

काशी हिन्दू
विश्वविद्यालय



BANARAS HINDU
UNIVERSITY

An Institution of National Importance Established by an Act of Parliament

INFORMATION BULLETIN

FOR ADMISSION TO

MASTER OF SCIENCE IN BIOTECHNOLOGY

MASTER OF SCIENCE IN MOLECULAR AND HUMAN GENETICS

Batch 2021 - 2023

About the University:

Banaras Hindu University is an internationally reputed temple of learning, situated in the holy city of Varanasi. The creative and innovative University was founded by the great nationalist leader, Pt. Madan Mohan Malaviya, in 1916. It played a stellar role in the independence movement and has developed into the greatest centre of learning in India. It has produced many great freedom fighters and builders of modern India and has immensely contributed to the progress of the nation through a large number of renowned scholars, artists, scientists and technologists who have graced its portals. The area of the main campus of this premiere Central University is 1300 acres, which is the second largest in the World, having well maintained roads, extensive greeneries, a temple, an airstrip and buildings which are an architectural delight. Another campus of the University is coming up at Barkachha, in Mirzapur District, covering an area of 2800 acres. The university comprises 5 Institutes, Indian Institute of Technology-BHU, 16 Faculties, and 140 Departments spanning a vast range of subjects pertaining to all branches of humanities, social science, science, technology, commerce, management, medicine, performing arts and visual arts. It has 4 centres of Advanced Studies and several departments specially assisted by the UGC. It has a large number of specialized research centres. Bharat Kala Bhavan, the reputed museum of the University, is a treasure trove of rare collections. The 927 bed hospital is equipped with all the modern amenities. The University provides a wide range of facilities for sports and hobbies, Internet facilities and units like Public Relations Cell, Printing Press, Preservation Centre, Radio Station, Petrol Pump, ATMs, Banks, Post Office, Subsidized Canteens, a NCC barrack and its own Security Force. The University family comprises of about 31000 students belonging to all streams of life, castes, religions and races, about 2000 teachers and nearly 5000 non-teaching staff. A large number of students from foreign countries like the US, UK, Russia, European countries, Asia, Africa and the Middle East come here to learn about a wonder named INDIA.

School of Biotechnology:

The School of Biotechnology was established in 1986 with the financial support from the Department of Biotechnology, Govt. of India, New Delhi. Departments of the University participated for teaching include Departments of Microbiology and Biochemistry of IMS; Department of Chemical Engineering of IT, BHU, Departments of Botany, Zoology, Biochemistry, Chemistry and Statistics of the Faculty of Science. The core faculty of the school was appointed in 1990. At present Institute of Medical Sciences and Institute of Technology, BHU and other Universities & research institutions are actively participating in the school's multidisciplinary teaching program. The M.Sc. (Biotechnology) 30 students are admitted annually through a National level combined entrance test conducted by the Graduate Aptitude Test-Biotechnology conducted by the Regional Centre for Biotechnology, on behalf of the Department of Biotechnology, Govt. of India, New Delhi. M.Sc. students are awarded with fellowship of 5000/-PM.

The faculty members of the School are presently actively engaged in the following areas of research:

- a). Cellular and Molecular Immunology;
- b). Immunotherapy of cancer and inflammatory diseases;
- c). Microbiology of infectious diseases;
- d). Enzyme based diagnostics and structure-function relationship;
- e). Bacterial gene regulation;
- f). Diversity of microbes from extreme environment;
- g). Use of molecular markers in gene tagging;
- h). Germplasm conservation and propagation;
- i). Molecular Biology: Genomics and Proteomics

So far School has produced several Ph.Ds. The school has excellent infrastructure and equipments facilities such as Spectrofluorimeter, gel documentation systems, water purification system, ABI Prism 310 Genetic Analyzer (DNA Sequencer), Thermal cyclers, GLC, HPLC/FPLC, Scintillation Counters, High-Speed Centrifuges, Spectrophotometers, ELISA Reader, Nano Drop Spectrophotometer, Ice flaker, Circulating water bath, Incubator shaker, Plant growth chamber and Animal & Plant Cell & Tissue Culture facilities, LCD projection systems etc. The School also has a Bioinformatics Centre funded by the DBT with internet facilities, databases, Bioinformatics facility is available for other interested researchers from the other departments of the University and outside institutions.

Department of Molecular & Human Genetics:

Genetics is an important area of life science with a trans-disciplinary approach requiring close interactions between specialists in various disciplines including Biology, Physics, Chemistry, Mathematics, Statistics, Informatics, Medicine and Agriculture. Keeping in view the urgent need for developing state-of-the art teaching and research programs in Molecular and Human Genetics, the Faculty of Science introduced, under the auspices of the Center for Advanced Studies in Sciences, a two-year M.Sc. course in Molecular and Human Genetics in 1999 in the Department of Zoology. The early nodal group of teachers of this course comprised of teachers from Cytogenetics and Biochemistry sections of the Department of Zoology. Since August 2004, a separate Department of Molecular and Human Genetics has been established in the Faculty of Science. This young department continues to believe in the principle of integrative teaching and thus maintains close interactions with other departments in the University. Currently, the department has six core faculty members. It takes pride in having a teaching network of best faculty from within and other departments like Zoology, Center for Genetic Disorders, Institute of Medical Sciences (both Modern medicine and Ayurved) and Mahila Mahavidyalaya of the University, a combination of expertise that makes it one of the best teaching programmes in this field of specialization. The core group of faculty members have diverse expertise and research interest. Major areas of the active research in the department includes but not limited to cancer genetics (molecular mechanisms of genetic and epigenetic regulation of tumorigenesis in multiple tumors), developmental genetics (cell signalling), clinical genetics using model systems (genetic and molecular mechanisms responsible for neurodegenerative diseases and neuronal development), reproductive genetics (genetics of the male and female infertility; recurrent pregnancy loss), immunogenetics (the immunopathogenesis and regulatory mechanisms in Systemic Lupus Erythematosus (SLE)), hematology and cardiovascular biology. So far the Department has produced several Ph.Ds. Due to its trans-disciplinary nature, the course is open to students holding Bachelor's degree in any branch of Science, Agriculture, Medicine, Pharmaceutics or Bioscience-related Technology/Engineering. In the M.Sc. course (Molecular and Human Genetics) 30 students are admitted annually through a National level combined entrance test conducted by the Graduate Aptitude Test-Biotechnology conducted by the Regional Centre for Biotechnology, on behalf of the Department of Biotechnology, Govt. of India, New Delhi. M.Sc. students are awarded with fellowship of 5000/-PM.

1. COURSE OF STUDY AND ELIGIBILITY REQUIREMENTS:

FACULTY OF SCIENCE

(a) M.Sc. in Biotechnology	Duration:4 Semesters (2 Years)	Course Code: 720	Intake : 30
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Eligibility: Graduate Degree in Physical, Biological, Agricultural, Veterinary and Fishery Sciences, Pharmacy, Engineering/Technology, 4-years B.Sc. (Physician Assistant Course); OR MBBS/B.D.S. with at least 55% marks in the aggregate including all subjects studied at Graduate level except those subjects where only pass marks are required and which do not contribute to the total in the final (degree) marksheet.

(b) M.Sc. in Molecular and Human Genetics	Duration:4 Semesters (2 Years)	Course Code: 490	Intake : 30
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Eligibility: Graduate Degree in Physical, Biological, Agricultural, Veterinary and Fishery Sciences, Pharmacy, Engineering/Technology, 4-years B.Sc. (Physician Assistant Course); OR MBBS/B.D.S. with at least 55% marks in the aggregate including all subjects studied at Graduate level except those subjects where only pass marks are required and which do not contribute to the total in the final (degree) marksheet.

2. RESERVATIONS

(i) Scheduled Castes/Scheduled Tribes:

Seats shall be reserved for Scheduled Caste (15%) and Scheduled Tribe (7.5%) candidates in each Course. Admission against these seats will be made provided the candidate has passed the Qualifying Examination and appeared in the Graduate Aptitude Test-Biotechnology conducted by the Regional Centre for Biotechnology, on behalf of the Department of Biotechnology, Govt. of India.

Every SC/ST candidate shall have to submit a self attested copy of the Certificate mentioning that the candidate belongs to SC/ST community. Such certificates shall be subject to verification from the concerned District Magistrate. The following are empowered to issue the certificate:

- (a) District Magistrate/Additional District Magistrate/Collector/Deputy Commissioner/Addl. Deputy Commissioner/Deputy Collector/1st Class Stipendiary Magistrate/ City Magistrate/Sub-Divisional Magistrate/Taluka Magistrate/ Executive Magistrate/Extra Assistant Commissioner.
- (b) Chief Presidency Magistrate/Addl. Chief Presidency Magistrate/Presidency Magistrate.
- (c) Revenue Officer not below the rank of Tehsildar.
- (d) Sub-Divisional Officer of the area where the candidate and/or his family normally resides.
- (e) Administrator/Secretary to the Administrator/ Development Officer (Lakshadweep Islands)

Candidates must note that Certificate from any other person/authority shall not be accepted in any case. If the candidate happens to belong to SC or ST, his/her caste/tribe must be listed in the appropriate Govt. of India schedule. The Caste Certificate should clearly state: (a) Name of his/her caste/tribe (b) whether he/she belongs to SC or ST (c) District and the State or Union Territory of his/her usual place of residence and (d) the appropriate Govt. of India schedule under which his/her caste/tribe is approved by it as SC or ST.

However, if an SC/ST candidate seeks admission under some other category (for example: PWD/Employee Ward etc.) the candidate should satisfy the minimum eligibility requirement for that category.

(ii) Other Backward Classes (OBCs):

27% Reservation to candidates belonging to OBC category (excluding under creamy layer) will be provided in different courses. The authorities to issue the OBC certificate are the same as in case of SC/ST provided in section 2 (i) above. The caste in the OBC certificate will be those only which are in the list of Central Govt. Further the OBC certificate should clearly mention that the candidate is not under creamy layer. However, if an OBC candidate seeks admission under some other category (for example: PWD/Employee Ward etc.) the candidate should satisfy the minimum eligibility requirement for that category.

(iii) Economically Weaker Sections (EWSs)

In accordance with O.M.F.No.12-4/2019-U1 dated 17th January 2019 of the Department of Higher Education, MHRD, Government of India, 10% reservation for Economically Weaker Sections shall be provided in admission during the Academic Session 2020-21

(iv) Persons with Disability: 5% seats shall be reserved for Persons with Disability Candidates on horizontal basis: (a) blindness and low vision; (1%) + (b) deaf and hard of hearing; (1%) + (c) locomotor disability including cerebral palsy, leprosy cured, dwarfism, acid attack victims and muscular dystrophy; (1%) + (d) autism, intellectual disability, specific learning disability and mental illness; (1%) + (e) multiple disabilities from amongst persons under clauses (a) to (d) including deaf-blindness in the posts identified for each disabilities: (1%) (on horizontal reservation basis). Such candidates will have to submit a self attested copy of Disability Certificate issued by the District CMO with the Application Form. The candidates called for Counseling for possible provisional admission will be examined by a Medical Board constituted by BHU and if necessary, will be referred by the Medical Board to other recognized bodies for the purpose, as per criteria fixed by the University. The decision of the Medical Board constituted by BHU will be final.

3. SUPERNUMERARY SEATS:

Foreign Nationals: Provision to the extent of 15% supernumerary seats for Foreign Nationals exist, out of which 5% seats will be filled up by children of NRIs [Persons of Indian Origin (PIO)] and 5% by children of Indian workers in Gulf and South Asian Countries. The details about this may be obtained from the Office of the International Centre, C/3/3, Tagore House, Banaras Hindu University, Varanasi-221 005. (visit our BHU website: www.bhu.ac.in).

4. APPLICATION FORM:

The candidates desirous of admissions in School of Biotechnology and Department of Molecular and Human Genetics shall be required to register on the Entrance Test portal of BHU and fill up the application form ONLINE as per procedure provided on the Portal. **For further details visit the BHU website (www.bhu.ac.in) or the entrance test portal of BHU (www.bhuonline.in).**

5. APPLICATION PROCESSING/ENTRANCE TEST FEE:

Nil

IMPORTANT DATES:

Filling up of the online application form will open on **28th August, 2021**. The last date is 10 days after declaration of GAT-B result.

6. INSTRUCTIONS FOR SUBMISSION OF APPLICATION FORM:

Applicants must fully satisfy themselves about their eligibility before filling the application forms of both the courses, M.Sc. in Biotechnology, School of Biotechnology; and M.Sc. in Molecular and Human Genetics, Department of Molecular and Human Genetics, BHU.

6.1 Online Application Form:

The Application Form for M.Sc. in Biotechnology, School of Biotechnology and M.Sc. in Molecular and Human Genetics, Department of Molecular and Human Genetics is available on the BHU's entrance test portal (www.bhuonline.in). The online application making process will have following steps:

Step 1: Registration on the Portal [www.bhuonline.in]- This step involves authentication of Candidate's email id and mobile number. Candidates are required to have a valid email id and mobile No. (in use) for registration, preferably the same they have used for GAT-B 2020 registration purpose.

Step 2: Filling up Identification details - Only after successful registration on the Portal [www.bhuonline.in], the candidates would be required to fill up an Identification Form giving particulars of the documents for authentication of their identity. For the purposes, following photo identification documents are allowed: **(i) Aadhaar Card; (ii) Passport; (iii) Voter ID issued by the Election Commission of India; (iv) Bank Passbook affixed with the photograph (v) Driving License; and (vi) Pan Card; (vii) any other valid Government ID Number.**

Step 3: Online Application Form Entry and Course Selection- After successful authentication of identity, candidates would be allowed to fill-up details in the online application form and select the course after ensuring their eligibility for the concerned course in which they are desirous.

Step 4: Uploading of photographs and signature- Candidates have to scan their photo and signature as per instruction given in the portal and upload it.

Step 5: Payment of Application Processing/ Entrance Test Fee- After the candidate has filled up the application form online and clicks on the "CONFIRM" button, he/she will be made payment of application processing/test fee through online payment credit card/ debit card through the payment gateway available on the Entrance test portal.

Step 6: Printout of Application Form for the record of candidates- After online submission of application form and successful payment of Application Processing/ Test Fee, candidates are advised to take a printout of the online filled up application form (containing the details he/she has filled in and the transaction details of payment of application fee) from either the Entrance Test portal for their own record.

7. REASONS FOR REJECTION OF THE APPLICATION FORMS:

- (i) Submission of application form without payment of requisite amount of **Application Processing/ Entrance Test Fee**.
- (ii) Any other inadequacy detected.

NOTE: If at any stage it is found that the applicant is not eligible for admission in a discipline under University rules, his/her candidature will automatically stand cancelled. Please note that thorough checking of Application Form, Minimum Eligibility requirements, Original documents in support of Academic Certificates and Categories-claimed will be done only at the time of admission/counseling (if called for the same). At that stage also, the candidature of the applicant will stand cancelled, if he/she does not fulfill all the requirements for admission.

8. DOCUMENTS IN ORIGINAL REQUIRED AT THE TIME OF ADMISSION:

If the candidate is called for admission to a particular course on a particular date/dates, he/she shall have to bring with him/her all the necessary documents mentioned below in ORIGINAL failing which his/her admission shall NOT be considered.

- (i) Transfer Certificate.
- (ii) Migration Certificate, if passed from any University other than BHU (To be submitted not later than 90 days of admission).
- (iii) High School Certificate/equivalent Certificate.

- (iv) Intermediate (+2) Certificate/equivalent Certificate.
- (v) Mark sheets of High School/equivalent & Intermediate (+2)/equivalent.
- (vi) Mark sheet of the Qualifying Examination.
- (vii) GAT – B score card
- (viii) SC/ST/OBC/EWS/PwD Certificate on the basis of which reserved quota seat is claimed.

IMPORTANT NOTE:

- (i) Candidates are advised to keep sufficient number of extra copies of the same photograph, which has been pasted on the application form for future use, as and when needed.
- (ii) The Category to which an applicant belongs once mentioned on the Application Form will be final and no subsequent change will be allowed.
- (iii) Applications of candidates who have submitted forged / fake certificates / documents or adopted fraudulent means shall be rejected without any intimation to the candidates. Further, such candidates shall be debarred from appearing in any subsequent entrance test conducted by B.H.U.
- (iv) **Any related legal litigation in respect of the admission shall be subject to the jurisdiction of the local court of Varanasi and/or Hon'ble High Court of Judicature at Allahabad only.**

9. ADMISSION PROCEDURE:

- (i) Admission to the M.Sc. in Biotechnology, School of Biotechnology and M.Sc. in Molecular and Human Genetics, Department of Molecular and Human Genetics Programs of the Institute of Science will be made in order of merit on the basis of score/merit of the candidates in Graduate Aptitude Test-Biotechnology (GAT-B) conducted by the Regional Centre for Biotechnology, on behalf of the Department of Biotechnology, Govt. of India.
- (ii) Separate final merit list shall be prepared for the candidates under each of the categories, i.e., General, SC, ST, OBC and EWS on the basis of score/merit of the candidates in Graduate Aptitude Test-Biotechnology (GAT-B).
- (iii) Vacant seats reserved for SC/ST/OBC candidates, if any, may be filled up as per Govt. of India rules.
- (iv) In case there are more than one candidate securing equal ranks as obtained by the last candidate in order of merit in the list of candidates to be called for admission, the following *inter-se* ranking rules of the University shall be applicable.
 - “In case the candidates have equal ranks then:
 - (a) the candidate having secured higher marks in the qualifying examination is eligible;
 - (b) In case the mark in the qualifying examination is also equal then the candidate senior in age shall be given preference”
- (v) While coming for counseling for provisional admission, candidates are required to bring with them all the original documents (certificates, Mark-sheets including Caste Certificate, Migration Certificate by non-BHU candidates / Transfer Certificates by BHU candidates etc.) In case provisional admission is offered to a candidate, all his/her original documents will be detained in the Institute and the same will be returned after completion of admission formalities.
- (vi) Provisional admission to a particular program will depend upon the combined merit in GAT-B 2020 against the availability of seat in that program on the date and time of counseling.
- (vii) If a student requests for cancellation of his/her admission and return of original documents the same will be permitted as per the existing provisions of the University.
- (viii) The candidate granted Provisional admission shall deposit fee within the period prescribed by the Admission Committee failing which the admission shall stand cancelled.
- (ix) Provisional admission cannot be claimed by any applicant as a matter of right. The provisional admission of an applicant shall be entirely at the discretion of the Admission Committee, which may refuse to admit any student without assigning any reason thereof.
- (x) Provisional admission of a candidate is liable to be cancelled by the Admission Committee at any time
 - (a) if it is detected that there is something against the candidate which would have prevented him/her from being admitted to the course
 - (b) If the candidate is found at a later stage to have provided any false information, and /or
 - (c) if he/she has been punished for an act of gross misconduct, indiscipline or an act involving moral turpitude
- (xi) A candidate provisionally selected for admission shall be required to fill the prescribed form, submit the required documents, collect his/her admit card for admission to the course from the office of the Department and pay fees by a date fixed for the purpose, otherwise the offer made to him/her will automatically stand cancelled and the seat thus falling vacant shall be offered to the next candidate in order of merit under the

specified category.

- (xii) A candidate provisionally selected for admission shall be required to fill the prescribed form, submit the required documents, collect his/her admit card for admission to the course from the office of the Department and pay fees by a date fixed for the purpose, otherwise the offer made to him/her will automatically stand cancelled and the seat thus falling vacant shall be offered to the next candidate in order of merit under the specified category.
- (xiii) Waitlisted candidate shall be offered admissions strictly on the basis of ranking provided there is a vacancy in the Program. Such waitlisted candidates shall have to deposit their fee latest by the date fixed by the Admission Committee

Note: Non-appearance of the candidate for counseling on the scheduled date and time of the counseling shall disqualify him/her for admission.

10. FEE STRUCTURE: The aforesaid two course fee will be as per regular PG course of Institute of Science.

11. ADMISSION OF FOREIGN NATIONALS TO M.SC. IN BIOTECHNOLOGY, SCHOOL OF BIOTECHNOLOGY AND M.SC. IN MOLECULAR AND HUMAN GENETICS

Seats: 15% of the intake.

(Candidates under Provision to the extent of 15% supernumerary seats for Foreign Nationals exist, out of which 5% seats will be filled up by children of NRIs [Persons of Indian Origin (PIO)] and 5% by children of Indian workers in Gulf and South Asian Countries).

Eligibility:

Foreign Nationals are required to produce a valid GMAT Score of not less than 300 besides having equivalent basic eligibility as stated at point (1) Page 2 above.

All the application forms may be submitted in the office of the International Students Adviser, International Students Centre, BHU for processing for their admission. The International Students' Adviser, with the help of the Admission Committee constituted to look after the admission work of the foreign nationals shall examine the eligibility of each applicant to the course and also the equivalence of the qualifying examination passed by the candidate.

The International Students Adviser shall issue the eligibility letter to the concerned foreign nationals if they are found eligible. If there is any problem regarding equivalence of the qualifying examination passed by the candidates, the same may be referred to the Equivalence Committee constituted for foreign nationals. The last date of admission in this category will be announced by the International Students Adviser. Foreign national candidates are exempted from appearing in The Graduate Aptitude Test-Biotechnology (GAT-B), being conducted by the Regional Centre for Biotechnology on behalf of the Department of Biotechnology, Government of India.

All the Foreign Nationals have to fulfill the following conditions:

a) At the time of submitting the application:

- (i) All the Foreign Nationals should submit their application, along with the processing charges.
- (ii) The applications of scholarship-holding Foreign Nationals (under various schemes) required to be routed through the Indian Council for Cultural Relations / Ministry of Human Resource Development (Department of Education), Govt. of India, New Delhi.
- (iii) They hold a valid foreign passport.
- (iv) That they have adequate knowledge of English and/or Hindi as per the requirements of the Course.

b) At the time of admission:

- (i) They have valid Residential permit in India granted for studies / student visa for the prescribed duration of the concerned Course.
- (ii) They fulfill the minimum eligibility requirements.

c) General:

- (i) The Degree/certificates of the candidates have been recognized and approved by the Association of Indian Universities (AIU)/Commonwealth Universities/ International Association of Universities (IAU) as equivalent to the corresponding Indian degrees/certificates.

- (ii) All the eligible Foreign Nationals are required to fill up the Registration Form prescribed by the University at the time of admission.
- (iii) The applicant should have completed 17 years of age and there is no maximum age limit for Foreign Nationals.
- (iv) The Inter-se merit among the applicants of various Foreign Nationals shall be decided by the “Core Committee for Admissions of Foreign Nationals”, which shall be deemed as final.

d) Fee for the Foreign Nationals

The quantum of processing charges and additional charges may be modified by BHU from time to time. Fee structure for all the candidates of Foreign Nationals is as under:

1.	Processing charges	US \$ 50 /100	At the time of submitting the application
2.	Rs.50,000 for Lab. Expenses per year (Total Rs. 01.00 lakh for 2 years along with regular University fee.		
3.	Rs.50,000/- for dissertation work in Second year.		
4.	Rs.40,000 (For SAARC) and Rs.50,000 (for Non-SAARC) candidates per year, respectively, as an additional charge.		

Further details regarding admission of Foreign Nationals are available on the website www.bhu.ac.in which is updated periodically.

IMPORTANT DATES

I. FOR APPEARING IN GAT-B 2021:

(Please also refer GAT-B 2020 advertisement / visit <https://rcb.res.in/GATB/> for detailed information.)

GAT-B 2020 ACTIVITY SCHEDULE & IMPORTANT INFORMATION

Activity	Starting Date	End Date
Registration for GAT (B) 2020	---	----
GAT-B Test Date	Regularly visit the GAT-B website: https://rcb.res.in/GATB/ 14 th August 2021	
Declaration of Score/Merit List/Rank	27 th August 2021	

II. FOR FILLING APPLICATION FORM OF INSTITUTE SCIENCE, BANARAS HINDU UNIVERSITY

Activity	Starting Date	End Date
Online Application Submission for M.Sc. in Biotechnology, School of Biotechnology and M.Sc. in Molecular and Human Genetics, Department of Molecular and Human Genetics Programs of the Institute of Science for Batch 2021-2023	28 th August, 2021	10 th September, 2021