## **INFORMATION BROCHURE - 2015**

for

## **Admission to**

M.E., M.Tech, M.Pharm, MUP and M.Sc. Programmes

at

Birla Institute of Technology, Mesra and It's Off Campuses



## **BIRLA INSTITUTE OF TECHNOLOGY**

(Deemed University under section 3 of UGC Act 1956)

Mesra, Ranchi — 835215

Jharkhand, India

Website: http://www.bitmesra.ac.in

The Postgraduate Information Brochure 2015 covers admission to the following postgraduate programmes of the Birla Institute of Technology:

- 1. M.E. programmes in various disciplines & specializations at Mesra and its Off Campuses
- 2. M.Tech programmes in various disciplines at Mesra and its Off Campuses
- 3. M.Pharm programme in various specializations at Mesra
- 4. Master of Urban Planning (MUP) at Mesra
- 5. M.Sc. programmes in various disciplines at Mesra
- 6. M.Sc. programme in Information Technology at Lalpur (Ranchi City) Campus

The addresses and contact details of the concerned Campuses where the above programmes are offered are given below.

Campus	Addresses and contact details
Mesra	Dean, Admissions & Academic Coordination,
	Birla Institute of Technology, Mesra, Ranchi 835215
	Phone: 0651-2275868 (Direct), PBX: 0651-2275444 / 896, Extension- 4469
	Fax: 0651- 2276007, 2275401
	e-mail: admissions@bitmesra.ac.in
Allahabad	Director
	Birla Institute of Technology, Allahabad Campus
	B-7, Industrial Area, P.O. TSL Naini
	Allahabad 211010
	Phone: 0532– 2686668, Mobile: 9452366235, 09956002048, Fax: 2687554
	e-mail: bitallahabad@bitmesra.ac.in
Kolkata	Director
	Birla Institute of Technology, Kolkata Campus
	Southend Conclave, 1582, Rajdanga Main Road, 4th Floor
	(On Gariahat - E M bypass Connector, opposite Siemens Building)
	Kolkata 700107, Phone: 033 – 24414542 / 24414456, Fax: 24414299
	e-mail: bitkolkata@bitmesra.ac.in
Lalpur	Director
	Birla Institute of Technology, Lalpur Campus
	Lalpur Ranchi 834001.
	Phone: 0651–2531817 / 2531676, Fax: 2531658 / 2531676
	e-mail: bitlalpur@bitmesra.ac.in
Noida	Director.
Itolua	Birla Institute of Technology, Noida Campus
	A-7, Sector-1
	Noida 201501
	Phone: 0120-2440408 / 4264080/ 4263080 / 2553661 / 3662, Fax: 2554146
	e-mail: bitnoida@bitmesra.ac.in
Patna	Director
	Birla Institute of Technology Patna Campus
	Near Patna Airport, P.O. Bihar Veterinary College, Patna-800014
	Phone: 0612- 2223545, 3200853
	Fax: 2227050
	e-mail: bitpatna@bitmesra.ac.in

The addresses and contact details of other Off Campuses are as given below.

1110 4441000	ses and contact details of other on campuses are as given below.				
Deoghar	Director,				
	Birla Institute of Technology Deoghar Campus				
	P.O. – Ratanpur, Jasidih				
	Dist. Deoghar, 814142, Jharkhand				
	Phone: 9334654856 / 9308139037, Telefax: 06432-292565				
	e-mail: bitdeoghar@bitmesra.ac.in				
Jaipur	Director,				
	Birla Institute of Technology Jaipur Campus				
	27, Malviya Industrial Area,				
	Jaipur 302017				
	Phone: 0141– 4019798 / 4019819, Fax: 2751601				
	e-mail: <u>bitjaipur@bitmesra.ac.in</u>				

Section	Table of Contents	Page No.
1	Admission to Postgraduate Programmes 2015 – an Introduction and How to Apply	4-6
2	Instructions for filling the Application Form	7-9
3	Eligibility criteria for:	
	a) M.E. programmes	
	b) M.Tech programmes	10-17
	c) M.Pharm programme	
	d) Master of Urban Planning (MUP) programme	
	e) M.Sc. programmes	
4	Selection Procedures, Expected Dates of Tests & Counselling / Interviews and list of documents required at the time of counselling / admission	18-20
5	Number of Seats, Scholarships, Reservations	21-22
6	Financial Information and Fees Payable	23-27
7	List of enclosures required with the completed application form	28
8	Profile of the Departments	29-49
9	Discipline, Rules and Regulations, Hostel, Medical Examination	50-51
10	Format of undertaking for candidates appearing for final examinations in 2015	52
11	Anti-ragging Affidavits	53

## **IMPORTANT DATES**

Filling of online form commences from	8 April 2015	
Last date for submission of online form	20 May 2015	
Last date for receipt of printouts of duly completed online forms at BIT, Mesra	25 May 2015	
Tentative date for notification of schedule for Written Test & Counselling / Interviews (only on the Institute website)	10 June 2015	
Tentative dates for Written Test and Interviews / Counselling	22-26 June 2015	
Classes will commence from 15 July 2015 at all Campuses		

Note: All the dates mentioned above are tentative, and liable to be changed. Hence, please check Institute website periodically.

## Sec 1. Admission to Postgraduate Programmes 2015 – An Introduction and How to Apply

The Institute offers the following postgraduate programmes at Mesra and its Off Campuses located in India at Allahabad, Jaipur, Kolkata, Lalpur (Ranchi City), Noida and Patna. Please see the Institute website for brief details about the Institute, Departments, including course structures and syllabi, etc. and Off Campuses.

- 1. **M.E. programme in various specializations in the following disciplines:** [Duration: 2-year, 4-semester]
  - a) Automated Manufacturing Systems
  - c) Computer Aided Analysis & Design-CAAD
  - e) Electrical Engineering
    - (i) Power Systems (ii) Control Systems
    - (iii) Power Electronics
  - g) Mechanical Engineering
    - (i) Heat Power
    - (ii) Design of Mechanical Equipment
  - i) Space Engineering & Rocketry
    - (i) Aerodynamics (ii) Rocket Propulsion

- b) Chemical Engineering
- d) Civil Engineering
  - (i) Soil Mechanics & Foundation Engineering
  - (ii) Structural Engineering
- f) Electronics & Communication Engineering
  - (i) Instrumentation & Control (ii) Microwave
  - (iii) Wireless Communication
- h) Software Engineering
- 2. M.E. programme in ECE (Wireless Communication) at BIT Kolkata and BIT Patna Campuses [Duration: 2-year, 4-semester]
- 3. **M.Tech programme in the following disciplines:** [Duration: 2-year, 4-semester]
  - a) Biotechnology
  - c) Computer Science & Engineering
  - e) Environmental Science & Engineering
  - g) Information Technology
  - i) Remote Sensing

- b) Bio-medical Instrumentation
- d) Energy Technology
- f) Information Security
- h) Nano Science & Technology
- 4. M.Tech. programme in Computer Science & Engineering at BIT Allahabad, BIT Kolkata, BIT Noida and BIT Patna Campuses [Duration: 2-year, 4-semester]
- 5. M.Tech. programme in Biotechnology at BIT Kolkata Campus [Duration: 2-year, 4-semester]
- 6. M.Pharm programme in the following specializations: [Duration: 2-year, 4-semester]
  - a) Pharmaceutical Chemistry
- b) Pharmaceutics

c) Pharmacology

d) Pharmacognosy

e) Clinical Research \*

- f) Quality Assurance & Regulatory Affairs
- 7. MUP Master of Urban Planning, [Duration: 2-year, 4-semester]
- 8. M.Sc. programme in the following disciplines, [Duration: 2-year, 4-semester]
  - a) Chemistry

- b) Bio-Informatics

c) Biotechnology

d) Geo-Informatics

e) Mathematics

- f) Physics
- 9. **M.Sc. programme in Information Technology** at BIT Lalpur (Ranchi city) campus [Duration: 2-year, 4-semester]
- 10. M.Sc. in Animation Design programme\*\* at BIT Jaipur Campus [Duration: 2-year, 4-semester]\*\*
- 11. **Integrated M.Sc.**\*\* in Chemistry, Mathematics & Computing, Physics and Food Technology [after Class XII, Duration: 5-year, 10-semester, with exit option after 6 semesters B.Sc. Degree]\*\*

<sup>\*</sup> This programme is being conducted jointly in collaboration with Norwich Clinical Services, Bangalore

<sup>\*\*</sup>See our website for separate admission notification at end of April / early May

## **How to Apply:** (Please see Instructions also for details)

- To start online application, click on the link "Apply Online", create 'username' and 'password' when prompted. Do not share the username and password with anyone.
- To apply for any programmes listed above\*, eligible candidates must complete and submit the online application form available on Institute website <a href="https://www.bitmesra.ac.in">www.bitmesra.ac.in</a>. Pay application fee of Rs.2,500/- (General / OBC candidates) or Rs.1,500/- (SC/ST candidates) through State Bank Collect net banking or debit/credit card of any nationalized bank in favour of "Birla Institute of Technology" within the given time period. [Fee once remitted shall not be refunded under any circumstances].
- Send a printout of the completed form along with required enclosures (see List of Enclosures) in a A4 size envelope by Speed Post / reliable courier (means by which sender may track its movement on internet) to the office of Dean Admissions & Academic Coordination, Birla Institute of Technology, Mesra, Ranchi 835215, to reach positively by the due date.
- Write "Application for PG 2015 on top of the envelope".
- Applications reaching us after the due date are liable to be rejected / may not be processed.

\*Except for the programmes at S.No. 10 & 11, please see separate notification on our website <a href="http://www.bitmesra.ac.in">http://www.bitmesra.ac.in</a> at end of April / early May.

#### Notes:

 You may use one application form to apply for ONLY one programme – M.E. or M.Pharm or M.Tech or MUP or M.Sc. etc, and ONLY one discipline within that programme - for example only M.E. in Mechanical or only M.Tech in Computer Science & Engineering or only M.Sc. in Bioinformatics.

However, one application form can be used to apply for various specializations within some M.E. programmes (within a department) & within the M.Pharm programme, and in the case of ME (ECE- Wireless Communication), M.Tech (CSE) and M.Tech (Biotechnology) programmes, you may also use one application form to apply for different Places for Study, in order of preference.

- 2. Please use separate application form(s) to apply for two or more programmes
- 3. All candidates in their own interest should keep photocopies of their completed forms for their own reference.

#### **Acknowledgement of receipt and Registration Numbers**

- 1. Lists of eligible candidates with registration numbers will be displayed on the Institute website, whose properly completed application forms with all required enclosures have been received within the stipulated time.
- 2. Candidates must make a note of their registration numbers carefully, as the same will be required at the time of Written Test and Interview / Counselling. **No individual intimation** will be sent to candidates.
- 3. Candidates, whose names do not appear in the lists of eligible candidates, may contact the Admission Office at Mesra by telephone or fax or email.

Please see Section 4 for details of selection procedures.

The interview / counselling schedules and details of tests (wherever applicable) for the above programmes will be announced by 10<sup>th</sup> June 2015, only on our website and Notice Boards of the Institute at BIT Mesra and concerned Off Campuses. Candidates must visit our website periodically for updates and any other matter related to the admission procedures. No individual intimations will be sent to candidates.

Candidates appearing for final examinations in 2015 can also apply, and if selected can join the programme provisionally. Provisionally selected candidates will be required to sign an undertaking at the time of admission on Non-Judicial Stamp Paper of Rs. 20/- to the effect that if they fail to obtain the requisite marks in graduation / postgraduation their admission will be cancelled. The deadline for submission of mark-sheet / degree certificate is 31 October 2015, failing which the provisional admission will be cancelled. (Please see Sec 10 for format of the above undertaking).

**Sponsored candidates (as per norms of AICTE):** A few seats in some programmes are "Sponsored Seats" meant for candidates who are employed in recognized Educational Institutes / Universities / Colleges OR in Government / Defence / Research Laboratories OR in Industry, etc. Such candidates should normally have at least two years of experience. Such candidates must submit their applications in prescribed form, along with a letter of Sponsorship from their Organization.

#### Sec 2. Instructions for filling the Application Form

#### **General Guidelines:**

- 1. Before filling and submitting your application form online, you are advised to carefully read the eligibility conditions for admission to the programme (Section 3) and satisfy yourself that you fulfill all the eligibility conditions.
- 2. Clearly fill all items that are relevant to you in capital letters or numbers or tick (✓) the check box / radio button as required. Certain items are mandatory and must be filled in; otherwise, the form may be rejected.
- 3. Please ensure that all information provided is correct and accurate. Admission on false information and certificate will be ipso facto null and void and also punishable under the various provision of Indian Penal Code.
- 4. After filling in the complete form, you will be prompted to "Save & Exit" before you click the submit button. Candidates will have the option to save the form to a maximum of only two times. Please ensure that all fields are correctly filled in before you finally click on the "Submit" button. Take a printout when prompted. Note: Once you click on the "Submit" button, the Form is set to read only. You may however return to the form to view or print it again.
- 5. Candidates who seek admission under any reservation category:
  - a) All candidates belonging to the SC, ST or OBC [OBC of Jharkhand state only-Candidates must have passed their qualifying examination from State of Jharkhand and should have OBC certificates issued from the State of Jharkhand] categories must obtain caste certificates which should be in proper format and signed by appropriate authority of rank not less than SDO. They must enclose photocopy of the same. (Note: The final reservation proportion will depend on notification, if any, issued by competent authority and as accepted by the Institute).
  - b) Candidates belonging to other special categories [Person with Disability (PwD) / Ward of BIT Employee] must provide photocopy of certificate in proper format from appropriate authority.

#### **Specific Guidelines:**

- 6. While filling the form please note the following:
  - a) On opening the webpage by clicking the link ["Click here to Apply Online" (under the relevant programme heading)]. A login page will be opened where you will see 2 options:
    - If you have not yet registered before and you are accessing this for first time <u>Click here</u>
    - Or, in case you have already registered and created a profile using a 'username' and a 'password', re-enter the same in the box and click on 'Login'. All the previous information that you have saved by using the option 'Create Login' will be available to you on the screen.
  - b) For first time users: you will be prompted to enter the following details on a new screen that will appear. Follow the instructions & fill correctly using instructions given below ['c' to 'i']:
  - c) Name: Type your name (IN BLOCK LETTERS) as appears in your pass certificate of Class 10. Type name in the following format: First Name, Middle Name(s) and Surname.
  - d) **Date of Birth:** Select the appropriate date, month and year in the given boxes.
  - e) **Gender:** Click on the appropriate radio button.
  - f) **State of Eligibility:** Please select appropriate state (from drop down box) from where you have passed / are appearing for **qualifying examination** [i.e. state in which your Institute / University / College is located where you have completed / are completing qualifying examination]
  - g) **Caste:** Click on the appropriate radio button. [OBC of Jharkhand state only-Candidates must have passed their qualifying examination (graduation) from State of Jharkhand and should have OBC certificates issued from the State of Jharkhand]

- h) Other Category: Click the appropriate check box (See also instruction (5-b)).
- i) Enter any chosen 'username' [may be short form of your name] and 'password' in the appropriate boxes and Click on 'Create Login'.

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[At this stage, basic details filled by you will be saved for future. You may view your details and proceed further or stop for now and come back later at a different time / sitting as well by using the same password and username]

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- j) Programme applying for: Please select programme applying for from drop down box
- k) Choice of Specializations for M.E. and M.Pharm: If applicable, select your choice of specializations in the order of preference (only for some M.E. and the M.Pharm programmes). Please see section 3 for details of specializations in M.E. and M.Pharm programmes.
- l) For M.E. (ECE): Candidates may select all choices of specialization / place for study in order of preference [Example: 1. Microwave, Mesra, 2. Wireless Communication, Mesra, 3. Wireless Communication, Patna, 4. Instrumentation & Control, Mesra, 5. Wireless Communication Kolkata]
- m) For M.Tech (Computer Science & Engineering): Candidates may select all choices of Place for Study in order of preference (Example: 1. Mesra, 2. Allahabad, 3. Kolkata, 4. Noida, 5. Patna)
- n) **For M.Tech (Biotechnology):** Candidates may select first and second preferences of Place for Study (Example: 1. Kolkata, 2. Mesra).
- o) **Father's Name, Mother's Name:** Type names in the following format: First Name, Middle Name(s) and Surname. If space is insufficient, use initials for middle name(s). Do not use any titles, such as, Mr. / Mrs. / Sri/ Smt. etc.
- p) Educational Record:
  - a. <u>Percentage of Marks in qualifying examination:</u> Calculate as mentioned under eligibility criteria.
  - **b.** For M.E., M.Tech and MUP programmes: Candidates, who have qualified in GATE 2014 / GATE 2015, should provide their Roll No, rank, Score / Percentile and discipline papers (please also see footnotes of Sec-5). Non-GATE candidates may please see Selection Procedures.
  - **c.** For M.Pharm programmes: Candidates, who have qualified in GPAT 2014 / GPAT 2015, should provide their Roll No, Rank and Score / Percentile. Non-GPAT candidates may please see Selection Procedures.
  - d. No. of attempts: Write 1 if passed in one attempt, 2 if in two attempts, etc, if you are in final year of the qualifying examination, write "APP" under column for "No. of attempts". Enclose photocopy of certificate from Principal of your Institute stating that: (a) by 30 June 2015, you will have appeared for examinations in all subjects required for obtaining your qualifying degree. (b) You have obtained requisite marks or equivalent based on latest available grades / marks. (See: Eligibility Criteria).
  - e. <u>Subjects:</u> Use abbreviations, Phys, Chem, Math, Stat, Eng, etc.
  - f. Certificates: See also instructions 5a and 5b above.

**Note:** For candidates who are appearing / appeared in 2015 and the results are not yet declared should type 'APP' in the 'Number of Attempts'.

- q) Institute / University / College Details: Please fill the details [qualification, name of college, address & telephone number] referring to relevant papers of your own Institute / University / College. You should note these down in a piece of paper beforehand. [Qualification: Type B.E. / M.Sc. / B.Sc. or as the case may be (qualifying examination)].
- r) **Present Address / Address for Communication:** Type the full address including your full name, PIN code, STD code, Telephone number and Mobile number in the appropriate boxes.
- s) **Permanent Address:** Type the full address including your full name, PIN code, STD code, Telephone number and Mobile number in the appropriate boxes.

- t) E-mail ID: Type your E-mail ID currently using
- u) Please ensure that you have chosen the option either 'Yes" or 'No' regarding RTI provisions in the Online application.

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At this stage, you will see 2 different buttons: 'Save & Exit' and 'Submit'. If you have fully completed: click on 'Submit'. If you have not completed filling everything click on 'Save & Exit'. You will be able to enter once again only using your 'username' and 'password' to complete all the required details.

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v) After you submit the form, a new page/ screen will appear. Read the instructions on the screen carefully for payment towards application fee.

Payment of Application Fee through State Bank Collect [candidate may use the net banking or debit / credit card payment through any nationalized bank].

- On clicking the link "Click here to pay application fee through State Bank Collect" a disclaimer clause page will appear, where candidate has to click on check box to proceed for the payment.
- New page will appear where candidate need to select "Application Fee" from the drop down box.
- Enter / select the following details:
   Name, Programme, Session, Date of Birth, Mobile Number, Caste/Category, Application
   Number, Candidate Address and Application form fee etc. (while filling form, please do not use special character e.g. % # @ & ^ \* etc. including brackets and commas).
- Take a print out of the payment receipt that is generated after successful payment transaction.
- By using username and password click on the link "<u>Click here to enter Transaction ID / Reference No.</u>" Please enter the Transaction Id / Reference No. same as provided on the payment receipt.
- After entering <u>Transaction ID / Reference No.</u> click on the "Confirm and Continue" button to complete the online application.

#### Note:

- (a) The original copy of the payment receipt should be attached along with printout of online application form.
- (b) Bank charges are extra and will be payable by the candidate only. Fee once remitted shall not be refunded under any circumstances.

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w) At this stage the candidates are required to take the printout of application form. A recent colour photograph of good quality must be pasted firmly in the box provided. Attach one extra photograph to the form using a clean paper clip and send a printout of the completed form along with required enclosures (see List of Enclosures) in a A4 size envelope by Speedpost / reliable courier (means by which sender may track its movement on internet) to the office of Dean, Admissions & Academic Coordination, Birla Institute of Technology, Mesra, Ranchi – 835215.

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x) **Declaration and Undertakings:** After filling the above details, your online form filling is complete. Submit online and then take a print out of the form. You and your legal guardian / parent are required to sign the declarations and undertaking on the last page of the printed form.

Note: The Admissions Office may not undertake detailed scrutiny of applications before counselling, and all shortlisted applicants called for interviews / counselling, except those whose applications are summarily rejected, are allowed to appear at interviews / counselling on purely provisional basis, subject to their eligibility being verified at the time of interviews / counselling. Merely being allowed to appear at the interviews / counselling will not be considered as a ground for being eligible for admission.

# Sec 3. Eligibility criteria for the M.E., M.Pharm, M.Tech, Master of Urban Planning and M.Sc. Programmes 2015

#### 3 A) Minimum Eligibility Criteria for the M.E. programmes (MEC - PG1):

1. Candidates must hold a B.E. / B.Tech / AMIE or equivalent degree in the appropriate disciplines / branches mentioned below for the respective courses. Candidates must have a first class or minimum 60% marks in average (45% for SC/ST) in graduation.

[Sponsored candidates must have minimum 55% in average (45% for SC/ST) in graduation].

Candidates should preferably be GATE 2014/ GATE 2015 qualified. Non-GATE candidates may also apply. However, their applications will be considered only after applicants who have qualified in GATE have been considered, interviewed.

- 2. Candidates appearing for final examinations of their Bachelor's programme in 2015 can also apply and if selected can join the programme provisionally. At the time of the interview / counselling they must bring a certificate in original from the Principal of Institute stating that:
  - a) by 30 June 2015, (s)/he will have appeared for examination in all subjects required for obtaining his/her Bachelor's degree.
  - b) (s)/he has obtained requisite marks [60% (45% for SC/ST) upto pre-final year / semester] or equivalent based on latest available grades / marks.

Provisionally selected candidates will be required to sign an undertaking at the time of admission on Non-Judicial Stamp Paper of Rs. 20/- (as format given in Sec-10). Further, their admission will be confirmed only when they submit the mark sheet and a certificate of having passed the Bachelor's degree / equivalent qualification with at least 60% marks (45% in case of SC/ST). They must submit proof of passing their final examinations with requisite marks by 31 October 2015. Non-fulfillment of this condition will automatically result in the cancellation of the provisional admission.

3. Candidates with qualifications acquired through correspondence or distance-learning programmes are eligible only if (a) the programmes are recognized by the tripartite panel of AICTE-UGC-DEC, (b) they have passed the qualifying examination at the time of applying, with minimum 60% marks in average (45% for SC/ST) calculated as per item (1) above. They must enclose photocopy of pass certificate and marksheets of qualifying examination with their application [Appearing candidate in distance learning programmes, whose results are yet to be declared, are not eligible to apply].

Please see Selection Procedures for details. Please also see footnote below.

- (1) Candidates with foreign diplomas should see the EdCIL website for equivalence (http://www.edcil.co.in), and if required should obtain an equivalence certificate from the evaluation division of the AIU (website http://www.aiuweb.org).
- (2) In case any Board / University awards grades instead of marks, the calculation of equivalent marks would be based on the procedure prescribed by the Board / University. In case a University does not have any scheme for converting CGPA into equivalent marks, the equivalence would be established by dividing obtained CGPA with the maximum possible CGPA and multiplying the resultant with 100.
- (3) At any level of the studies [class X, class XII or graduation], a candidate / applicant must have passed all the required subjects at that level from the same board/ University.

## M.E. Programmes at BIT Mesra & its Off Campuses:

Other Criteria in addition to the Minimum Eligibility Criteria (MEC - PG1) above:

M.E. Programme (with	Specialization(s) offered	Eligible Branches	GATE Sahalarahina
Department Offering the course)	οπετεα		Scholarships available
Automated Manufacturing Systems (Production Engineering)	-	Production / Manufacturing / Mechanical / Industrial Engineering / Electronics & Communication / Computer Science / Mechatronics / Electrical	Available
Chemical Engineering (Chemical Engineering & Technology)	-	Chemical / Polymer / Metallurgical & Materials / Biotechnology, Food & Biochemical / Chemical Technology or equivalent	Not Available
Civil (Civil & Environmental Engineering)	a) Soil Mechanics & Foundation Engineering	Civil	Available
	b) Structural Engineering	Civil	Available
Computer Aided Analysis & Design - CAAD (Mechanical Engineering)	-	Any branch of Engineering	Available
Electrical	a) Power Systems	Electrical / Electrical & Electronics	Available
(Electrical & Electronics Engineering)	b) Control Systems	Electrical / Electronics & Communication / Electrical & Electronics / Electrical Instrumentation & Control or equivalent	Available
	c) Power Electronics	Electrical / Electrical & Electronics / Electronics & Communication / Instrumentation & Control or equivalent	Available
Electronics & Communication	a) Instrumentation & Control	Electronics & Communication / Instrumentation or equivalent	Available
(Electronics &	b) Microwave	Electronics & Communication or equivalent	Available
Communication Engineering)	c) Wireless Communication	Electronics & Communication or equivalent	Available at Mesra & Patna Campuses only
Mechanical	a) Heat Power	Mechanical / Chemical / Marine	Available
(Mechanical Engineering)	b) Design of Mechanical Equipment	Mechanical / Production	Available
Software Engineering (Computer Science & Engineering)	-	Computer Science / Information Technology or equivalent	Available
Space Engineering & Rocketry	a) Aerodynamics	Mechanical/Aeronautical/ A.M.Ae.S.I. / AMIE or equivalent	Available
(Space Engineering & Rocketry)	b) Rocket Propulsion	Mechanical / Aeronautical / Chemical / A.M.I.Ch.E. / A.M.Ae.S.I. / AMIE or equivalent	Available

Note: Candidates admitted in M.E. programmes with valid GATE 2014/ GATE 2015 score will be considered to receive scholarships only if approved and amount released by the funding agency.

#### 3 B) Minimum Eligibility Criteria for the M.Pharm programme (MEC - PG2):

1. **For M.Pharm programme:** Candidates must hold a B.Pharm degree from a PCI and AICTE approved Institute. Candidates must have a first class or minimum 60% marks in average (45% for SC/ST) in graduation.

[Sponsored candidates must have minimum 55% in average (45% for SC/ST) in graduation].

Candidates should preferably be GPAT 2014 / GPAT 2015 qualified. Non-GPAT candidates may also apply. However, their applications will be considered only after applicants who have qualified in GPAT have been considered, interviewed (for details, please see the selection procedure).

- 2. Candidates appearing for final examinations of their Bachelor's programme / qualifying examination in 2015 can also apply and if selected can join the programme provisionally. At the time of the interview / counselling they must bring a certificate in original from the Principal of Institute stating that:
  - a). by 30 June 2015, (s)/he will have appeared for examination in all subjects required for obtaining his/her Bachelor's degree.
  - b). (s)/he has obtained requisite marks [60% (45% for SC/ST) upto pre-final year / semester] or equivalent based on latest available grades / marks.

Provisionally selected candidates will be required to sign an undertaking at the time of admission on Non-Judicial Stamp Paper of Rs. 20/- (as format given in Sec-10). Further, their admission will be confirmed only when they submit the mark sheet and a certificate of having passed the Bachelor's degree / equivalent qualification with at least 60% marks (45% in case of SC/ ST). They must submit proof of passing their final examinations with requisite marks by 31 October 2015. Non-fulfillment of this condition will automatically result in the cancellation of the provisional admission.

Please see Selection Procedures for details. Please also see footnotes below.

#### Notes:

- (1) Candidates with foreign diplomas should see the EdCIL website for equivalence (http://www.edcil.co.in), and if required should obtain an equivalence certificate from the evaluation division of the AIU (website http://www.aiuweb.org).
- (2) In case any Board / University awards grades instead of marks, the calculation of equivalent marks would be based on the procedure prescribed by the Board / University. In case a University does not have any scheme for converting CGPA into equivalent marks, the equivalence would be established by dividing obtained CGPA with the maximum possible CGPA and multiplying the resultant with 100.
- (3) At any level of the studies [class X, class XII, graduation], a candidate / applicant must have passed all the required subjects at that level from the same board/ University.

Other Criteria in addition to the Minimum Eliqibility Criteria (MEC - PG2) above:

Name of the Department	Specialization(s) offered	Eligibility	GPAT Scholarship available
Pharmaceutical Science & Technology	M.Pharm in a) Pharmaceutics b) Pharmaceutical Chemistry c) Pharmacognosy d) Pharmacology e) Clinical Research* f) Quality Assurance & Regulatory Affairs	Candidate must hold a B. Pharm degree from PCI & AICTE approved Institute	Available

<sup>\*</sup> This programme is being conducted jointly in collaboration with Norwich Clinical Services, Bangalore

Note: The candidates admitted in M.Pharm programme with valid GPAT 2014 / GPAT 2015 score will be considered to receive scholarships only if approved and amount released by the funding agency.

### 3 C) Minimum Eligibility Criteria for the M.Tech programmes (MEC - PG3):

- 1. Candidates must hold EITHER a
  - a). B.E. / B.Tech / AMIE / MCA / equivalent degree in the appropriate disciplines / branches mentioned below for the respective courses, with a first class or minimum 60% marks in average (45% for SC/ST) in graduation / MCA.
  - b). M.Sc. / M.A. degree or equivalent in the appropriate disciplines / branches mentioned below for the respective courses with 55% (45% for SC/ST), after graduating with a Bachelor's Degree or equivalent qualification in 10+2+3 system from a recognized University.

Sponsored candidates must have minimum 55% in average (45% for SC/ ST) in B.E. / B.Tech or equivalent / MCA, or 50% in average (45% for SC/ ST) in M.Sc. / M.A. degree in the appropriate disciplines / branches mentioned below.

Candidates should preferably be GATE 2014 / GATE 2015 qualified. Non-GATE candidates may also apply. However, their applications will be considered only after applicants who have qualified in GATE have been considered, interviewed.

- 2. Candidates appearing for final examinations in 2015 can also apply and if selected can join the programme provisionally. At the time of the interview / counselling they must bring a certificate in original from the Principal of Institute stating that:
  - a). by 30 June 2015, (s)/he will have appeared for examination in all subjects required for obtaining his/her qualifying degree.
  - b). He/she has obtained requisite marks or equivalent based on latest available grades / marks.

Provisionally selected candidates will be required to sign an undertaking at the time of admission on Non-Judicial Stamp Paper of Rs. 20/- (as format given in Sec-10). Further, their admission will be confirmed only when they submit the mark sheet and a certificate of having passed the qualifying examination with requisite marks. They must submit proof of passing their final examinations with requisite marks by 31 October 2015. Non-fulfillment of this condition will automatically result in the cancellation of the provisional

3. Candidates with qualifications acquired through correspondence or distance-learning programmes are eligible only if (a) the programmes are recognized by the tripartite panel of AICTE-UGC-DEC, (b) they have passed the qualifying examination at the time of applying, with minimum requisite marks, calculated as per item (1) above. They must enclose photocopy of pass certificate and marksheets of qualifying examination with their application. [Appearing candidate in distance learning programmes, whose results are yet to be declared, are not eligible to apply].

Please see Selection Procedures for details. Please also see footnote below.

- (1) Candidates with foreign diplomas should see the EdCIL website for equivalence (http://www.edcil.co.in), and if required should obtain an equivalence certificate from the evaluation division of the AIU (website http://www.aiuweb.org).
- (2) In case any Board / University awards grades instead of marks, the calculation of equivalent marks would be based on the procedure prescribed by the Board / University. In case a University does not have any scheme for converting CGPA into equivalent marks, the equivalence would be established by dividing obtained CGPA with the maximum possible CGPA and multiplying the resultant with 100.
- (3) At any level of the studies [class X, class XII, graduation or postgraduation], a candidate / applicant must have passed all the required subjects at that level from the same board/ University.

## M.Tech Programmes at BIT Mesra & its Off Campuses:

Other Criteria in addition to the Minimum Eligibility Criteria (MEC - PG3) above:

	Ovelifying Exeminations / Dissiplines Eligible	CATE
M.Tech Programme	Qualifying Examinations / Disciplines Eligible	GATE
(With Department Offering the		Scholarships
course)		available
Biotechnology	B.E. / B.Tech in Biotechnology / Biochemical Engineering / Chemical Engineering	Available
(Bio-Engineering)	/ Food Technology / B. Pharm or equivalent	at Mesra
	OR	campus only
	M.Sc. in Biotechnology / Biochemistry / Microbiology / Plant Biotechnology	
Bio-Medical Instrumentation	B.E. / B.Tech in Biomedical / Biotechnology / Computer / Electrical / Electronics /	Not Available
(Bio-Engineering)	Information Technology / Instrumentation Engineering / B.Pharm / MBBS OR	
	M.Sc. in Biomedical Instrumentation / Computer / Electronics / Information Science / Instrumentation / Physics / Mathematics / Chemistry / Bio Sciences	
Computer Science &	B.E. / B.Tech in Computer Science / Information Technology / Electronics /	Available at Mesra
Engineering	Electrical or equivalent	& Patna
(Computer Science &	Or MCA or M. Sc in Computer Science or equivalent	Campuses only
Engineering)	The state of the s	
Energy Technology	B.E. / B.Tech in any discipline / B.Arch	Available
(Mechanical Engineering)	OR	7 11 611 61 61
(	M.Sc. in Physics / Chemistry / Mathematics	
Environmental Science &	B.E./ B.Tech or equivalent in any branch of Engineering	Available
Engineering	OR	, tranabio
(Civil & Environmental	M.Sc. in Environmental Sciences, Life Sciences and Biological Sciences	
Engineering)	Thios. In Environmental estations, End estations and Biological estations	
Information Security	B.E. / B.Tech in Computer Science / Information Technology / Electronics /	Available
(Computer Science &	Or	7.110.110.10
Engineering)	MCA or M.Sc. in Computer Science / Information Technology / Electronics with	
,	Mathematics at graduate level	
Information Technology	B.E. / B.Tech in Computer Science / Information Technology	Available
(Computer Science &	Or	
Èngineering)	MCA or M.Sc. in Computer Science / Information Technology with Mathematics	
,	at graduate level	
Nano Science & Technology	B.E. / B.Tech in Ceramics/ Chemical / Computer Engineering / Electrical /	Available
(Physics)	Electronics / Engineering Physics / Instrumentation / Manufacturing / Mechanical	
	/ Metallurgy & Materials / Nano Technology / Nuclear Science & Technology /	
	Polymer / Production Engineering or equivalent	
	OR	
	M.Sc. in Physics / Applied Physics / Electronics / Photonics	
	OR	
	M.Sc. in Chemistry / Applied Chemistry / Materials Science / Nanotechnology	
	with Mathematics up to at least Bachelor's level	
Remote Sensing	a) B. Arch or B.E. / B.Tech in any branch of Engineering, OR	Available
(Remote Sensing)	b) Masters degree in Agriculture / Atmospheric Sciences / Botany / Climatology	
	/ Chemistry / Computer Applications / Computer Science / Disaster	
	Management / Electronics / Environmental Science / Fisheries / Forestry /	
	Geography / Geology / Geophysics / Geo-Informatics / GIS / Information	
	Science / Mathematics / Meteorology / Oceanography / Physics / Remote	
	Sensing / Soil Science / Statistics / Town Planning / Zoology / allied	
	disciplines	
	c) Candidates must have stereoscopic vision and normal colour vision	

Note: Candidates admitted in M.Tech programmes with valid GATE 2014 / GATE 2015 score will be considered to receive scholarships only if approved and amount released by the funding agency.

### 3 D) Minimum Eligibility Criteria for Master in Urban Planning (MUP) programme (MEC - PG4):

- 1. Candidates must hold EITHER a
  - a) B.Arch / B.Planning or equivalent or B.E. in Civil Engineering with a first class or minimum 60% marks in average (45% for SC/ST) in graduation.
  - b) M.A. / M.Sc. degree or equivalent in Geography, Economics, Sociology or Statistics with 55% marks (45% for SC/ST) after graduating with a Bachelor's Degree or equivalent qualification in 10+2+3 system from a recognized University

Sponsored candidates must have minimum 55% in average (45% for SC/ ST) in B.Arch / B.Planning or equivalent or B.E. in Civil Engineering, or 50% in average (45% for SC/ ST) in M.A. / M.Sc. degree in Geography, Economics, Sociology or Statistics.

Candidates should preferably be GATE 2014 / GATE 2015 qualified. Non-GATE candidates may also apply. However, their applications will be considered only after applicants who have qualified in GATE have been considered, interviewed.

- 2. Candidates appearing for final examinations in 2015 can also apply and if selected can join the programme provisionally. At the time of the interview / counselling they must bring a certificate in original from the Principal of Institute stating that:
  - a) by 30 June 2015, (s)/he will have appeared for examination in all subjects required for obtaining his/her qualifying degree.
  - b) He/she has obtained requisite marks or equivalent based on latest available grades / marks.

Provisionally selected candidates will be required to sign an undertaking at the time of admission on Non-Judicial Stamp Paper of Rs. 20/- (as format given in Sec-10).

Further, their admission will be confirmed only when they submit the mark sheet and a certificate of having passed the qualifying examination with requisite marks. They must submit proof of passing their final examinations with requisite marks by 31 October 2015. Non-fulfillment of this condition will automatically result in the cancellation of the provisional admission.

3. Candidates with qualifications acquired through correspondence or distance-learning programmes are eligible only if (a) the programmes are recognized by the DEC-IGNOU for M.A./M.Sc. and tripartite panel of AICTE-UGC-DEC for others, (b) they have passed the qualifying examination at the time of applying, with minimum requisite marks, calculated as per item (1) above. They must enclose photocopy of pass certificate and marksheets of qualifying examination with their application [Appearing candidate in distance learning programmes, whose results are yet to be declared, are not eligible to apply].

Please see Selection Procedures for details. Also see footnote below.

### Notes:

- (1) Candidates with foreign diplomas should see the EdCIL website for equivalence (http://www.edcil.co.in), and if required should obtain an equivalence certificate from the evaluation division of the AIU (website http://www.aiuweb.org).
- (2) In case any Board / University awards grades instead of marks, the calculation of equivalent marks would be based on the procedure prescribed by the Board / University. In case a University does not have any scheme for converting CGPA into equivalent marks, the equivalence would be established by dividing obtained CGPA with the maximum possible CGPA and multiplying the resultant with 100.
- (3) At any level of the studies [class X, class XII, graduation or postgraduation], a candidate / applicant must have passed all the required subjects at that level from the same board/ University.

Other Criteria in addition to the Minimum Eligibility Criteria (MEC - PG4) above:

Programme (With Department Offering the course)	Qualifying Examinations / Disciplines Eligible	GATE Scholarship Available
Master in Urban Planning (MUP) (Architecture)	B. Arch / B. Planning or equivalent / B.E. Civil with 60% marks in aggregate (45% for SC/ST), OR M.A. / M.Sc. Geography, Economics, Sociology or Statistics with 55% marks (45% for SC/ST)	Available

Note: Candidates admitted in MUP programme with valid GATE 2014 / GATE 2015 score will be considered to receive scholarships only if approved and amount released by the funding agency.

## 3 E) Minimum Eligibility Criteria for the M.Sc. programmes offered at BIT Mesra and BIT Lalpur Campuses (MEC – PG5):

- 1. Candidates must hold a Bachelor's Degree or equivalent qualification of any of the Universities incorporated by an act of the central or state legislatures in India or other educational institutions established by an act of Parliament or declared to be deemed as a University under section 3 of UGC Act, 1956, or possess an equivalent qualification recognized by the Ministry of HRD, Government of India / AIU. This degree must entail a minimum of three years of education after completing higher secondary schooling [Class 12 or equivalent] (10+2+3 system).
- 2. Candidates of B.Sc. / B.A. Honours must have minimum 55% marks in average (45% for SC/ST) in their Honours subject. Candidates of other graduate courses must have minimum 55% marks in average (45% for SC/ST) in graduation.
- 3. Candidates appearing for final examinations of their Bachelor's programme in 2015 can also apply and if selected can join the programme provisionally. At the time of the counselling they must bring a certificate in original from the Principal of Institute stating that:
  - a). by 30 June 2015, (s)/he will have appeared for examination in all subjects required for obtaining his/her qualifying degree.
  - b). He/she has obtained requisite marks or equivalent based on latest available grades / marks.

Provisionally selected candidates will be required to sign an undertaking at the time of admission on Non-Judicial Stamp Paper of Rs. 20/- (as format given in Sec-10). Further, their admission will be confirmed only when they submit the mark sheet and a certificate of having passed the Bachelor's degree / equivalent qualification with at least 55% marks (45% in case of SC/ ST). They must submit proof of passing their final examinations with requisite marks by 31 October 2015. Non-fulfillment of this condition will automatically result in the cancellation of the provisional admission.

4. Candidates with qualifications acquired through correspondence or distance-learning programmes are eligible only if (a) the programmes are recognized by the DEC-IGNOU, (b) they have passed the qualifying examination at the time of applying, with minimum 55% marks in average (45% for SC/ST) calculated as per item (2) above. They must enclose photocopy of pass certificate and marksheets of qualifying examination with their application [Appearing candidate in distance learning programmes, whose results are yet to be declared, are not eligible to apply].

- (1) Candidates with foreign diplomas should see the EdCIL website for equivalence (http://www.edcil.co.in), and if required should obtain an equivalence certificate from the evaluation division of the AIU (website http://www.aiuweb.org).
- (2) In case any Board / University awards grades instead of marks, the calculation of equivalent marks would be based on the procedure prescribed by the Board / University. In case a University does not have any scheme for converting CGPA into equivalent marks, the equivalence would be established by dividing obtained CGPA with the maximum possible CGPA and multiplying the resultant with 100.
- (3) At any level of the studies [class X, class XII or graduation], a candidate / applicant must have passed all the required subjects at that level from the same board/ University.

## Other Criteria in addition to the Minimum Eligibility Criteria (MEC - PG5) above

S.No.	M.Sc. Programme (With Department Offering the course)	Campus(s)	Qualifying Examinations / Disciplines Eligible
1	Bioinformatics (Bio-Engineering)	Mesra	Graduate in any branch of Applied Science / Biological Science / Chemical Science / Pharmacy / Engineering
2	Biotechnology (Bio-Engineering)	Mesra	B.Sc. with Biotechnology / Physical / Chemical / Biological / Agricultural / Pharmaceutical or equivalent
3	Chemistry (Chemistry)	Mesra	B.Sc. with Chemistry, Physics, Mathematics / Biology or equivalent and Mathematics as a subject at Class 12 level
4	Geoinformatics (Remote Sensing)	Mesra	a) Graduate in Agriculture / Atmospheric Sciences / Botany / Chemistry / Computer Applications / Computer Science / Disaster Management / Ecology & Environmental Sciences / Fisheries / Forestry / Geography / Geology / GIS / Information Science / Mathematics / Oceanography / Physics / Soil Science / Statistics / Town Planning / Zoology / allied disciplines b) Candidates must have stereoscopic vision and normal colour vision
5	Mathematics (Mathematics)	Mesra	B.Sc. with Mathematics, Physics, Chemistry or equivalent
6	Physics (Physics)	Mesra	B.Sc. Honours with Physics, Chemistry, Mathematics or Physics, Chemistry, Statistics or equivalent
7	Information Technology (MIT) – for boys & girls both (Computer Science & Engineering)	Lalpur (Ranchi city)	Bachelor of Computer Applications / B.Sc. Electronics / B.Sc. Computer Science

No scholarships are available for these programmes.

### Sec 4. Selection Procedures, Expected Dates of Tests & Interviews / Counselling

#### (A) Selection Procedures for the M.E., M.Tech, and MUP programmes:

**GATE qualified candidates:** Provisional selections to the M.E., M.Tech and MUP programmes will be on the basis of scores obtained in GATE 2014 / GATE 2015, previous academic record and personal interviews / counselling, provided that the candidates fulfill the eligibility criteria mentioned in Sec - 3A, 3C & 3D.

**Non-GATE** candidates: Provisional selections of Non-GATE candidates will be on the basis of written test, previous academic record and personal interviews / counselling, provided that the candidates fulfill the eligibility criteria mentioned in Sec – 3A, 3C & 3D. However, their admission will be considered only after applicants who have qualified in GATE 2014 / GATE 2015 have been considered and admitted, subject to the availability of seats. **There will be no scholarships for these candidates.** Syllabus of the test will be same as for GATE.

#### (B) Selection Procedures for the M.Pharm programme:

**GPAT Qualified candidates:** Provisional selections to the M.Pharm programme in Pharmaceutical Chemistry, Pharmaceutics, Pharmacognosy, Pharmacology, Clinical Research and Quality Assurance & Regulatory Affairs will be on the basis of scores obtained in GPAT 2014 / GPAT 2015, and previous academic record and personal interviews / counselling, provided that the candidates fulfill the eligibility criteria mentioned in Sec 3B.

**Non-GPAT** candidates: Provisional selections of Non-GPAT candidates will be on the basis of written test, previous academic record and personal interviews / counselling, provided that the candidates fulfill the eligibility criteria mentioned in Sec-3B. However, their admission will be considered only after applicants who have qualified in GPAT 2014 / GPAT 2015 have been considered and admitted, subject to the availability of seats. **There will be no scholarships for these candidates.** Syllabus of the test will be same as for GPAT.

(C) Selection Procedures for the M.Sc. programmes: Provisional selections to the M.Sc. programmes will be on the basis of previous academic record and counselling for shortlisted candidates at Mesra, Kolkata and Lalpur provided that the candidates fulfill the eligibility criteria mentioned in Sec-3E. There will be no scholarships for students of these programmes.

[Note: Admission of Non-GATE / Non-GPAT candidates will be considered only after applicants who have qualified in GATE 2014 or GATE 2015 / GPAT 2014 or GPAT 2015 have been considered and admitted, subject to the availability of seats].

Candidates admitted in M.E. / M.Tech / MUP with valid GATE 2014 or GATE 2015 and M.Pharm with valid GPAT 2014 or GPAT 2015 score will be considered to receive scholarships only if approved and amount released by the funding agency (see also footnotes in Section 5).

Candidates must visit our website http://www.bitmesra.ac.in occasionally for updates / any other matters related to admission procedures.

## **Expected Dates of tests / interviews / counselling for all programmes:**

Interview / counselling schedules and details of tests (wherever applicable) for the above programmes will be announced by 10<sup>th</sup> June 2015, only on the Institute website and Notice Boards of the Institute at BIT Mesra and its other Campuses. Candidates must visit our website periodically for updates and any other matter related to the admission procedures. <u>No individual</u> intimations will be sent to candidates.

The written tests (wherever applicable) and counselling / interviews of eligible candidates will be held tentatively between 22-26 June 2015.

#### Note, FOR:-

- 1. M.E. ECE (Wireless Communication) the written test and interview / counselling will be held at BIT Mesra, BIT Kolkata & BIT Patna Campuses, based on candidate's first choice of Place for Study.
- 2. M.Tech (Computer Science & Engineering) the written test and interview / counselling will be held at BIT Mesra, BIT Allahabad, BIT Kolkata, BIT Noida & BIT Patna campuses, based on candidate's first choice of Place for Study.
- 3. M.Tech (Biotechnology) the written test and interview / counselling will be held at BIT Mesra and BIT Kolkata campuses, based on candidate's first choice of Place for Study.
- 4. M.Sc. (Information Technology) the counselling will be held at BIT Lalpur Campus only.

Provisional selection lists, along with procedures for admissions, will be notified the day after the interviews / counselling, on the Institute website and Notice Boards of the Institute / its other concerned Campus only. **No separate intimations will be sent to candidates.** 

Provisionally selected candidates will be required to take admission by the date given, failing which vacant seats may be allotted to waitlisted candidates. The list of waitlisted candidates will also be announced on our website and Institute Notice Boards only. **No separate intimations will be sent to candidates.** 

Candidates must visit our website http://www.bitmesra.ac.in occasionally for updates / any other matters related to admission procedures.

## Documents required at the time of counselling / interviews and admission

Candidates must carry the originals of the following documents at the time of reporting for counselling / interviews and admission, as well as one set of photocopies:

- 1. Pass certificate of Class 10 for proof of age
- 2. Marksheet of Class 10
- 3. Marksheet of Class 12 / Intermediate or equivalent
- 4. Certificates and marksheets of Graduation / qualifying examination

OR

Marksheets upto pre-final year for appearing candidates of graduation / qualifying examination in 2015. They must bring a certificate in original from the Principal of Institute stating that:

- a). by 30 June 2015, (s)/he will have appeared for examination in all subjects required for obtaining his/her qualifying degree.
- b). (s)/he has obtained requisite marks or equivalent based on latest available grades / marks.
- 5. Candidates with qualifications acquired through correspondence or distance-learning programmes must carry proof of pass certificate, marksheets of qualifying examination and approval of DEC (Distance Education Council).
- 6. GATE 2014/2015 admit card and GATE 2014 / GATE 2015 Score card for M.E. / M.Tech and MUP programmes (if applicable).
- 7. GPAT 2014/2015 admit card and GPAT 2014 / GPAT 2015 Score card for M.Pharm programme (if applicable)
- 8. Caste certificate / special category certificate (if applicable).
- 9. One passport size photograph, identical to the photograph affixed in the application form.
- 10. Photo identification: (Driving license, Passport, PAN Card, Voter ID, College ID, Employee Identification Card are acceptable).

## They should also carry a photocopy of their duly completed form.

#### Documents required at the time of admission:

If provisionally selected, candidates will be required to submit all the above documents in original (except the Photo ID) at the time of admission, along with the requisite fees.

Provisionally selected candidates appearing for final examinations in 2015 will be required to sign an undertaking at the time of admission on Non-Judicial Stamp Paper of Rs. 20/- to the effect that if they fail to obtain the requisite marks in graduation / postgraduation their admission will be cancelled. The deadline for submission of marksheet / degree certificate is 31 October 2015, failing which the provisional admission will be cancelled. (Please see Sec 10 for format of the above undertaking).

Note: Eligible SC/ST and PwD students admitted to PG programmes 2015 at Mesra should submit their scholarship form in the Office of Registrar, for the academic year by February for processing scholarship to SC/ST and PwD students each year, as per UGC quidelines.

# Sec 5. Number of seats for M.E. / M.Tech / M.Pharm / MUP / M.Sc. programmes, GATE / GPAT Scholarships<sup>\$</sup>, Reservations

## **TABLE 1: Number of seats**

Programmes	Total Seats*
(A) M.E. Programmes (4-Semester) at Mesra	
Automated Manufacturing Systems	25
Chemical Engineering **	18
Civil (Soil Mechanics & Foundation Engineering – 12, Structural Engineering –12)	24
Computer Aided Analysis & Design - CAAD	18
Electrical (Control Systems – 12, Power Systems – 12, Power Electronics – 18)	42
Electronics & Communication (Instrumentation & Control – 12, Microwave – 12, Wireless	42
Communication – 18)	
Mechanical (Heat Power – 12, Design of Mechanical Equipment – 12)	24
Software Engineering	15
Space Engineering & Rocketry (Aerodynamics – 12, Rocket Propulsion – 12)	24
(B) M.E. Programme (4-Semester) at its Off Campuses	18
Electronics & Communication (Wireless Communications)** at BIT Kolkata Campus	
Electronics & Communication (Wireless Communications) at BIT Patna Campus	18
(C) M. Took Duogrammas (4 Comporter) et Manue	
(C) M. Tech Programmes (4-Semester) at Mesra	18
Bio-medical Instrumentation **	18
Computer Science & Engineering  Engrav Technology	16 18
Energy Technology  Environmental Science & Engineering	18
Environmental Science & Engineering	18
Information Technology	18
Information Security	
Nano Science & Technology  Remote Sensing	18 18
Remote Sensing	10
(D) M.Tech Programme (4-Semester) at its Off Campuses	
Biotechnology at BIT Kolkata Campus**	18
Computer Science & Engineering at BIT Allahabad Campus **	18
Computer Science & Engineering at BIT Kolkata Campus **	18
Computer Science & Engineering at BIT Noida Campus **	18
Computer Science & Engineering at BIT Patna Campus	18
(E) M. Pharm Programme (4-Semester) at Mesra	
M. Pharm (Pharmaceutics-18, Pharmaceutical Chemistry-18, Pharmacology-18, Pharmacognosy-06)	60
M. Pharm Clinical Research	12
M. Pharm Quality Assurance and Regulatory Affairs	12
M. Pharm. Programme under Q.I.P.	8
(F) Master of Urban Planning (MUP) Programme(4-Semester) at Mesra	12
()	

\$Candidates admitted in M.E. / M.Tech / MUP with valid GATE 2014/ GATE 2015 score and M.Pharm with valid GPAT 2014 / GPAT 2015 score will be considered to receive scholarships only if approved and amount released by funding agency (see also notes below).

\*The total number of seats in a programme includes the sponsored seats and indicates the maximum sanctioned strength.

<sup>\*\*</sup>No scholarships are available for these programmes (UGC approval applied for)\*\*

(G) M.Sc. Programmes	Total S	Total Seats		
	Main Campus, Mesra	Lalpur (Ranchi City) Campus		
M.Sc. in Bioinformatics (4-Semester)	20			
M.Sc. in Biotechnology (4-Semester)	30			
M.Sc. in Chemistry (4-Semester)	15			
M.Sc. in Geoinformatics (4-Semester)	20			
M.Sc. in Information Technology (4-Semester)	-	30		
M.Sc. in Mathematics (4-Semester)	15			
M.Sc. in Physics (4-Semester)	15			

No scholarships are available for M.Sc. programmes

**Sponsored candidates:** A few seats in some programmes are "Sponsored Seats" meant for candidates who are employed in recognized Educational Institutes / Universities / Colleges OR in Government / Defence / Research Laboratories OR in Industry, etc. Such candidates should normally have at least two years of experience. Such candidates must submit their applications in prescribed form, along with a letter of Sponsorship from their Organization.

The Institute reserves the right to lower the intake in a programme without showing any reason.

The Institute also reserves the right not to offer a particular programme in case the number of students found to be eligible to be admitted is less than 50% in number.

#### **Reservations:**

- 1. For all programmes at the Institute which are supported by any of the respective State Governments, the reservation criteria for the state quota are as per the norms of the respective State Government.
- 2. For all other programmes the reservation criteria for SC & ST are as per the statutory norms of Central Govt. (SC -15% & ST 7.5%)
- 3. The Institute observes statutory reservation for Persons with Disability (3%).
- 4. Upto 6% of the seats in each M.Sc. programmes at its Off Campuses (other than Mesra) are reserved for candidates who are sons and daughters of serving employees of BIT, who otherwise have qualified for admissions.
- 5. At Mesra and Lalpur, 50% of the total seats are reserved for candidates from Jharkhand State, and the remaining 50% of the total seats are distributed in the rest of the states. The domicile of a candidate for the purpose shall be determined on the basis of place of passing his/her qualifying examination (the location of his/her Institute).

[In case sufficient numbers of suitable candidates from any group are not available, the Institute reserves the right to fill the seats from the other group].

However the final reservation proportion will depend on notification, if any, issued by competent authority and as accepted by the Institute.

## TABLE 2 (a): Fees payable for M.E., M.Pharm, M.Tech and MUP Programmes at Mesra

Fee payable at the time of admission and in each subsequent semester

Particulars	1st Sem	2nd Sem	3rd Sem	4th Sem
Tuition Fee	67500	67500	72500	72500
Development Fee	4500	4500	5000	5000
Institute Exam Fee	3500	3500	4000	4000
Total :	75500	75500	81500	81500

Hostel Seat Rent*, Electricity and Transport etc.	12500	12500	13500	13500
G. Total:	88000	88000	95000	95000

<sup>\*</sup> Hostel fees are subject to revision in future

Additional amount to be paid at the time of admission:	
(i) Admission Fee (One time only) =Rs.15,000.00 and	Total Rs.25,000.00
(ii) Caution Money (One time only-Refundable)=Rs.10,000.00	

- 1. Hostel mess charges at Mesra will range from approximately Rs. 2,000/- to Rs. 3,000/- per month. Students at Mesra will be required to deposit Hostel Caution Money\* (One Time only Refundable) of Rs.5,000/- .They will also be required to pay suitable mess advance at the beginning of each semester, which will be adjusted against their mess charges. For the July 2015 session, this mess advance will be Rs. 15,000/- (boys), Rs. 10,000/- (Girls).
  - \*Hostel Caution Money (One Time only Refundable) and Hostel Mess Advance (each semester) are payable by crossed Demand Draft in favour of "BIT Hostels Mess Account" payable at Ranchi.
- Other fees must be paid by crossed Demand Draft in favour of "Birla Institute of Technology" payable at Ranchi.
- 3. Students will be expected to provide themselves with stationery and textbooks, etc, as prescribed for different subjects.
- 4. The Institute reserves the right to revise the fees and other charges at any stage.
- 5. For rules regarding refund of fees on withdrawal, please see separate Notice on Notice Boards.

TABLE 2 (b): Fees payable for M.Pharm in (i) Clinical Research, (ii) Quality Assurance & Regulatory Affairs at Mesra

(I) Fee payable at the time of admission and in each subsequent semester

Particulars	1st Sem	2nd Sem	3rd Sem	4th Sem
Tuition Fee	91500	91500	98000	98000
Development Fee	6500	6500	7000	7000
Institute Exam Fee	3500	3500	4000	4000
Total :	101500	101500	109000	109000

Hostel Seat Rent*, Electricity and Transport etc.	12500	12500	13500	13500
G. Total:	114000	114000	122500	122500

<sup>\*</sup> Hostel fees are subject to revision in future

Ad	ditional amount to be paid at the time of admission:	
(i)	Admission Fee (One time only) =Rs. 15,000.00 and	Total Rs.25,000.00
(ii)	Caution Money (One time only-Refundable)=Rs. 10,000.00	

- 1. Candidates admitted to M.Pharm in Clinical Research would be required to study for the first two semesters at BIT Mesra, and for the next two semesters at Norwich Clinical Services, Bangalore.
- 2. Hostel mess charges at Mesra will range from approximately Rs.2,000/- to Rs.3,000/- per month. Students at Mesra will be required to deposit Hostel Caution Money\* (One Time only Refundable) of Rs.5,000/- . They will also be required to pay suitable mess advance at the beginning of each semester, which will be adjusted against their mess charges. For the July 2015 session, this mess advance will be Rs. 15,000/- (boys), Rs. 10,000/- (Girls).
  - \*Hostel Caution Money (One Time only Refundable) and Hostel Mess Advance (each semester) are payable by crossed Demand Draft in favour of "BIT Hostels Mess Account" payable at Ranchi.
- 3. Other fees must be paid by crossed Demand Draft in favour of "Birla Institute of Technology" payable at Ranchi.
- 4. Students will be expected to provide themselves with stationery and textbooks, etc, as prescribed for different subjects.
- 5. The Institute reserves the right to revise the fees and other charges at any stage.
- 6. For rules regarding refund of fees on withdrawal, please see separate Notice on Notice Board.

### TABLE 2 (c): Fees payable for M.Sc. Programmes at Mesra

## (I) Fee payable at the time of admission and in each subsequent semester for M.Sc. in Chemistry, Mathematics and Physics programmes at Mesra

Particulars	1st Sem	2nd Sem	3rd Sem	4th Sem
Tuition Fee	32000	32000	32000	32000
Development Fee	2500	2500	2500	2500
Institute Exam Fee	3500	3500	4000	4000
Total :	38000	38000	38500	38500

etc.  G. Total:	12500	12500	13500	13500
	<b>50500</b>	<b>50500</b>	<b>52000</b>	<b>52000</b>
Hostel Seat Rent*, Electricity and Transport	40500	40500	40500	40500

<sup>\*</sup> Hostel fees are subject to revision in future

Additional amount to be paid at the time of admission:	
(i) Admission Fee (One time only) =Rs. 15,000.00 and	Total Rs.25,000.00
(ii) Caution Money (One time only-Refundable)=Rs. 10,000.00	

## (II) Fee payable at the time of admission and in each subsequent semester for M.Sc. in Biotechnology, Bio-informatics and Geo-informatics programmes at Mesra

Particulars	1st Sem	2nd Sem	3rd Sem	4th Sem
Tuition Fee	49000	49000	49000	49000
Development Fee	3500	3500	3500	3500
Institute Exam Fee	3500	3500	4000	4000
Total :	56000	56000	56500	56500

Hostel Seat Rent*, Electricity and Transport etc.	12500	12500	13500	13500
G. Total:	68500	68500	70000	70000

<sup>\*</sup> Hostel fees are subject to revision in future

ſ	Additional amount to be paid at the time of admission:	
	(i) Admission Fee (One time only) =Rs. 15,000.00 and	Total Rs.25,000.00
	(ii) Caution Money (One time only-Refundable)=Rs. 10,000.00	

- 1. Hostel mess charges at Mesra will range from approximately Rs. 2,000/- to Rs. 3,000/- per month. Students at Mesra will be required to deposit Hostel Caution Money\* (One Time only Refundable) of Rs.5,000/-. They will also be required to pay suitable mess advance at the beginning of each semester, which will be adjusted against their mess charges. For the July 2015 session, this mess advance will be Rs. 15,000/- (boys), Rs. 10,000/- (Girls). \*Hostel Caution Money (One Time only Refundable) and Hostel Mess Advance (each semester) are payable by crossed Demand Draft in favour of "BIT Hostels Mess Account" payable at Ranchi.
- 2. Other fees must be paid by crossed Demand Draft in favour of "Birla Institute of Technology" payable at Ranchi.
- 3. Students will be expected to provide themselves with stationery and textbooks, etc, as prescribed for different subjects.
- 4. The Institute reserves the right to revise the fees and other charges at any stage.
- 5. For rules regarding refund of fees on withdrawal, please see separate Notice on Notice Boards.

# TABLE 2 (d): Fees payable for M.Sc. in Information Technology at BIT Lalpur (Ranchi City) Campus

Fee payable at the time of admission and in each subsequent semester

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Particulars	1st Sem	2nd Sem	3rd Sem	4th Sem		
Tuition Fee	49000	49000	49000	49000		
Development Fee	3500	3500	3500	3500		
Institute Exam Fee	3500	3500	4000	4000		
Total :	56000	56000	56500	56500		

Additional amount to be paid at the time of admission:	
(i) Admission Fee (One time only) =Rs. 15,000.00 and	Total Rs.25,000.00
(ii) Caution Money (One time only-Refundable)=Rs. 10,000.00	

- 1. No Hostel facilities are provided at BIT Lalpur Campus.
- 2. All fees must be paid by crossed Demand Draft in favour of "Birla Institute of Technology" payable at Ranchi.
- 3. Students will be expected to provide themselves with stationery and textbooks, etc, as prescribed for different subjects.
- 4. The Institute reserves the right to revise the fees and other charges at any stage.
- 5. For rules regarding refund of fees on withdrawal, please see separate Notice on Notice Boards.

#### TABLE 2 (e): Fees payable for M.E. / M.Tech Programmes at BIT Patna Campus

(I) Fee payable at the time of admission and in each subsequent semester

Particulars	1st Sem	2nd Sem	3rd Sem	4th Sem
Tuition Fee	67500	67500	72500	72500
Development Fee	4500	4500	5000	5000
Institute Exam Fee	3500	3500	4000	4000
Total :	75500	75500	81500	81500

G. Total:	87500	87500	94500	94500
Hostel Seat Rent* and Electricity etc.	12000	12000	13000	13000

<sup>\*</sup> Hostel fees are subject to revision in future

Additional amount to be paid at the time of admission:	
(i) Admission Fee (One time only) =Rs.15,000.00 and	Total Rs.25,000.00
(ii) Caution Money (One time only-Refundable)=Rs.10,000.0	00

## (II) Fees payable for M.E. / M.Tech programmes at BIT Allahabad, BIT Kolkata & BIT Noida Campuses

Fee payable at the time of admission and in each subsequent semester

Particulars	1st Sem	2nd Sem	3rd Sem	4th Sem
Tuition Fee	67500	67500	72500	72500
Development Fee	4500	4500	5000	5000
Institute Exam Fee	3500	3500	4000	4000
Total :	75500	75500	81500	81500

Ad	ditional amount to be paid at the time of admission:	
(i)	Admission Fee (One time only) =Rs. 15,000.00 and	Total Rs.25,000.00
(ii)	Caution Money (One time only-Refundable)=Rs. 10,000.00	

- 1. Hostel facilities are provided only at the BIT Patna Campus. Hostel mess charges at BIT Patna will range from approximately Rs. 2,000/- to Rs. 3,000/- per month. Students admitted at BIT Patna will be required to deposit Hostel Caution Money\* (One Time only Refundable) of Rs.5,000/- .They will also be required to pay suitable mess advance at the beginning of each semester, which will be adjusted against their mess charges. For the July 2015 session, this mess advance will be Rs. 15,000/- (boys), Rs. 10,000/- (Girls).
- 2. All fees must be paid by crossed Demand Draft in favour of "Birla Institute of Technology" payable at Allahabad (for admission at BIT Allahabad Campus), payable at Kolkata (for admission at BIT Kolkata Campus), payable at Noida (for admission at BIT Noida Campus) and payable at Patna (for admission at BIT Patna Campus).
- 3. Students will be expected to provide themselves with stationery and textbooks, etc, as prescribed for different subjects.
- 4. The Institute reserves the right to revise the fees and other charges at any stage.
- 5. For rules regarding refund of fees on withdrawal, please see separate Notice on Notice Boards.

### Sec 7. List of enclosures to be submitted along with the completed application form

- 1. A print-out of the duly completed online form
- 2. Two recent colour photographs one pasted on form and one attached by clip (write your Name and "PG 2015" on the back of the second photo)
- 3. Payment receipt towards application fee of Rs.2,500/- (General / OBC) and Rs.1,500/- (SC/ST) candidates (non-refundable)
- 4. <u>A set of photocopies</u> of certificates as listed below: (write your Name, telephone number and programme applying for, on the back of each of these papers):
  - a) Pass certificate of Class 10
  - b) Marksheet of Class 10
  - c) Marksheet of Class 12 / Intermediate or equivalent
  - d) Certificates and marksheets of Graduation / qualifying examination

OR

Marksheets upto pre-final year for appearing candidates of graduation / qualifying examination in 2015. They must enclose photocopy of certificate from the Principal of Institute stating that:

- a) by 30 June 2015, (s)/he will have appeared for examination in all subjects required for obtaining his/her qualifying degree.
- b) (s)/he has obtained requisite marks or equivalent based on latest available grades / marks.
- e) Candidates with qualifications acquired through correspondence or distance-learning programmes must enclose with their application a photocopy of pass certificate, marksheets of qualifying examination showing that they have passed the qualifying examination with requisite marks and approval of DEC (Distance Education Council) [Appearing candidate in distance learning programmes, whose results are yet to be declared, are not eligible to apply].
- f) Admit Card of GATE 2014 or GATE 2015 / GPAT 2014 or GPAT 2015 (if applicable)
- g) Score Card of GATE 2014 or GATE 2015 / GPAT 2014 or GPAT 2015 (if applicable)
- h) Caste certificate (if applicable), which should be in proper format and signed by appropriate authority of rank not less than SDO.
- i) Candidates belonging to other special categories mentioned in Sec 5 (Person with Disability [PwD] / Ward of BIT employee) must provide photocopy of certificate in proper format from appropriate authority.
- j) GPA to Percentage Conversion formula duly attested by Head of the Institute/ Principal/ HOD.
- k) Photo identification: (Driving license, Passport, PAN Card, Voter ID, College ID, Employee Identification Card are acceptable)

Incomplete applications or applications received without all required enclosures are liable to be rejected / may not be processed.

## Sec 8. Profile of the Departments

## **Department of Architecture**

The Department was established in 1993 with a vision to develop professional architects and to promote research and consultancy activities in the areas of architecture, conservation, landscaping, urban design, urban planning etc. Birla Institute of Technology, Mesra, Ranchi is the only institute in Jharkhand that offers an undergraduate course in Architecture and a postgraduate course in Urban Planning.

Programmes offered	Intake
Bachelor of Architecture (B.Arch) - 5 years (10 semesters)	40
Master in Urban Planning (MUP) - 2 years (4 semesters)	12
Ph.D. programme in architecture and planning	

The 5-year Bachelor Degree in architecture programme is approved by the Council of Architecture, India (COA) and is also approved by All India Council of Technical Education (AICTE).

The Department is recipient of UGC assistance in the form of departmental research support under the special assistance programme (SAP) of the UGC.

Architecture is primarily the art and science of designing spaces for serving the multifarious activities of human beings and for meeting their specific needs in a meaningfully built environment. Architecture uses the philosophic wholesomeness of humanities, the logical rationalism of science, the passionate imagination of art and the inexhaustible resources of technology. It calls for originality, creativity, conceptualization, perception, aesthetic values and a holistic judgment of people, places, objects and events. The course structure is designed to fulfill the above requirements of the profession. Graduate students have found gainful employment in design consultancy and construction sector. Many of our students have opted for higher studies in India and abroad in many related disciplines, such as, urban design, city planning, landscape architecture, conservation and construction management and even other diversified fields, such as, visual design, product design, management and software development related with architecture.

The MUP programme is designed to fulfill the great need of formal training requirement for holistic fulfillment of the duties of urban local bodies in the area of urban development, planning, town planning schemes and implementation of such development plans or living in urban settlements and various tools and techniques used for planning and management of the development process.

Since its inception, the department has contributed to the field of architecture and urban studies through an array of seminars, conferences, workshop and training courses at both national and international level. The department in association with the civil engineering department of the institute is identified as state level research centre/institution for conducting training programme for Capacity Building of Architects / Engineers in Earthquake Risk Management. The Department has signed a MoU with INTACH (Indian National Trust for Art and Culture Heritage)for conservation and upkeep of heritage properties of Jharkhand.

In 2006 the Department started publication of "ABACUS: An Internationally Refereed Bi-annual Journal on Architecture, Conservation and Urban Studies" (ISSN: 0973-8339), which is continued by researches across the globe and gained the reputation over time.

The Architecture Department of BIT, Mesra closely cooperates with many departments of the Government of Jharkhand, notably, in the field of Urban Development, Building Construction and Disaster Management. The Department has conducted seminars and workshops in association with many departments of the Government and provide consultancy as and when sought. Faculty members are actively involved in various committees of the State Government in the Architecture and Planning related activities. They are also resource persons for the various QIP activities of the 'Administrative Training Institute' of the State Government at Ranchi.

The Department is involved in development of e-content for six architectural subjects at the undergraduate level the sanctioned project "Development suitable pedagogical methods for various classes, intellectual calibers and e-learning" anchored by IIT, Kharagpur under the 'SAKSHAT' scheme of the Department/School of Architecture to develop content for all six sanctioned architectural subjects as a part of the pilot project.

The faculty members contribute to the development of the subject area through research activities and contribution of papers and articles in national and international journals, and stay abreast with up-to-date academic development through participation in short term courses, seminars, conferences and workshops.

In order to respond to the social obligation, the department regularly provides consultancy in preparation of architectural design schemes, interior design schemes, landscaping schemes, architectural conservation schemes and several social projects along with city development plans.

Students of the Department have won many prizes at the various Zonal and National meets of the National Association of students of Architecture (NASA) over the years. Students win many prizes in national and international competitions as well. The department is ranking among top ten best architectural colleges in the country by Outlook Express through a nationwide survey.

Alumni of the Department are engaged in various top ranking consultancy organizations, and some of them have already established themselves as successful entrepreneur by owning architectural firms. However, some of them have preferred to take up higher studies in India and abroad. Thereby spread the legacy of the Department and the Institute to rest of the world.

## **Department of Bio-Engineering**

The Department of Bioengineering, renamed in 2014, was established as Dept. of Biotechnology in 2002 with financial support from the Department of Agriculture, Government of Jharkhand, with objectives to provide education and training facilities, carrying out application oriented research, developing in-house technologies and promoting consultancy services in various areas of Biotechnology.

Programmes Offered	Intake
B.E. Biotechnology - 4 years (8 semesters)	60
M.Tech. Biotechnology - 2 years (4 semesters)	18
M.Tech. Bio-Medical Instrumentation - 2 years (4 semesters)	18
M.Sc. Biotechnology - 2 years (4 semesters)	30
M.Sc. Bioinformatics - 2 years (4 semesters)	20
Ph.D. Programme	

The Vision & Mission of the Department are-

#### Vision:

• The Department of Bioengineering has a vision to impart international standard quality education in the field of Bio- science, Bio-technology and Bio-engineering.

#### Mission:

- To create state-of-the-art infrastructure for Research and Training in Biotechnology and Bioengineering.
- To provide globally acceptable technical education in Bio- science, Bio-technology and Bioengineering.
- To nurture graduates for innovation and creativity in the field of Bio-science, Bio-technology and Bioengineering having ethical and social concern.
- To promote collaboration with Academia, Industries and Research Organizations at National and International level.
- To contribute to socioeconomic development through education and bio-entrepreneurship.

The different programmes seek to provide students with education and training in:

- Scientific principles and knowledge underlying advances in bioengineering
- > Basic laboratory techniques in research and development
- Legal and intellectual property issues
- Tools involved in bioinformatics, imaging and signal processing
- > Skill and attributes important in business and bio-entrepreneurship

Further the learning approach encourages team spirit and leadership quality among students to prepare them for challenging careers, including:

- > Research positions in laboratories
- > Biotech industries including biopharmaceuticals, medical devices
- > Careers in biotechnology applications
- Management positions in bioengineering sector
- Careers with Law firms in biotechnology
- > Software development and management

#### Department at a Glance:

- Independent building about 35000 sq. ft.
- 12 well equipped high end research laboratories dedicated to carry out basic and advanced research in the field of Molecular Biology, Genetic Engineering and Cell Biology, Plant and Animal Biotechnology, Microbiology, Biochemistry, Proteomics, Bioinformatics, Bioprocess Engineering, Chemical Engineering, Environmental Biotechnology, Biomedical Instrumentation and Imaging.
- A Center of Excellence (CoE) under TEQIP, Phase II sponsored by World Bank, BTISnetSubDIC Bioinformatics center for Jharkhand.
- More than 50 externally funded projects from funding agencies like DST, DBT, DST-SERB, UGC, AICTE, ICMR, CSIR, NAIP, MoFPI etc.
- A mixed and balanced well recognized faculty members with rich academic and research profile.
- All faculties with minimum Doctoral degree. Dept. provides high end computational software/ platform for students.

## **Department of Chemical Engineering & Technology**

The Department of Chemical Engineering & Technology with well qualified faculty provides high standard of education in the diversified fields of Chemical Engineering and Chemical Technology. The Department received national recognition by winning the Gold Trophy for Plasticon Award 2012 in the category of Best Educational Institution Contributing to Plastics. The Plasticon Award was conferred on 1st February 2012, at 8th International Plastics Exhibition and conference. The programme was supported by Ministry of Chemicals and Fertilizers, Department of Chemicals and Petrochemicals, Government of India. Faculty members are working on sponsored projects and collaborative research with various organizations. The Department is also recognized under DST-FIST. Department is recipient of a major grant from Ministry of Food Processing Technology, Govt. of India, for infrastructure development for programmes in Food Technology.

Programmes Offered	Intake
B.E. in Chemical Engineering - 4 years (8 semesters)	60
B.E. in Chemical Engineering (Plastic and Polymer) - 4 years (8 semesters)	60
M.E. in Chemical Engineering - 2 years (4 semesters)	18
Integrated M.Sc. in Food Technology - 5 years (10 semesters) with exit option after three	20
years	
Ph.D. Programmes	

#### **VISION:**

The Department of Chemical Engineering & Technology aspires to be a centre of excellence for the provision of instruction, teaching, training, and research in the areas of chemical engineering & polymer science and engineering. It aims to advance and disseminate knowledge in the above areas, provide an enriched academic environment in undergraduate and graduate education, build partnerships and collaborative relationships, and respond to the growing needs of society.

#### MISSION:

The mission of the Department of Chemical Engineering & Technology is to educate and prepare students with critical thinking skills in the areas of chemical engineering & polymer science and engineering, for national and international positions in industry, academia and government; to develop and transmit new knowledge in these areas; to serve as a knowledge and service base to the nation; and to provide guidance and leadership in the solution of technical and socio □economic problems.

The undergraduate programme BE (Chemical Engineering) imparts high standard training, emphasizing on Chemical Engineering fundamentals - Heat Transfer, Mass Transfer, Fluid Flow, Process Control, Reaction Engineering, Computer Aided Engineering etc to groom them to carry out economic and environment friendly design, technology development and operation of a wide range of chemical plants – Industrial chemicals, petroleum, polymers, pharmaceuticals, cement, fertilizer, fuel, processed food etc. The core curriculum is complemented by electives in the important emerging areas like Nanotechnology, Biotechnology, Food Technology, Polymer Engineering, Energy Engineering etc.

In addition to the core Chemical Engineering subjects, students of BE (Chemical Engineering – Plastics and Polymers) programme are exposed to courses in Polymer Materials Technology, Polymer Processing, Polymer Product Design and Development in order to serve industries involved in polymer manufacture, polymer processing and conversion industries, polymer science research and development organizations.

The M.E.(Chemical Engineering) programme deals with topics on advanced Transport Phenomena, Reaction Engineering, Thermodynamics along with elective courses on Polymer Processing, Specialty Polymers, Nano-science and Nanotechnology, Plant Design, Surface Engineering

The M. Tech (Polymer Science and Engineering) programme aims to groom students and for advanced level research in the field of polymer science and engineering.

Food Processing Industry in India is growing at a very fast pace. Envisaging a great demand for qualified food technologists in our country, From 2014 academic year following programmes in the area of Food Technology has been introduced, with support from Ministry of Food Processing Industries: (a) 5 year Integrated M.Sc.(Food Technology), with exit option after three years, and (b) M.Sc. (Food Technology). The courses include training in the area of Food Composition and Chemistry, Food Biochemistry and Human Nutrition, Food Microbiology, Food Plant sanitation, Food Analysis and Quality Control, Food Preservation and Processing Technology, Chemical Engineering unit operations in Food Processing Industries, Food Packaging, Post-Harvest Technology etc.

The Department also offers facilities for Ph. D. programme in fields of Chemical Engineering, Polymer Science and Technology, Food Technology.

Apart from standard Chemical Engineering laboratories like Fluid Flow, Heat Transfer, Mass Transfer, Reaction Engineering, Process Control etc. the Department of Chemical and Polymer Engineering has state of the art facilities for Post Graduate and Doctoral Research in Reaction Engineering, Instrumental Analysis of chemicals and Polymer, Polymer Processing, Product Development Laboratory etc. The major facilities include computer controlled reactors, Haake Minilab Micro Compounder and Haake Minilab micro injection Moulding, Air Bearing Rotational Rheometer, Malvern, HAAKE Torque Rheometer with Mixer and Extruder, Oscillating Disc Rheometer, Instron Tensile Testing machine, ATLAS accelerated weathering system, Dynamic Mechanical Thermal analyzer (TA), Gas Chromatograph. The Polymer Processing and Product development facilities include Injection Moulding machines - 80 ton L&T Ergotech and 25 ton Windsor, Extrusion Blow moulding machine with parison programming, Kolsite Single screw extruder, Kolsite Film blowing plant and PVC pipe Extrusion plant, Two roll mixing mills, Thermoforming, Compression moulding, Welding facilities — Ultrasonic and Hot air, Fused Deposition Modeling system, Stratasys, for rapid prototyping, MCP-HEK vacuum casting machine for prototyping, 3 axis CNC EDM machine etc.

The students are trained in various CAE applications ASPEN Plus, Accelerys -Material Studio for molecular simulation, MATLAB, PROENGINEER, ANSYS, CATIA, FLUENT, POLYFLOW, MOLDFLOW etc. E-learning facility has been created with Paulsons Training Basic Injection Moulding, Simtech, Single Screw Extrusion, and Compounding with Twin Screw Extruder.

Laboratories in the area of Food Technology include Food Processing Laboratory, Food Microbiology Laboratory, Food Analysis Laboratory. The Food Processing Laboratory includes Pulper machine, vegetable dicing machine, Juice Extraction, Homogeniser, Twin Screw Extrusion cooker, Homogenizer, Colloidal Mill, Grinders, Can Body Reformer, Canning Retort, Steam generator, Steam jacketed cooker, Tray dryer, fluidized bed dryer, Vacuum bottle Filling maching, Form Fill and Seal packaging etc. Food Microbiology lab with Autoclave, Laminar flow clean air workstation, BOD incubator has the expertise of microbiological tests of water and food. The Food Analysis and quality Control facilities included Flame photometer, HPLC, Digital colorimeter, NIR Spectral Analyzer, UV-VIS Spectrophotomerer etc. The other required equipment are available in Central Instrumentation Facility are also available. The facilities are being augmented with capability for determination of protein by Kjeldahl method, dietary and crude fibre determination, Fat determination, Food Texture Analysis, Atomic Absorption Spectrophotometry, Spray drying, etc.

#### **RESEARCH AREA:**

Nanoparticle synthesis, Catalysts, Advanced Polymer Composites, Alternative Energy, Pollution Control, Water Treatment Technologies, Polymer Blends and Interpenetrating Polymer Networks, Nano filtration Membrane, Recycling of Polymer Waste, Specialty Polymer, Colloids and Interfacial Science, Tissue Engineering, Sensors, Fuel Cell Membrane etc.

## **Department of Chemistry**

The Department of chemistry was established in 1956 and is dedicated to providing a high quality chemistry education at both undergraduate & postgraduate level. The department supports the institute's undergraduate, postgraduate and Ph.D. programmes in pure and applied chemistry.

Programmes Offered	Intake
M.Sc. in Chemistry - 2 years (4 Semesters)	15
Integrated M.Sc. in Chemistry - 5 years (10 semesters) with exit option after three years	20
Ph.D. Programme	

The M.Sc. and Integrated M.Sc. courses are interdisciplinary in nature, designed to provide an in-depth knowledge in various branches of chemistry such as Environmental & Inorganic, Organic & Medicinal, Polymer, Physical, Analytical, Materials & Computational Chemistry.

The maximum intake in both the courses is limited to 20, in order to ensure quality in instruction and mentoring. The aim of this program is to prepare students for entry into Ph.D. programs, academics and careers in R & D laboratories. Several R & D laboratories and pharmaceutical industries are in collaboration with the department to promote the educational and research environment.

Laboratory courses are designed to provide a hands-on experience on working with various sophisticated instruments. The facilities available in the department include: Materials synthesis and characterizations, Environmental monitoring and control, Fuel chemistry, Electrochemical studies, Advanced instrumentation facility and Softwares for computational chemistry. The department has developed as a nodal centre for qualitative and quantitative analysis of various environmental pollutants and engineering materials.

The faculty members are actively involved in research in the fields of pure and applied chemistry and have various publications in high-impact journals. The department has quality research programs supported by UGC, DST and DBT. The department is actively involved in promoting environmental awareness amongst the tribal and rural population in Jharkhand.

## **Department of Civil and Environmental Engineering**

The Department of Civil Engineering was established at BIT Mesra in 1957. The Environmental Science and Engineering Group was established in 2002 and was merged with the department of Civil Engineering in 2014. Henceforth the department was renamed as Department of Civil and Environmental Engineering. Civil Engineering, as a subject includes a wide range of courses on various topics from those that are of general nature to those that are of utility in daily life. Starting from building of homes and other buildings, to construction of all kinds of infrastructure facilities, the scope of civil engineering is truly massive. It offers a wide reach in bright and promising career opportunities and professional advancement. Environmental Science and Engineering is an interdisciplinary research wing open for science and engineering degree holders. It focuses on waste, air, soil, water, ecology, GIS, modeling, ecosystem management, carbon sequestration and various other research activities. Students after completing their course have been placed in various renowned institutions and organizations such as IISc, Bangalore, TERI, New Delhi, IITs, MECON, Sesa Goa, and NEERI, Nagpur.

S.No	Programmes Offered	Intakes
1	B.E. in Civil Engineering - 4 years (8 Semesters)	60
2	M.E. in Civil - 2 years (4 semesters) in two specializations	
	a) Soil Mechanics & Foundation Engineering	12
	b) Structural Engineering	12
3	M.Tech. in Environmental Science & Engineering - 2 years (4 Semesters)	18
4	Ph.D. Programme	

#### **Departments Vision:**

To provide an educational, professional and intellectual experience that enables a diverse body of students, alumni, faculty and staff to contribute to the development and advancement of the society through teaching, research, practice and service.

#### **Departments Mission:**

- To impart quality education and professional skill development of students
- To produce practical oriented, value driven technocrats and professionals
- To create dynamic and effective leaders for the society
- To establish research and development based programmes
- To build faculty capacities and capabilities at par with top universities.

### **Courses Offered:**

### I. Undergraduate Programme

The Department offers a B.E. in Civil Engineering and is one of the few in the country offering a course in Disaster Management with special focus on Earthquake Engineering at the undergraduate level.

## II. Postgraduate Programmes

The Department of Civil & Environmental Engineering at BIT Mesra offers M.E./M.Tech Programmes in the following specialized disciplines:

- ME Soil Mechanics & Foundation Engineering
- ME Structural Engineering
- > M.Tech. in Environmental Science & Engineering
- III. Ph.D. Programmes (Soil Mechanics and Foundation Engineering, Structural Engineering, Hydraulics and Water Resources, Transportation Engineering, Phytoremediation, Arsenic Analysis, Waste Treatment, Ecosystem Services, GIS, Pollution Modeling and various other branches of Civil Engineering and Environmental Science & Engineering).

## **Department of Computer Science & Engineering**

The Department of CSE was established in the year 1983 and is now recognized as one of the leading departments with infrastructure and facilities to match the very best in the country. The department remains committed towards its mission which is twofold. One is to provide students with the fundamental knowledge and problem solving skills in Computer Science required for a fulfilling career. The other goal is to create and disseminate knowledge to improve Computer Science research, education and practice.

The department currently offers the following programmes, all of which are accredited by the All India Council for Technical Education (AICTE).

Programmes Offered	Intake
B.E. in Computer Science & Engineering - 4 years (8 semesters)	120
B.E. in Information Technology - 4 years (8 semesters)	60
Master of Computer Applications (MCA)- 3 years (6 semesters)	60
M.E. in Software Engineering - 2 years (4 semesters)	15
M.Tech in Computer Science & Engineering - 2 years (4 semesters)	16
M.Tech in Information Technology - 2 years (4 semesters)	18
M.Tech in Information Security - 2 years (4 semesters)	18
Ph.D. Programme	

The major areas emphasized are: Analog & Digital Communications, Artificial Intelligence, Bio-Informatics, Compiler Design, Computer Algorithms, Computer Architecture, Data Communication, Data Structures, Database, Digital Signal Processing, Image Processing &Pattern Recognition, Information& Coding Theory, Microprocessor, Mobile Computing, Multimedia, networking, Object Oriented Design, Operating Systems, Parallel & Distributed Computing, Reliability & Testing, Soft Computing, Software Engineering, Telecommunication and Wireless Communication, Information Systems, Information Processing, Information Architecture, etc..

**Facilities:** The department is equipped with seven laboratories with over 490 computers available for conducting laboratory sessions in diverse topics like in (i) programming languages: C, C++, Java, Oracle.(ii) Matlab for Soft Computing and Image Processing (iii) Rational Rose for Software Engineering and (iv) Laboratories for Networking, Multimedia, Simulation, Parallel Computing etc. All the Laboratories are internally networked allowing students to remotely access any particular resource at any point in time.

**Areas of Research:** Bioinformatics, DNA Computing, Parallel Computing, Grid Computing, Image Processing, Robotics, Intelligent Systems, Rough Sets ,DNA Nanorobotics, Software Engineering, Sensor Networks, Data Mining, Pattern Recognition, Natural language Processing Web Engineering ,Network Security etc.

The department has also organized in the recent past seminars, training programs and workshops. .

**International Collaborations**: The department has academic collaborations with University of New Brunswick, Canada, University of Manitoba, Canada, and University of Mannheim, Germany.

# **Department of Electronics & Communication Engineering**

The Department of Electronics and Communication Engineering was established in the year 1960. This is one of the largest departments of the institute, having the highest number of students and the faculty members. Due to its modern infrastructure and exposure given to the students, it is one of the elite departments in India. The ECE department runs the following programmes:

Programmes Offered		
B.E. in Electronics & Communication Engineering- 4 years (8 semesters)		
M.E. in Electronics & Communication- 2 years (4 semesters) in 3 specializations		
a) Instrumentation & Control	12	
b) Microwave	12	
c) Wireless Communications	18	
Ph.D. Programme		

## **Bachelor in Engineering**

It offers B.E. in Electronics & Communication Engineering, a 4-year (8-semester) programme with intake of 120 students. The students are exposed to all fundamental and advanced technology in the field of Electronics and Communication Engineering. Some of the courses offered are Modern Instruments and Measurements, Microprocessor and Microcontroller, Digital Communication system, Microwave Engineering, Digital Signal Processing, Intelligent Instrumentation, Computer Networking, Fiber Optics Communication System, Antennas and Propagation for Wireless Communication, Mobile and Cellular Communication etc. The syllabi are frequently updated to incorporate recent developments. The Department has several well-equipped and advanced laboratories to help students in gaining practical exposure. Almost 100% students are absorbed by various leading industries and organizations by campus placement.

#### Master in Engineering

The Department is currently running three postgraduate programmes with specializations in (a) Instrumentation with intake of 12, (b) Microwave Engineering with intake of 12 and (c) Wireless Communication with intake of 18 students. A team of expert teachers are involved in teaching and providing research guidance. Students are exposed to several specialized software tools such as Cadence System Design Tools, Silvako Software (Athena & Atlas), IE3D, HFSS, Microwave Office, Sonnet, Fidelity, Beampro, SystemView, LABView, MATLAB, NS-2 and QualNet etc. The department is recipient of assistance in the form of Departmental Research Support under the Special Assistance Programme of UGC. The department is running several R & D projects from various agencies like UGC, DST, AICTE, ISRO etc.

#### Ph.D. Programme

The Department runs PhD programme within the field of Electronics and Communications Engineering. Currently the research areas undertaken for the PhD programme are: Fibre Optic Sensors & Communication, Optoelectronic Devices, Wireless Communicationl Printed RF & Microwave Circuits, Antennas for various Applications, Electromagnetics, EMI/EMC, Computational Electromagnetics, VLSI & Embedded System Design, RF MEMS, Biomedical Signal Processing, Speech & Audio Signal Processing, Image Processing, Multimedia & Automation

## **Vision of the Department**

Become a centre of excellence in teaching and research for creating technical manpower to meet the technological need of the country in the field of Electronics and Communications Engineering.

## **Mission of the Department**

- To facilitate state of the art Education and Research at Undergraduate, Post Graduate and Doctoral levels to enable to perform challenging engineering and managerial jobs in the field of Electronics and Communication Engineering.
- > To build national capabilities in Technology, Education and Research in emerging areas in the field of Electronics and Communication Engineering.
- To create an environment to provide excellent Research and Development facilities to strengthen Ph.D. programmes and Research Projects.
- > To provide excellent Technological Services to bridge the gap between Academics and Industry in order to fulfill the overall academic needs of the society.
- To provide high quality Course Structure in order to turn out qualified professionals to meet the engineering needs of the country.
- > To develop effective Teaching Skills and the Research Potentials of the faculty members.
- To ensure All Round Development of the students and to create a platform for turning out engineering professionals who can assume leadership position in society.

# **Department of Electrical & Electronics Engineering**

The Department of Electrical Engineering was started in 1955. It was renamed as Electrical & Electronics Engineering in 1986, when the B.E. curriculum was redesigned to accommodate several Electronics and Computer subjects in order to tune its programmes according to changing requirements. The Department is dedicated to the current needs of industry primarily focusing on application of new technology in various fields. As recognition of the activities of faculty members, different agencies like UGC, DST, AICTE, CDAC, TEQIP, etc have sanctioned funds to support the on-going research work.

Programmes Offered	Intake
B.E. in Electrical & Electronics Engineering - 4 years (8 semesters)	60
M.E. in Electrical Engineering - 2 years (4 semesters) in 3 specializations	
(i) Control System	12
(ii) Power System	12
(iii) Power Electronics	18
Ph.D. Programme	

## **Vision of the Department**

To become, in consonance with the society, an internationally recognized center of excellence in academics, research and technological services in the area of Electrical and Electronics Engineering and related inter-disciplinary field.

### **Mission of the Department:**

- Imparting strong fundamental concepts to students and motivate them to find innovative solutions to engineering problems independently
- Developing engineers with managerial attributes capable of applying latest technology with responsibility
- Creation of congenial atmosphere and excellent facilities for undertaking quality research by faculty and students
- To strive for more internationally recognized publication of research papers, books and to obtain patent and copyrights
- To provide excellent technological services to industry for the benefit of society

#### **Programmes Accredited:**

B.E. (EEE), M.E. (Control System) and M.E. (Power System) programmes are accredited by NBA. M.E.(Power Electronics) has been applied for accreditation. All the above courses are approved by AICTE.

## A. Undergraduate Programme:

The emphasis is given on fundamentals of science, mathematics and their application to the solution of contemporary problems.

#### **Electives offered:**

Computer Aided Power System Analysis, Bio Electronics Instrumentation, Artificial Neural Network (ANN), Advanced Power Electronics, Robotics, High Voltage Engg., EHV Power Transmission, Artificial Intelligence, Soft Computing Techniques, Renewable Sources of Electrical Energy, Testing & Commissioning of Electrical Equipment, Embedded System & its Applications.

## **List of Breadth Papers:**

Environment Psychology, Organization Behaviour, Industrial Organization & Management, Financial Management, Business Ethics, Intellectual Property Rights, Entrepreneurship & Small Business Management, etc.

### **B. Postgraduate Programmes:**

## (i) M.E. in Control System:

In M.E. Control Systems emphasis is given to cutting edge control techniques like modern control system, nonlinear control analysis, discrete control techniques, optimal control, robotics, ANN based adaptive control methods, fuzzy logic controllers with advanced model reference learning and stability analysis, etc.

## (ii) M. E. in Power System:

M. E. Power systems aims at imparting knowledge on advanced analysis techniques, modern tools in power system operation and control, techniques to improve the performance of EHV AC and HVDC transmission, advanced power system protection systems, planning and reliability analysis, technologies involved with renewable energy sources, DSP applications, etc.

### (iii) M.E. in Power Electronics:

M.E. Power Electronics aims at imparting knowledge on advanced semiconductor devices, power electronic converters, their design and control methodology, dynamic of Electrical Machines, Power Electronics applications, Control of electrical drives etc.

### Ph. D. Programme:

Currently a number of research scholars are working in the areas of non-stationary signal analysis, intelligent control techniques applied to automatic generation control and non-linear dynamic systems, development of new architecture for neural networks, development of low-cost Phasor Measurement Unit (PMU), Multi-Agent System (MAS) modelling, Wide Area Monitoring System (WAMS), Real-time Image processing for robotic application, Laboratory Prototype of Smart Grid, soft computing based intelligent controller design, Power system automation, Fault diagnosis of  $3-\phi$  Induction motor, bi-directional dcto-dc converters, matrix converter, resonant converter, current source inverter for hybrid electric vehicles, control of induction motor drive, three-phase and multi-phase PM BLDC drive, estimation and identification of plants.

#### **Research Activity:**

The faculty members of the Department (with different specializations) actively pursue research with funding from various national agencies like UGC, AICTE, DST. The current areas of research include digital relaying of transmission using DSP techniques, reliability analysis, generation scheduling, distribution systems planning, voltage stability analysis, Fault tolerant permanent magnet drives, Energy Storage and Management — Photovoltaics, bi-directional converters for contactless energy exchange, Image processing applied to vehicular traffic surveillance system, etc.

The research outputs are published in reputed journals like IEEE transactions, IET Proceedings, Elseveir, Taylor & Francis, Polish Academy of Science and Tech., IE (I), etc.

Besides publications, department has also got two patents in the area of power systems.

#### **Collaboration with Industries and Universities:**

The Department has collaborated with the Texas Instruments, NI, Research and Development Center for Iron and Steel (RDCIS), SAIL, Metallurgical Consultants Limited (MECON), Meditron (Ranchi), etc.

## **Conventions/Seminars/Conferences/Short-term Training Programmes:**

The Department regularly organizes conventions, seminars, conferences short term training programmes/courses under aegis of AICTE- ISTE, TEQIP, UGC (FIST), NaMPET. Specialized courses for industry (SAIL, Indian Railways) have also been organized.

Keeping in view the development of nearby villages, the Department is also involved in conducting short term training programmes in electrical technical skills to youth.

#### Facility:

The Department has following well-equipped laboratories;

Basic Electrical Engineering lab., Measurement Lab., Electrical Machines lab., Power Electronics lab., Electrical Drives lab., Control Systems lab., Power Systems lab., Smart Grid lab., Process Control Lab., Simulation lab., Electrical Workshop.

The main equipment in Control laboratory include inverted pendulum, bouncing ball apparatus, coupled tank control, mechatronics kit, NI kit and a range of DSP kits.

The major equipment in Power Systems laboratory include generator protection scheme, static VAR compensator, network analyser, power factor controller, induction type and numerical relays, vacuum air breaker, etc. Smart grid lab is equipped with two-area system; each area is consisting of generator, transmission line and load. Control station is being developed under LabVIEW platform and SCADA software. Department is in the process of procuring PMU for the lab.

The main equipment in measurement lab are - Optical transducer, thermal transducer, Kelvin double bridge, LVDT setup, strain gauge setup, setup to determine breakdown voltage of transformer oil.

The Process Control lab consists of apparats for control of level, pressure and flow; both manually and automatically.

The major equipment in power Electronics lab are - device characterization system, AC to DC, DC-DC, DC to AC conversion systems, Programmable signal generators, signal analyzer, etc.

The Department is in the process of establishing a drive lab for enhancing research facility in the field of Power Electronics.

## **Department of Mathematics**

The Department of Mathematics offers facilities for research work leading to Ph.D. degree in different areas of mathematics. Besides this, the department not only teaches various topics in mathematics to undergraduate and post graduate students of different departments of the institute, but also runs its own 5 years Integrated M.Sc. (Mathematics & Computing) and M. Sc. (Mathematics) courses. The Department also has its own state of the art Computational Laboratory.

Programmes Offered	Intake
M.Sc. in Mathematics - 2 years (4 semesters)	15
Integrated M.Sc. in Mathematics & Computing - 5 years (10 semesters) with exit	20
option after three years	
Ph.D. Programme	

The faculties of the Department are actively engaged in research in the following areas:

- · Cyber Attack, Defence and Crime
- Statistical Analysis of Hindustani Classical Music
- Differential Equations and Difference Equations
- Seismology & Earthquake Engineering
- Computational Solid Mechanics
- · Operations Research, Optimisation Techniques
- Fuzzy Optimisation
- Mathematical Models on Infectious Disease, Environment Pollution
- Algorithm Analysis

#### **MISSION:** The mission of the Department is

- to provide an environment where students can learn and become competent users of mathematics and mathematical applications.
- to conduct research that has worldwide recognition

## VISION: The vision of the Department is

- to develop and offer dynamic programs in mathematics that helps the students to enter in new emerging fields and specialisations of mathematics.
- to be among the best departments of the country

## **Department of Mechanical Engineering**

Since its inception in 1955, the Department of Mechanical Engineering has a wide reputation for the quality of teaching and research it offers. It has been awarded top grades for both teaching and research activities from independent and government bodies. The excellent laboratory facilities, modern computer clusters, systematically designed curriculum, and dedicated faculty members make this Department a dynamic place to study and.

Programmes Offered	Intake
B.E. in Mechanical Engineering - 4 years (8 semester)	90
M.E. in Mechanical Engineering - 2 years (4 semesters) in following specializations:	
a) Heat Power	12
b) Design of Mechanical Equipment	12
M.E. in Computer Aided Analysis and Design (CAAD) - 2 years (4 semesters)	18
M.Tech in Energy Technology - 2 years (4 semesters)	18
Ph. D. Programmes	

Mechanical Engineering Graduates from BIT Mesra are sought after by many prestigious companies. There is also an excellent careers center on campus, which helps the students to get entry into multinational companies.

## **Vision of the Department**

The Mechanical Engineering Department of Birla Institute of Technology, Mesra, Ranchi strives to be globally recognised for quality engineering education and research leading to well qualified engineers, academicians and researchers who are innovative, entrepreneurial and successful in achieving excellence in their field of study.

## **Mission of the Department**

- To impart quality education to the students and enhancing their knowledge and skills to be globally competitive Mechanical Engineers.
- b) To maintain state of the art research facilities to provide its students and faculty to create, interpret, apply and disseminate knowledge with an understanding of the limitations.
- c) To develop linkages and interaction with industry, R & D organisation and educational institution for excellence in consultancy practices, research and teaching.
- d) To provide conducive environment for learning, creativity and problem solving skill.

All degree schemes offered are modular and structured to allow a gradual development of knowledge and skills. Students undergo for industrial projects in their last two semesters of study. The industrial project gives students a chance to apply their engineering skills to a real engineering problems. Many professional projects are industrially driven or linked, giving students direct exposure to industry as part of their studies. There is also a strong tutorial system, which provides students with a point of contact with a member of staff who can advise on welfare issues as well. Students regularly participate in various national/international events like:

- Team Srijan
   Firebolt.

The department has Mechanical Engineering Society which takes care of all-round development of the students.

## **Laboratories in the Department:**

Heat Transfer Lab., Strength of Materials Lab., CAD Lab., Hydraulics and Hydraulic Machines Lab., Theory of Machines Lab., Non-Conventional Energy Lab., Automotive Lab., Advanced Fluid Mechanics Lab., I.C. Engine/Thermal Engg. Lab, Engineering Mechanics Lab., Computational Lab.

### Research Areas: Some of the research areas are:

Composite Materials, Materials Technology, Smart Materials/Composites, Modelling and Simulation On-Condition health monitoring, Mechanical vibrations, Computational Fluid Dynamics, Heat Transfer, New and Renewable Energy, Design of Thermal Systems, Computer Aided Analysis and Design, Solar Energy, Waste Heat Recovery, I.C. Engines and Gas Turbines, Bio-fuels and Combustion, Fluidics Plastic Deformation and Fracture, Robotics, CAD/CAM

# **Department of Pharmaceutical Science & Technology**

The Department of Pharmaceutical Sciences & Technology was established in 1972. It offers the following programmes:

S. No.	Programmes Offered	Intake		
1	B. Pharm – 4 years (8 semesters) programme	60		
2	M. Pharm -2 years (4 semesters) programme in four specializations			
	(a) Pharmaceutics	18		
	(b) Pharmaceutical Chemistry	18		
	(c) Pharmacology	18		
	(d) Pharmacognosy	18		
	(e) Clinical Research	12		
	(f) Quality Assurance and Regulatory Affairs	12		
3	M. Pharm -2 years (4 semesters) programme under QIP	08		
4	Ph. D. Programme (including 8 under QIP)	Flexible		

The above programmes are recognized by the Pharmacy Council of India (PCI) and the All India Council for Technical Education (AICTE). The Department is recipient of assistance under the Special Assistance Programme (SAP) of the UGC and FIST of the DST. The Department is also recognized and approved by AICTE as one of the Centres for Quality Improvement Programmes (QIP) for postgraduate and Ph.D. programmes.

The course syllabi are updated frequently to incorporate newer developments in Pharmaceutical Sciences & Technology and also to cater the need of Pharmaceutical Industries, Academic Research and Drug Regulatory agencies. Department has facilities for doctoral research in different areas of Pharmaceutical Sciences. A number of Ph.D. degrees have been awarded besides a large number of scholars, registered for Ph.D. in different disciplines of Pharmaceutical Sciences. The Department has highly qualified and competent academic staff.

The faculties of the Department have been handling several R&D projects sponsored by National (UGC, AICTE, CSIR, DST, ICAR, TRIFED, ICMR, etc.) and International (BMBF/New Indigo/UKIERI) funding agencies.

The Department has sophisticated state of the art laboratories besides a computational & molecular modeling laboratory for teaching and research. Some important facilities and instruments available are: Differential Scanning Calorimeter (Shimadzu DSC50 & DSC60), ELISA Reader (Perkin-Elmer), Automatic Video Tracking System (Ethovision), Fluorescence Spectrophotometer (Hitachi), Gas Chromatograph (Chemito Ceres 800 Plus), Gel Electrophoresis System, High Performance Liquid Chromatography (Waters and Knauer), Preparative HPLC (Agilent), High Performance
Thin Layer Chromatography with WINCAT software (Camag), High Speed Refrigerated Centrifuge, FTIR 8400S (Shimadzu), Research Microscope with photomicrography (Carl-Zeiss)
& High Resolution Research Microscope with Digital Camera with PC based screen (Leica), UV-VIS Spectrophotometers 1800 and 2450 (Shimadzu & Systronics), Rotational Viscometer (Wells Brookfield Cone/Plate), Nitrogen and Hydrogen Gas Generator (Claind), Milli Q Water Purification Unit (Millipore), Non – invasive B.P. Instruments (IITC Life Sciences), Plethysmograph (IITC Life Sciences), Microwave Synthesis System (Catalyst 4RI), Lyophillizer (Operon), Rotary Evaporator (Buchi), Probe sonicator, Dissolution Apparatus, Ultracentrifuge, Texture Analyzer, Malvern Viscometer, Nano spray dryer, Humidity chamber (as per ICH), Electromagnetic sieve shaker, Ball mill, Ultra turrax digital homogenizer.

## An overview of different areas of research at the Department is as follows:

## Pharmaceutics group

New drug delivery system: Controlled release formulations, Transdermal drug delivery systems; Development of nasal delivery system; Colon targeted drug delivery system, self-emulsifying drug delivery system. Thermodynamic approach to drug excipient interactions, Cosmeceuticals (cost-effective skin care poly-herbal formulations), Nanotechnology based formulation development, Exploration of Natural Gum as Pharmaceutical Adjuvants and Standardization of Ayurvedic Drug/Polyherbal Formulations.

## **Pharmaceutical Chemistry group**

In-silico design, synthesis (microwave, combinatorial solution phase synthetic techniques) and evaluation of novel candidate compounds with special reference to antimicrobial, antiprotozoal, antiviral, antiHIV, anticancer, analgesic, antihistaminic, anticonvulsant, cardiovascular, antidiabetic and other activities. Isolation and characterization of natural products using spectroscopic methods (UV-VIS/IR/NMR/MS etc.) besides studies on synthetic nutraceuticals, Molecular modeling, docking, QSAR and solution phase ADME studies using CADD based software like Maestro Glide, BioSolveIT FlexX, Sybyl 7.1, and Scigress Explorer.

## Pharmacognosy group

Validation of traditional systems of medicine, validated methodologies for development of new herbal formulations, microcomputerized identification of indigenous drugs & development of standards, development of drug molecules from natural sources and their enhancement by biotechnological approaches, exploring natural resources for novel drug delivery systems.

## Pharmacology group

Anti tumor & immunomodulatory studies of compounds from synthetic and natural sources, general pharmacological screening of new moieties from synthetic and natural sources, toxicological studies of bioactive molecules (natural and synthetic sources), neuropharmacological studies of bioactive molecules, studies of bioactive molecules on experimentally induced urolithiasis, nephropathy, neuropathy and diabetes in animal models, biochemical and molecular pharmacological studies of bioactive molecules.

The Department maintains a well-equipped animal house, which is accredited by the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA). The Department also has a Medicinal Plant Garden spread over 10 acres of land within the Institute Campus. More than 200 plants of medical and aromatic importance have been cultivated and are being maintained in the Herbal Garden. A few aromatic oils such as Citronella (Java), *Cymbopogon martinii*, *Mentha arvensis*, *Mentha piperita*, *Eucalyptus citriodora*, Lemon Grass, are extracted from time to time.

The Department also extends support to other Departments like- Bio-Engineering, Chemical Engineering & Technology, Applied Chemistry, Environmental Science & Engineering, Medical Lab Technology at the University Polytechnic, Hotel Management & Catering Technology and other engineering departments.

## **Department of Physics**

The Department of Physics (previously known as Department of Applied Physics) since its inception in 1955 has played a pivotal role in the institute. A gamut of very motivated, well qualified and talented faculty is actively engaged in teaching as well as research in areas of theoretical and experimental physics and technology. They have, to their credit, numerous research publications and several R&D projects. Some faculty members have been awarded international fellowships from Universities abroad and some have received BOYSCAST fellowship awarded by DST, Government of India.

Programmes Offered	Intake
Integrated M.Sc. in Physics - 5 years (10 semesters) with exit option after three years	20
M.Sc. in Physics - 2 years (4 semesters)	15
M.Tech. in Nano Science and Technology - 2 years (4 semesters)	
Ph.D. Programme	

## Vision of the Department

The vision of the Department is to achieve excellence in undergraduate and postgraduate education and research for scholarly inquiry and development of new knowledge.

## Mission of the Department

- To train the students to be lifelong learners who will contribute to the creation of new knowledge, new technology, and innovation through excellence in research in emerging areas To educate students to be future leaders in science, technology, industry, education and other professions and succeed in a globally competitive environment
- To create National and International collaborations for research engagement in strategic areas of research
- To provide beneficial service to local, state, national and international communities

Department is presently offering the following programmes:

The prime objectives of the offered programmes are as follows:

- Impart high quality education in a vibrant academic ambience.
- Prepare students to take up challenges as researchers in academic and R & D organizations.
- To train students for participation in multidimensional academic activities.
- To impart scientific knowledge and inculcate human values.

The department has well equipped laboratories having several systems viz., RF magnetron sputtering, Plasma Enhanced Chemical Vapour Deposition (PECVD), thermal CVD, RF/DC magnetron cosputtering, plasma nitriding, anodic vacuum arc deposition, plasma arc generator, polishing setup, Raman spectrometer, nanoindenter, solar simulator, D33 meter, PE loop-tracer, UV Visible Spectrometer, 10K cryostat etc.

At present the department has 16 faculty members and 30 research scholars. Besides two Indo-Russian projects, the department has been pursuing several sponsored projects funded by the UGC, DST, AICTE, BRNS, ISRO, ARDB, DRDO, NRB and CSIR. In addition, the department has also completed an Indo-German project under Indo-German Bilateral Cooperation in Science and Technology (DST-BMBF) and an Indo-Israel project. The Department has received "Fund for Improvement in Science & Technology Infrastructure (FIST)" from DST, New Delhi, as well as Special Assistance Programme (SAP) from UGC.

The current broad areas of research in the department include nanotechnology, condensed matter physics, quantum optics and nonlinear optics. Specific sub-areas are plasma processing of materials, surface engineering with plasma coating, surface modification, anodic vacuum arc deposition of thin films, carbon nanotubes, diamond-like carbon (DLC) films, nano and ultrananocrystalline diamond films, carbon nanotubes, solar cells, nanocrystalline superhard coatings, high temperature superconductivity, colossal magnetoresistive materials, dilute magnetic semiconductors, piezoelectric materials, electronic composite materials, magnetic composites, soliton and light propagation, optical communication, photonic crystal fibres, optoelectronics, etc.

The Department has organized various seminars and symposia, recent ones include: SERC School on Science and Technology of Plasmas, from 15th-27th December, 2008 DST-INSPIRE Camp on Basic Sciences from 27th-31st January, 2010 Recent Developments in Engineering Materials, from 12th - 14th May 2011 CMDAYS – 2012, from 29th – 31st August 2012 One Day Workshop on Solar Cell, on 15th May 2014.

## **Department of Production Engineering**

Since its inception in 1964, the Department of Production Engineering has been imparting quality education to undergraduate and postgraduate students by empowering them to meet the demands of the manufacturing industry. The Department has established links with industry, R & D organizations, consultancy organizations and academic institutes of the nearby area in furtherance of the cause of manufacturing engineering. The Department sees itself as the pathfinder of emerging technologies and techniques in the area of Production Engineering, and develops students to be technologically and managerially sound to meet the challenges of the rapidly changing manufacturing scenario.

Programmes Offered	Intake
B.E. in Production Engineering - 4 Years (8 Semesters)	60
M.E. in Automated Manufacturing System - 2 Years (4 Semesters)	25
Ph.D. Programme	

The major long- range goal of the Department is to make itself a centre of excellence in teaching, consultancy and research in various aspects of Production Engineering. An increasing number of university-industry collaborations are shaping through sandwich training programmes, short-term courses, workshops, and live projects for undergraduate, postgraduate and doctoral level programmes. With this perspective, the department has established its following Vision and Mission

#### Vision:

To Become a Centre of Repute Striving Continuously Towards Providing Quality Education, Research and Innovation in the Field of Production Engineering

#### Mission:

- To provide quality education at both undergraduate and post graduate levels.
- To provide opportunities and facilities for research and innovation.
- To produce engineering graduates to meet the demands of manufacturing industries and R&D organizations.
- To emphasize on integrating Manufacturing technology with management.
- To impart latest technological knowledge to students by continuous development of curricula and faculty.

The Department has been able to establish well-equipped laboratories, upgrades the syllabi on regular basis and carries out its teaching and academic programme through its qualified and experienced faculties. Both our graduates and post-graduates have been doing well in industry and other Universities of higher learning in India and abroad.

## Major Laboratories in the Department

Department is having all advance facilities required for training/ research purpose for undergraduate and postgraduate and Doctoral level students. In order to crater the need of the Industry and research organizations', the Department has established following laboratories:

Flexible Manufacturing Lab, CAM lab, Manufacturing System Design Lab, Non-traditional lab, , Metrology lab, Metallurgy lab, Work Study & Ergonomics lab, Metal forming lab, Machine tool & Automation lab, Workshop (Carpentry shop, Foundry, Forging, Welding, Fitting & Machine Shop)

## Major Equipments in the Department

Some the state of art equipment's available in the department are: Hybrid Micro machine, 5-axis CNC Machining Center, CNC Starturn Lathe, Wire-cut EDM, Nd-Yag Laser Cutting and Welding Machine, Plasma cutting, Hydro-jet Cutting System, Microwave sintering and welding, TIG/MIG welding, Flexible Manufacturing Systems, Three Axis Co-ordinate Measuring Machine, Mechatronics Kit, CNC Trainner, Breath-by-Breath Exercise Test System, Sensor Kit, Mechatronic Press, Surface Roughness Testing, Single Spindle Automate, Hydraulic Universal Cylindrical Grinding Machine, Sintering Furnace, Friction Wear monitor, Krystaler Tool Dynamometer, Metallurgical Microscope.

Software's in the Department: **DELMIA Digital Manufacturing**, **PLM Software**, **CATIA**, **ProE ANSYS etc.** 

## Major Research areas in the Department

Department has been supported by different agencies like UGC, AICTE, DST etc. Department has been recognized by SAP, FIST and NCP. Department have two major research groups, the research works being carried out in these groups are as follows:

<u>Manufacturing engineering group</u>: Micro Machining, Incremental forming, Microwave welding, Microwave assisted sintering, Formability of powder performs, EMR radiation during metal forming, Precision Forming, Metallic foam, Non-traditional manufacturing.

<u>Industrial Engineering</u>: Lean Manufacturing, Work station Design and Human Factor engineering, Scheduling in FMS environment, Feature recognition and process planning, E-manufacturing, Value engineering.

JOB OPPORTUNITIES: The Institute has dedicated Placement Cell. The students are well placed in different Core as well as Software Industries. Many of the students are doing well in higher studies at various prestigious Universities abroad. Some of the major recruiters are, TATA Motors, Maruti Suzuki, Cummins, Britannia, Caterpillar, Timken, Exide Industry, Hyundai Motors, Hero Motors cop, Tata Hitachi, Sterlite Technology Itd.

## **Department of Remote Sensing**

Department of Remote Sensing was established in 1997 with an aim to meet the increasing demand for qualified manpower in this rapidly developing field. Application of Remote Sensing/Geoinformatics techniques using tools such as Geographic Information System (GIS) and Global Positioning System (GPS) in various activities including resources evaluation, environmental monitoring and land use/land cover mapping, urban planning, etc. has grown considerably during the last few decades. RS data products are increasingly being used for plan formulation at all levels. An essential pre-requisite to partaking in these opportunities is the building of various indigenous capacities for the development and utilization of space science and technology. This has led to a spurt in the demand for qualified manpower in this field.

Programmes Offered	Intake
M.Tech in Remote Sensing -2 years (4 semesters)	18
M.Sc. in Geoinformatics -2 years (4 semesters)	20
Ph.D. in all branches of Remote Sensing, GIS, Earth Sciences	

Department of Remote Sensing is a DST- FIST sponsored department and as also UGC-SAP supported. The department is associated with many National and International agencies for R&D projects and consultancy works. This department has been recognized and awarded several projects from Govt. of India and Govt. of Jharkhand.

### Significance of Remote Sensing

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

Department is participating in EDUSAT Programme of Indian Institute of Remote Sensing (IIRS), Department of Space (DoS), Dehradun for imparting "Distance Learning Course on RS, GIS, and, GPS and DIP".

#### LABORATORIES IN THE DEPARTMENT

The department has set up several labs listed below for hands-on training to its postgraduate students such as for Digital Image Processing (DIP), GIS, GPS, Photogrammetry, Digital Photogrammetry, Cartography and Image Interpretation.

- 1. Geographic Information System (GIS) Lab
- 2. Digital Image Processing (DIP) Lab
- 3. Digital Photogrammetry Lab
- 4. Cartography & Image Interpretation Lab
- 5. GPS & Satellite Navigation Lab
- 6. Project Lab
- 7. Map Production & Reprographic Lab

These labs are equipped with latest new generation computer systems, workstations, server along with software for GIS, Cartography, and DIP such as ArcGis, ERDAS Imagine, ERDAS Virtual GIS, LEICA Photogrammetry Suite, ENVI, Definines, Insar Earth View, River Tool, PCI Geomatica, Image Analyst, Modular GIS Environment (MEG), IIRAS, Geomedia Professional, Geomedia Intersite Interplot Professional. The department labs are also equipped with instruments like DGPS, handheld GPS, large format scanner, flatbed scanner, map plotter, printer, Procom-2 Optical Pantograph, Mirror Stereoscopes, Ground Truth Radiometer (GTR) etc.

### Department also proposes to offer the following programme in future:

Bachelor of Engineering (B. E.) in Geoinformatics -4 years (8- semester)

## **Department Vision**

Be a centre of excellence in the field of Remote Sensing and Geoinformatics Technology education and research to match the needs of ever increasing requirement of human resources in these fields and to cater to the larger interest of the Society and Nation.

### **Department Mission**

- Impart quality education and equip the students with strong foundation that could make them capable of handling challenges of the ever advancing technologies.
- Maintain state-of-the-art in research facilities and integrity with the world's leading universities and research organisations for constant improvement in the quality of education and research.

## **Programme Educational Objectives**

- To prepare the students in identifying, analysing and solving geospatial problems.
- To train the students in developing practical and executable solutions to the challenges of growing field of Remote Sensing and GIS.
- To impart the students with strong base of knowledge that makes them suitable both for industries as well as for teaching and research.
- To inculcate the students with the sensitivity towards ethics, public policies and their responsibilities towards the Society.

# **Department of Space Engineering and Rocketry**

The Department of Space Engineering and Rocketry – the first of its kind in the country was established in 1964 to train scientists and engineers in the important areas of Aerospace Engineering and Rocket Technologies. Since 1968 it has been offering a post- graduate degree course leading to M. E. in Space Engineering and Rocketry with in-depth specialization in two specific areas- namely Aerodynamics and Rocket Propulsion. The Department aims to provide state of art education and training to its students to enable them to contribute efficiently in the National efforts made in the fields of Space & Defence related technologies and challenging future missions.

Programmes Offered	Intake	
M.E. in Space Engineering & Rocketry - 2 years (4 Semesters) programme in		
two specializations		
a) Aerodynamics	12	
b) Rocket Propulsion	12	
Ph.D. Programme		

The Department also provides research facilities at doctoral and postdoctoral levels in the fields of Aerodynamics and Flow Studies, Propellant Technology, Rocket Propulsion, Combustion, and Composite Materials.

The Rocket Propulsion Laboratory has static test set-ups equipped with a computer controlled firing facility and PC based data acquisition and analysis system for solid, liquid and hybrid rocket motors. Basic infrastructure for design and fabrication of rocket motors is also available in the Department.

In the Propellant Technology area, complete processing and characterization facilities are available for rocket propellants and igniters. Advanced techniques and equipments for carrying out research in the areas of high-energy material, igniters, inhibitors and insulators, and high performance metalized gelled propellants are also available in the Department.

In the area of fuel technology, adequate facilities have been created to carry out wide- ranging studies and characterization of conventional and non-conventional fuels. Modern equipments like STA, TGA, DSC, Viscometers, rheometers, fuel gas analyzer, etc. are available for training and research.

In the Aerodynamics Laboratory, 4 wind tunnels are available to train students and carry out research work in the fields of Viscous/ Inviscid Flow, High speed/ Low speed Aerodynamics, and steady/ unsteady Aerodynamics. Different types of pressure sensors and flow visualization techniques are available to study the flow field on scaled models of aerospace vehicles.

In the Composite Materials Laboratory, infrastructure is available for fabrication of composite plates and shells by the hand lay-up and vacuum bag techniques. Laboratory facilities are available to carry out research on mechanical properties and micro level analysis of composite materials subjected to various environmental conditions.

## Sec 9. Discipline, Rules & Regulations, Hostel and Medical Examination

**Institute Rules & Regulations**: For details of Institute rules and regulations, please see booklet provided at the time of admission.

## Discipline

The Institute places a very high emphasis on discipline of students both inside and outside the campus. Students must abide by the Institute and Hostel rules and agree to conform to the rules and regulations enforced from time to time. They must not do anything either inside or outside the Institute that will interfere with its orderly governance, discipline and image. Students must attend lectures, tutorials and practical classes regularly. A minimum attendance of 75% in lectures, tutorials and sessionals for each subject is essential for appearing in the Semester Examinations. Thus, students should attend all theory and laboratory classes from the first day of the academic year. In case of absence due to unavoidable circumstances, students are advised to take prior permission from the Dean / Head. In case of absence due to illness, students will have to produce a Medical Certificate with an application from their parents or guardians. In such a case, parents/guardians or Hostel Warden should inform the authorities immediately. Students should strike a proper balance between extracurricular activities and academic requirements. A student's participation in extracurricular activities should not be allowed to interfere in his/her academic schedule.

During teaching hours, the main lobby, the library, the corridors of the Institute and the area surrounding the Institute are to be observed as silence zones. Students must not cause any disturbance in these zones. Students must not indulge in any kind of misconduct or indiscipline or anti-social activities within or outside the campus. Students must not form a group causing any hindrance to the academic and administrative activities of the College. Those found doing so will be punished and strict disciplinary action will be taken by the authorities. Students shall not damage the property of the Institute. Cost of such damage will be recovered from students, parents/guardians of the students.

Students must always carry their Identity Card and produce it on request. In case of loss or damage of Identity Card, the concerned authorities should be informed immediately.

Students are not permitted to enter and use the laboratory / workshop / sports ground if they do not wear appropriate dress. For example, they should enter the laboratory only with apron, cap or mask as instructed. Students should park their cycles in an orderly manner at the cycle stands. Students should follow the rules of the Hostel Mess / Canteen. Students are advised to read the Notice Boards regularly.

Students are strictly prohibited from possessing or consuming spirits, tobacco products and narcotic drugs either within or outside the campus, and if found violating this will be rusticated immediately, without warning.

Ragging in any form inside or outside the campus is strictly prohibited by law. Any students found ragging other students will be summarily expelled from the Institute and dealt with as per the directive of Hon. Supreme Court/Hon. High Court.

Each student must read the "UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009" on the UGC website. Each student admitted to any of the Institute's programmes must submit the two completed affidavits [one from candidate and one from parents] at the time of admission. [for details please see Sec-11 of this Information Brochure].

## Hostel

Hostel facilities are provided only at Mesra & Patna Campuses. All students admitted at Mesra and Patna Campuses are required to reside in one of the Institute hostels, to which they are allotted and must take food along with other inmates of the hostel in the common mess. There are separate hostels for girls students.

#### Medical

All selected students will be required to undergo medical examination by a Medical Officer of the Institute and their admission is subject to being found medically fit for the Programme. Therefore, candidates, for their own satisfaction, are advised to get themselves examined by a registered medical practitioner.

The Institute at Mesra is located in a spacious green campus. There are small forests with a large number of trees – mostly sal trees which are native to Chotanagpur. These sal trees and a number of other trees and plants have their flowering season during mid-February to early April, and this sometimes leads to a large pollen content in the air. It has been noted that some people who are allergic or susceptible to pollen from these sal trees / other plants may develop some health problems / breathing problems or their existing problems may be aggravated during these weeks, as also during some other months of the year when other plants flower. Thus, such candidates who are known to be sensitive or susceptible to pollen from trees or other plants are required to get allergy tests done / take advice from their physicians / a specialist before taking admission at Birla Institute of Technology, Mesra, Ranchi.

## Applicability of Regulations for the time being in force, Disclaimer and Legal Jurisdiction:

#### In Force

Notwithstanding the nature of a programme spread over more than one academic year, the regulations in force at the time a student joins a programme shall hold good only for the examinations held during or at the end of the semester. Nothing in these regulations shall be deemed to debar the Institute from amending the regulations subsequently and the amended regulations, if any, shall apply to all students old or new, as specified therein.

#### **Disclaimer**

The statements made in this Information Brochure and all other information, contained herein are believed to be correct at the time of publication. However, the Institute reserves the right to make at any or without notice, changes in and additions to the regulations, conditions governing the conduct of students, requirements for degree, fees and any other information, or statements contained in this Information Brochure. No responsibility will be accepted by the Institute for hardship or expense encountered by its students or any other person for such changes, additions, omissions or errors, no matter how they are caused.

### **Legal Jurisdiction**

All disputes will be subject to jurisdiction of the Civil Courts at Ranchi city only.

## Sec 10. Undertaking for candidates appearing for final examinations in 2015

Format of Undertaking to be typed and submitted on Non- Judicial stamp Paper, signed by Public Notary, at the time of admission, by those candidates who are provisionally selected for the Postgraduate Programmes of the Institute, and who are appearing for their final examinations in 2015.

1.	l,	son/daughter of P.S hereby declare that I am fully		
	resident of	P.SP.S.		
	DIST.	hereby declare that I am fully ssion to the M.E. / M.Tech / M.Pharm / MUP / M.Sc.		
	Programmo in	of the Rida Institute of Technology is		
	/ % for SC/ST) in Honours	of the Birla Institute of Technology is % s / aggregate of all subjects in all years in		
	graduate/postgraduate level (qualify)	ing examination) and therefore I shall be disqualified		
		me of Birla Institute of Technology, if I do not secure		
		C/ST) in Honours / aggregate of all subjects in all		
	years in graduate / postgraduate le	evel or equivalent eligibility qualification (qualifying		
	examination).			
2.	I belong to SC / ST / OBC / General	category (strike out whichever is not applicable)		
3.		have been provisionally allowed to appear in the		
		raduate Programme although results of my graduate		
		/ postgraduate /equivalent eligibility qualifying examination has not yet been published, I shall not insist on extension / conversion of the provisional admission, if		
	i). I fail to secure minimum % ( % for SC/ST) in Honours / aggregate in all subjects in all the years in such graduation/postgraduation or equivalent			
	eligibility qualifying examination			
	ii). I fail to produce the official resu			
4.	I undertake that all the certificates / documents submitted by me are authentic and are issued by competent authority.			
5.		ng the programme I am found not to be eligible for		
	admission for not having required marks in graduation / postgraduation, my admission			
	shall be cancelled.			
Coun	ter Signed			
	(Guardian)	(Applicant)		
Name	e & Address in Block Capitals	Name & Address in Block Capitals		
Name	)	Name		
Addre	ddressAddress			

## Sec 10. Anti-ragging Affidavit

## How can fill Online affidavits and Why?

- 1. It is mandatory for every student and his/her parents to submit an anti-ragging affidavit at the time of admission. These are UGC's regulations.
- 2. It is the order of the Hon. Supreme Court that contact details of students must be collected from these affidavits and stored electronically at a central location.

## It is a simple procedure comprising 3 steps

Step 1: Log on to

www.ANTIRAGGING.in or www.AMANMOVEMENT.org

## Click on the button called 'On line affidavits'

**Step 2:** Fill in the information as desired and submit the form.

**Step 3:** On successful completion you will receive affidavits, both for Students and Parents, through E-mail.

#### Note:

- If you do not have an E-mail address please create one before you fill an affidavit forms.
- If your mother or father or guardian does not have a phone or a mobile phone or email then please give the numbers / email of their friends or relations or neighbors.
- If you do not have a mobile number, then please give the mobile number of your friend in the Institute.

After filling this form successfully you will receive the Student's Anti Ragging Affidavit and the Parents Anti Ragging Affidavit in your Email. Please print both the Affidavits, sign them yourself, request your parents to read the details and request them to sign their affidavit and then submit both during admission.