
Separate Hostels for Girls & Boys Exist.**

THE COMPLETED APPLICATION FORM MUST REACH ON OR BEFORE

30th April, 2010 for admission to 2010-2011 Academic Session.

Mailing Address for Applications :

**Incharge Examination Cell
Indian Institute of Information Technology Allahabad
Devghat, Jhalwa, Allahabad -211 012 (U.P.), INDIA**

**Please superscribe the envelopes as
“Filled Application Form for M.Tech. WCC / BI / SE / IS / RO/ HCI / MI”
(Please strikeout whatever is not applicable)**

**SEPARATE APPLICATION WITH SEPARATE
DEMAND DRAFT IS REQUIRED FOR EACH
SPECIALIZATION (if applying for more than one Spln.)**

Indian Institute of Information Technology Allahabad

(A University under Section 3 of UGC Act 1956)

(A Centre of Excellence in Information Technology, Established by Govt. of India)

Devghat, Jhalwa, Allahabad -211 012 (U.P.), INDIA

Ph. 0532-2922025/2431692; Fax. 2431689/ 2430006; Web: www.iiita.ac.in; E-mail: contact@iiita.ac.in

APPLICATION FORM FOR ADMISSION TO M.TECH. (IT) PROGRAMME – 2010

(For filling this application form see instructions overleaf)

Either TYPE or filled by hand writing using Capital Letters

Paste your
Self attested
photograph
here

1. FULL NAME : _____
2. DATE OF BIRTH : _____ 3. PLACE OF BIRTH : _____ 4. SEX : MALE/FEMALE
5. MARITAL STATUS : Married/Unmarried 6. NATIONALITY : _____
7. FATHER'S NAME : _____
8. ADDRESS FOR CORRESPONDENCE : _____

_____ STATE : _____ PIN CODE : _____

9. Please provide :
Phone No. : (_____) _____ Fax No. : (_____) _____ E-mail address : _____

10. Details of Demand Draft /Cash Receipt

- a) Amount Rs. No. Dated.....
- b) Bank & Branch issued

11. (a) Programme : M.Tech. (IT) Spln in

(Please Specify only one specialization)

(b) Statement by the applicant (Candidate should write and attached a separate page justifying his interest in the Specialization and his expectations.)

12. Category

GE	SC	ST	PH	SN	NR	OB
----	----	----	----	----	----	----

(Please TICK one only)

13. A. GATE Exam details (*) Not for MBBS / BVSc&AH / Sponsored candidates. GRE details for NRI / FN Candidates

Exam Name	Exam discipline	Rank / Score	Exam Year
GATE / GRE			2009-2010

B. Qualifying Degree (*) already obtained or in progress

University/ Institute	Discipline	Degree	Exam Date	Final results expected by	Min. Pass Marks % or Grade Average	Overall % or Grade Average (if degree completed)

BACK PAGE OF M.TECH. APPLICATION FORM

B. Working Experience () (Latest three only)**

Dates (from –to)	Employer	Position	Nature of Work

14. Declaration by the applicant:

Certified that all information provided by me in this form is correct to the best of my knowledge and belief. I understand that any willful misrepresentation of facts will result in my admission being cancelled / dismissal from the Institute. If admitted, I shall abide by all the rules and regulations of the Institute.

Date : _____ Signature of Candidate _____

Place : _____

15. Declaration by Parent/ Guardian (Not to be filled by sponsored candidates)

In the event of Mr./Ms. _____ son/ daughter/ ward being admitted, I hereby give an undertaking to pay regularly all admissible dues to the Institute and Hostel till the completion of his/ her studies. I undertake the responsibility for his/ her good conduct . I am also aware that RAGGING is prohibited at the Institute and is treated as a cognizable offence at IIT-A, under the Indian Penal Code and the directions of Hon'ble Supreme court of India and will ensure that he/she will not be involved in any ragging related activity.

Date : _____ Signature of Parent/Guardian _____

Place : _____

(*) Attach attested copies of certificates, marksheet etc. See checklist below for certificates required.
() A candidate presently working (including those on projects) must provide a “No Objection/Relieving certificate” from the employer.**
(§) Photocopies of this form or copies downloaded from IIT-Allahabad website (<http://www.iiita.ac.in>) are acceptable, however, photocopies or downloaded forms must accompany the required MICR Type Demand Draft of Rs.600/ Rs.300, as the case may be, drawn in favour of IIT-Allahabad and payable at Allahabad.

INSTRUCTIONS FOR FILLING THIS FORM

1. Either TYPE or filled by hand using capital letters or in clear handwriting the entries on the form neatly.
2. All items marked with an asterisk (*) require you to submit an attested copy of some document. PLEASE DO NOT SEND ORIGINALS. Documents for which attested copies are required are given in the checklist. Please tick off the items in this checklist you are attaching to this form.
3. The application fee of Rs.600/- for candidates in general category (Rs.300/- for SC/ST & OBC candidates) must be paid through demand draft payable to “IIT-Allahabad” at Allahabad.
4. Item 12: Category
SC* : Scheduled Caste; ST* : Scheduled Tribe; GN : General, NR* : Non Resident Indian; PH* : Physically Handicapped; SN* : Sponsored ; OB: Other Backward Classes

Checklist (Please Circle The Enclosed Documents). Send Only Attested Copies (DD & Sponsor’s certificate in Original please.)

1. Date of birth (DOB) certificate or High School (Class Ten) Certificate with DOB (Required for all candidates)
2. SC/ST/PH/OBC certificate if applicable (Item 12)
3. Sponsorship certificate for sponsored candidates. (Item 12)
4. GATE score card (Item 13 A)
5. Copies of mark/grade sheets (Item 13 B)
6. No Objection/relieving Certificate from employer (for sponsored candidates only)
7. The Demand draft for application fee of Rs.600/- (or Rs.300/- as applicable) (only in cases where application form has been downloaded from website or photocopied)
8. Three letters of reference (for sponsored/NRI category applicants only)
9. Equivalence Certificate in case Grades are awarded by the Qualifying Degree granting Institution.

SPONSORSHIP CERTIFICATE
(for sponsored candidates only)

(This should be typed on a letterhead of the Sponsoring Organization and enclosed with application for admission).

To,
The Director,
Indian Institute of Information Technology Allahabad
Devghat, Jhalwa,
Allahabad -211 012 (U.P.), INDIA

Sub : Sponsoring of our employee for M.Tech. IT Spln in (.....) Program at IIT-Allahabad.

Dear Sir,

We hereby Sponsor the candidature of Mr. / Ms. _____, an employee in our organization, for joining his/ her M.Tech. IT Spln. in (.....) Programme at your Institute as a full-time candidate.

He/ She has been employee of our organization for _____ years.

We shall bear the total expenses of his/ her studies. We shall fully relieve him/ her of his/ her duties in the organization during the entire period of the M.Tech. (IT) Program to enable him / her to devote full time to the studies.

We also certify that his/ her conduct at our organization has been good.

Signature and Seal of
the Sponsoring Authority.

Date:

Contact Phone Number of the Competent Authority Signing the Letter:

6. My rating of the candidate in Following trials (please tick):

	Excellent	Good	Excellent	Unable to judge
Analytical Ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Experimental Skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motivation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Written and Oral Expression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Responsibility & Initiative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teaching Ability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sincerity & Dedication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. To summarize, I would like to say that the applicant (please tick) :

is likely to become a brilliant scholar or an outstanding leader in his/ her chosen field.

is likely to do very well in the Post Graduate programme.

is likely to perform satisfactorily.

is not a good prospect.

8. My recommendation :

I recommend him/ her enthusiastically

I recommend him/ her

I do not recommend him/ her

Name of the Referee _____ Signature _____

Designation/ Position _____ Date _____
(with Name & Address
of Organization) _____

Address _____

Pin Code _____ Fax : _____

Telephone No. (with STD code) _____ (Office) _____ (Residence) _____ (Cell) _____

Professional qualification of the Referee _____

Please mail this form directly to :

**The Incharge Examination
Indian Institute of Information Technology Allahabad
Devghat, Jhalwa, Allahabad -211 012 (U.P.), INDIA**

MEDICAL EXAMINATION REPORT

(To be issued by a Registered Medical Practitioner only)
 (For all Applicants) &
 (To be attached with the filled in Application form)

GENERAL EXPECTATIONS

Candidates will have good general physique with

- a) *Chest Measurement should not be less than 70 cm, with satisfactory limit of expansion and contraction.*
- b) *Vision should be normal. In case of defective vision, it should be corrected to 6/9 in both eyes or 6/6 in the better eye.*
- c) *Hearing should be normal. Defective hearing should be corrected.*
- d) *Heart and lungs should not have any abnormality and there should be no history of mental disease or epileptic fits.*

PERSONAL HISTORY

1. Name
2. Parent/ Guardian’s Name:
3. Age: Years Months.....
4. Sex:.....
5. Identification Mark on the Body:
 (This can be a mole, scar or birthmark.)
6. Major illness / operation:
 (Specify nature of illness / operation.)

MEDICAL CERTIFICATE

(The following are to be filled by the Medical Officer conducting the medical examination.)

- | | |
|-------------------------------------|----------------------------|
| 1. Height :.....cm. | 2. Weight:.....kg. |
| 3. Past History: | 4. Chest : |
| a) Mental Disease | a) Inspiration.....cm. |
| b) Epileptic Fit | b) Expiration.....cm. |
| 5. Blood Group | 6. Hearing:..... |
| 7. Vision with or without glasses : | |
| a) Right eye : | c) Colour Blindness :..... |
| b) Left eye : | d) Unocular Vision :..... |
| 8. Respiratory system :..... | 9. Nervous system :..... |
| 10. Heart : | 11. Abdomen : |

a) Sounds :..... a) Liver:

b) Murmur :..... b) Spleen :.....

12. a) Hernia :..... b) Hydrocele :.....

13. Any other defects :.....

Certified that

son/daughter of

- a) fulfills the prescribed standard of physical fitness and is FIT for admission to M.Tech.(IT) Programs offered by IIT-A.
- b) does not fulfill the prescribed standard of physical fitness and is unfit / temporarily unfit to admission due to following defects :

Signature of the Medical Officer

Signature of the Candidate

Full Name :.....

MCI Registration No.(essential)

Official Seal :.....

Date :.....