

# **MCA Program Admission Brochure for Mesra (Main Campus), Lalpur, Noida & Jaipur Campuses- Academic Year 2023-24**

## **Master of Computer Application**

### **MCA Program Admission Notification**

## **Introduction**

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### **INTRODUCTION**

Master of Computer Applications (MCA) Program is of 2 years duration and the program is offered at Mesra (Main Campus), Lalpur, Noida & Jaipur campuses.

The Master of Computer Applications (MCA) program offered by the Department of Computer Science, BIT Mesra is one of the most coveted Post Graduate courses in the Institute. The course was originally designed as a three-year program to produce top quality, industry ready professionals who would provide tremendous value addition to the burgeoning IT service sector in the country.

In conformance with the guidelines issued by AICTE, the program is now being offered with a reduced tenure of two years, which features an intensive course curriculum and a multitude of sessional and laboratory courses. The course structure has been carefully designed with an even mix of courses addressing core facets of computer science and IT applications. We regularly invite eminent experts from the Industry and academia to moderate our course structures and are committed to updating them regularly to keep them relevant. Accredited by the National Board of Accreditation<sup>1</sup>, the MCA program provides ample opportunities to students to hone their programming, application development and software engineering skills which are in high demand in the IT sector.

Acknowledging the fact that the best way to learn is by doing, the course provides for a compulsory one semester Industry Internship, during which students spend time across India's top IT companies, learning the nuances of applying their skills to practical IT challenges. The program also features courses from the domains of Social Sciences, Management, Soft skills etc., which are important ingredients in producing truly committed professionals who appreciate the social, ethical and economical needs of the nation.

The program also ensures that all students get to explore their own aptitudes to the fullest by offering a vast array of electives, which students can opt for from the second semester onwards. These electives have been carefully curated to be in sync with the demands of the Industry and add to the value of the course.

It is this pursuit and commitment towards excellence that has been acknowledged by the Industry and each year some of the best IT companies from India and abroad visit the Institute to offer placement opportunities to the students of the MCA program. We are proud that for over three decades the MCA program has maintained an enviable placement record and our alumni now occupy positions of eminence across many corporates spread across the globe.

## Important Dates

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### **IMPORTANT DATES**

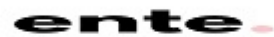
<b>Filling of Online Application Form commence from</b>	<b>14.03.2023</b>
<b>Last Date to Apply</b>	<b>02.06.2023</b>
<b>Issue of Admit Card</b>	<b>15.06.2023</b>
<b>Date for Online Entrance Test</b>	<b>18.06.2023</b>
<b>Declaration of Result</b>	<b>28.06.2023</b>

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

## Placements

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## Eligibility Criteria

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 must have one of following qualifications:**
  - a. **Bachelor of Computer Applications OR**

- b. **B.Sc. in Computer Science OR**
- c. **B.Sc. in Information Technology OR**
- d. **B.Sc. in Computer Applications**

3. Candidates with above mentioned qualifications must have minimum 55% (50% for SC/ST/PwD) marks in average in graduation, marks to be computed as average of marks obtained in all subjects in which the candidate has appeared. [Candidates with B.Sc. Honours must have minimum 55% (50% for SC/ST/PwD) marks in average in their Honours subject].
4. Candidates appearing for final examinations of their Bachelor's Program in 2023 can also apply, provided they have obtained requisite marks or equivalent (as per item 3 above) based on latest available grades / marks at the time of applying, and if selected can join the program provisionally. At the time of reporting for the verification of documents cum admission such an applicant must bring a certificate in original from the Principal of Institute stating that:
  - a. by ..... 2023, (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 or equivalent (as per item 3 above), 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 Annexure -I).**

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 requisite marks as per item 3 above. They must submit proof of passing their final examinations with requisite marks by **31 October 2023**. Non-fulfillment of this condition will automatically result in the cancellation of the provisional admission.

5. **Candidates with qualifications acquired through correspondence or distance-learning programs are eligible only if (a) the programs are recognized by the DEC-IGNOU (b) they have passed the qualifying examination at the time of applying, with minimum requisite marks in average calculated as per item (3) above. They must carry original copy of pass certificate, marksheets of qualifying examination and proof of Institute recognized by the DEC-IGNOU along with their application during admission. [Appearing candidate in distance learning programs, whose results are yet to be declared, are not eligible to apply].**

#### 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 or graduation], a candidate / applicant must have passed all the required subjects at that level from the same Board/ University.

## Application, Selection Procedure and Reservation Policy

### How to Apply:

1. To fill online application form, click on the link **"APPLY ONLINE"** to register for the program and create password for the application process. Do not share the password with anybody. [Please see instructions for filling online application form.](#)

2. Eligible candidates must complete and submit the application form online only [link available on the Institute website [www.bitmesra.ac.in](http://www.bitmesra.ac.in)].
3. Pay application fee of Rs.1,500/- (General / OBC /EWS candidates) and Rs.1,000/- (SC/ST candidates) through Online Payment Gateway (candidates may use net banking / debit card / credit card of any nationalized bank) till the last date of application process. **Fee once remitted shall not be refunded.**
4. The candidates may select multiple choice of place for study **MAXIMUM OF THREE CAMPUSES**, in order of preference from the prompt. **Candidates will not be permitted to alter their preferences at a later stage.**
5. Candidates should proceed to fill the Online Application Form only after they satisfy themselves that they fulfill all the eligibility criteria.

## Form / Application Numbers

The Form / Application numbers on each online application form may be noted and cited in correspondence, if required.

### Selection Procedures:

- Provisional selection will be based on performance of candidates in MCA Online Entrance Test conducted by the Institute, subject to fulfilling eligibility conditions mentioned under eligibility criteria.
- Admission will be offered, subject to fulfillment of the eligibility conditions.
- The waitlisted candidates may be called for verification of documents and admission against the vacant seats, if any, in successive rounds, as required. The same will be intimated on the Institute website only. **No separate intimation will be sent to candidates.**

### Cancellation of Admission Offer:

- The admission of a candidate will be automatically canceled:
  - if any information provided in the application form is found incorrect or missing.
  - who fail to submit the final degree / qualifying examination in time as stipulated or fail to secure minimum eligible marks in the degree / qualifying examination.

**Note: Eligible SC/ST, OBC, PwD students admitted to MCA Program at any of the Campus should submit their scholarship form in the Scholarship Section of the Campus for the academic year by February for processing scholarship to SC/ST, OBC, PwD students each year, as per UGC guidelines.**

### Availability of Seats & Reservations:

The number of seats to be offered in the Academic Year 2023-23 for the MCA Program at various Campuses is as given below:

Sl No.	Campus	Seats to be offered
1.	Jaipur	45
2.	Lalpur	120
3.	Mesra	60
4.	Noida	30

**Reservations:** Currently the Institute follows reservations as given below for its MCA Program.

1. For all programs 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 programs 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 (5%).
4. Upto 1 seat at all Campuses is reserved for candidates who are Sons or Daughters of Kashmiri Migrant who otherwise have qualified for admissions.
5. Upto 6% of the seats at its other Campuses [except Mesra Campus] are reserved for candidates who are sons and daughters of serving employees of BIT, who otherwise have qualified for admissions.
6. Upto 10% seats are reserved for candidates belonging to Economically Weaker Section (EWS).
7. 50% of the total seats are reserved for candidates who have passed / are appearing for qualifying examination (graduation) from the state in which Campus is located. (The “State of Eligibility” of a candidate for the purpose will be determined based on location of his/her College where (s)/he has passed/is appearing for the qualifying examination / graduation).

[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.**

**Note: Please select the state of eligibility from drop down box while filling the online application form. (Examples):**

	State of Eligibility
Qualifying examination (graduation) from Jharkhand	Jharkhand
Qualifying examination (graduation) from Rajasthan	Rajasthan
Qualifying examination (graduation) from West Bengal	West Bengal
Qualifying examination (graduation) from Uttar Pradesh	Uttar Pradesh
Qualifying examination (graduation) from Delhi	Delhi
Qualifying examination (graduation) from Andhra Pradesh	Andhra Pradesh

## The Online Computer Based Test & Syllabus

### The Online Computer Based Test:

The Online Computer Based Test for shortlisting candidates for admission to its 2 Years [4 Semesters] full-time MCA Program will be conducted by the Institute at national level. Please refer Section 9 for the details of the Test.



**Date of Online Entrance Test: 18.06.2023 (Sunday)**

**Mode of Examination: Proctored Based Online Test.**

**Duration of Online Test: 2 hours [10 am to 12 Noon]**

### **Admit Cards:**

Admit card will be issued to the applied candidates whose online applications are submitted successfully within the stipulated time.

The candidates are advised to download their admit cards from the Institute website [Admission Page] on or after **15.06.2023**. If a candidate is unable to download the admit card, candidates should contact the Admissions Office at BIT Mesra, Ranchi by email at [admissions@bitmesra.ac.in](mailto:admissions@bitmesra.ac.in) or telephone or fax (contact numbers are given in page -2 of this Brochure).

At the end of the online test, the score obtained by the candidates will be flashed on the computer screen. You may note it down for your ready reference.

Candidates are also advised to visit our Institute website <http://www.bitmesra.ac.in> for any latest updates pertaining to Online Entrance Test and admission.

### **Notes:**

- 1. The admit card is not transferable to any other person. Impersonation is a punishable offence under law. The admit card will be required to be produced at the time of admission. Therefore, all candidates are required to preserve the admit card until the admission process is complete.**
2. The link along with instructions for mock test and actual test will be share within the Admit Cards of the applicants.
- 3. Merely being allowed to appear in the online test will not be considered as a ground for being eligible for admission.**

### **Syllabus for the Online Entrance Test:**

The MCA 2023 Online Entrance Test shall comprise of 120 questions to be answered in 2 hours. Questions will be of objective type with multiple choices out of which only one is correct. A candidate must select only the correct answer to score full marks. For each correct answer a candidate will earn 4 marks. For every incorrect answer one mark will be deducted. If a question has not been attempted no credit will be given. The questions will be distributed into various areas as follows and the detailed syllabus is given below:



Section	Subject	No of Questions
A	Mathematics	40
B	Analytical ability & Logical Reasoning	20
C	Computer Awareness	40
D	English	20
	Total	120

### Section A: Mathematics (40 questions – objective type)

- **Algebra:** Fundamental operations in Algebra, expansion, factorization, quadratic equations, indices, logarithms, arithmetic, geometric and harmonic progressions, binomial theorem, permutations and combinations, surds
- **Set Theory:** Sets and subsets, operations on sets, sequences, properties of integers, relations and functions
- **Matrix Algebra:** Elementary transformations, inverse of a matrix, rank, solution of simultaneous linear equations, eigenvalues and eigenvectors, quadratic forms
- **Co-ordinate Geometry:** Rectangular Cartesian co-ordinates, equations of a line, mid point, intersections etc., equations of a circle, distance formulae, pair of straight lines, parabola, ellipse and hyperbola, simple geometric transformations such as translation, rotation, scaling.
- **Calculus:** Limit of functions, continuous functions, differentiation of function(s), tangents and normals, simple examples of maxima and minima, integration of function by parts, by substitution and by partial fraction, definite integral application to volumes and surfaces of frustums of a sphere, cone, cylinder, Taylor Series.
- **Vectors:** Position vector, addition and subtraction of vectors, scalar and vector products and their applications to simple geometrical problems and mechanics.
- **Trigonometry:** Simple identities, trigonometric equations, properties of triangles, solution of triangles, height and distance, inverse function
- **Probability and Statistics:** Basic concepts of probability theory, averages, dependent and independent events, frequency distributions, and measures of dispersions, skewness and kurtosis, random variable and distribution functions, mathematical expectations, binomial, Poisson, normal distributions, curve fitting, and principle of least squares, correlation and regression

### Section B: Analytical Ability and Logical Reasoning: (20 questions – objective type)

Questions in this section will test logical reasoning, quantitative reasoning, and visio-spatial reasoning

### Section C: Computer Awareness: (40 questions – objective type)

- **Computer Basics:** Organization of a computer, Central Processing Unit (CPU), Structure of instructions in CPU, input / output devices, computer memory, memory organization, back-up devices
- **Data Representation:** Representation of characters, integers, and fractions, binary and hexadecimal representations, Binary Arithmetic: Addition, subtraction, division, multiplication, 1's and 2's complement arithmetic, floating point representation of numbers, normalized floating point representation, Boolean algebra, truth tables, Venn diagrams
- **Computer Architecture:** Block structure of computers, communication between processor and I / O devices, interrupts
- **Programming Languages:** C, C++, Java, Python
- **Flow chart and Algorithms**
- **Operating Systems:** Evolution of operating systems, types of operating systems, functions of an operating system, modern operating systems
- **Database Management systems:** Relational Database, Entity-Relationship Diagram, Functional Dependencies, Decomposition
- **Computer Networks:** Classification of Networks: LAN, MAN, WAN, Network Topology: Bus, Star, Ring, Star bus, Star ring, Mesh, Modem, Repeater, NIC, Network adapters, Connectors, Transceiver, Hub, Bridge, Switches, Routers and Gateways

### Section D: English: (20 questions – objective type)

- **Use of articles and prepositions** (fill in the blanks or correct use)
- Idioms and phrases
- **Synonyms**
- Reading comprehension
- **Expansion of an idea**
- **Sentence sequence** (jumbled sentences)
- **Completion of a sentence** (with choices)
- **Choice of appropriate word to fill in the blanks** (with options)
- **Abridging sentences / paragraphs.**

## Course Strucure

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### [Course Structure MCA](#)

## Fee Structure

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[Fee Structure and Hostel Seat Rent for all UG & PG students of 2023-24 Batch](#)

## Financial Assistance and Scholarship

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### Scholarship:

The financial assistance to few deserving students(who are not availing any other fellowships) shall be offered @ Rs. 6500/- per month, for 3<sup>rd</sup> and 4<sup>th</sup> semesters (only during physical stay at the campus), completing first two semesters without any backlog and securing CGPA  $\geq 8$  in each semester.

## Contact Us

Campus	Addresses and contact details
<b>Mesra</b>	<p>Dean Admissions &amp; Accreditation Coordination E-mail: <a href="mailto:daac@bitmesra.ac.in">daac@bitmesra.ac.in</a></p> <p><b>OR</b></p> <p>Controller of Admissions Email: <a href="mailto:coa@bitmesra.ac.in">coa@bitmesra.ac.in</a></p> <p>Birla Institute of Technology Mesra, Ranchi - 835215</p> <p>Toll-Free:18003457057, 18003457058</p> <p><b>Phone:</b> PBX: 0651-2275444 / 896 / 2276496, Extn 4469, &amp; 2275868 (Direct)</p> <p><b>Email:</b> <a href="mailto:admissions@bitmesra.ac.in">admissions@bitmesra.ac.in</a></p> <p><b>For Information about MCA program:</b></p> <p>Head, Department of Computer Science &amp; Engineering Birla Institute of Technology</p> <p>Mesra, Ranchi - 835215</p> <p><b>Phone:</b> 0651-2275548</p> <p><b>Email:</b> <a href="mailto:hod.cse@bitmesra.ac.in">hod.cse@bitmesra.ac.in</a></p>
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