GU/Acad-Admissions/CAC/2024-25/43   **Date: 06/07/2024**

NOTIFICATION

ADMISSION TO MCA Programme
FOR ACADEMIC YEAR 2024-25

Goa University Computer Science Admission Test (GU-CSAT) Round-II for admission to **Master in Computer Applications (MCA)** Programme offered at Goa University for the academic year 2024-25 was held in May 2024. Based on the GU-CSAT Round-I, selected candidates have confirmed theirseats as per the Ranking for various Programmes. As seats are still available, the University has decided to invite applications and conduct the Second Round of GU-CSAT for MCA.

Applications for admission to MCA Programme shall be accepted through the online mode only till 9th July 2024. Interested candidates are informed to visit Goa University website: www.unigoa.ac.in for details.

A. Admission Procedure:

1. Admission to the MCA Programme shall be subject to the candidate fulfilling all the eligibility criteria of the respective programme as mentioned in **Section C**.
2. A Round II admission test '**Goa University-Computer Science Admission Test' (GU-CSAT)** shall be held for admission to the above mentioned Programmes for AY 2024-25. Refer **Section G** for more details.
3. Test results shall be displayed on the Goa University website.
4. Selected Candidates shall be offered admission on a provisional basis and shall have to pay the Seat Confirmation Fee of INR. 5,000/- on GUMS through online mode.

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Note:

- Merely appearing for the GU-CSAT does not entitle any candidate to admission in any of the programmes.

B. Important Dates:

Process	Dates	Mode
End date of submission of Application Form	09th July 2024 5 p.m.	Online
Goa University-Computer Science Admission Test (GU-CSAT)	12th July 2024	Offline at Goa University

C. Eligibility Criteria:

Programme	Eligibility Criteria
Master of Computer Application (MCA)	To be eligible for admission to the two year MCA Programme, a candidate must have: i. Passed BCA/ Bachelor Degree in Computer Science/ Engineering or equivalent Degree with at least 50% marks. **OR** ii. Passed Graduation in a Non-Computer Science discipline with Mathematics at 10+2 level or at Graduation level with at least 50% marks (5% relaxation in minimum percentage for candidates belonging to SC/ST/OBC (Non Creamy Layer)/PwD shall be applicable as per State Government Rules). Such candidates shall be provisionally admitted until successful completion of Bridge Courses.

| | iii. Admission to Semester III (Applicable for Non-Computer Science Graduates): The Non-Computer Science candidates are required to successfully complete the Bridge Course(s) before admission to the third Semester. To be considered successful, the student is required to obtain a minimum of 40% marks separately in the Theory and Laboratory components. The assessment of the Bridge course(s) shall be conducted by the Goa Business School.
Refer **section I.i** for Bridge course details |

Note:
- Candidates who are in their Final Year of Graduation are also eligible to apply.
- Selected candidates who are in the Final Year of Graduation shall be granted Provisional Admission. In case a candidate fails to fulfill the eligibility criteria at the time of final document verification, his/her admission shall stand cancelled.

D. Seat Matrix:

Refer Reservation Rules at **Annexure A**

Programme	Total Seats	SC	ST	OBC (NCL)	PwD	Other Indian Univer sities	Ex Service men	Unreserved Category	Economic Weaker Section (EWS)
MCA	60	1	7	16	3	2	1	24	6

Reserved Category Seats remaining vacant after the 1st Provisional List of the First Round of Entrance Test shall be transferred to the Un-reserved Category.

E. Fees:

Programme	Master of Computer Application (MCA)	M.Sc. Artificial Intelligence	M.Sc. Data Science
Total Annual Fees (approximate)	Rs. 50,745/-	Rs.20,765/-	Rs.20,765/-

Refund of Fees shall be as per University Guidelines. Refer to **Annexure B**.

F. Filling up of the Online Application Form:

Admissions Portal Link: https://tinyurl.com/2p8nbxed

a. The LAST DATE for submission of applications is **9th July 2024.**
b. Candidates are advised in their own interest to apply online much before the closing date and not wait till the last date for applying/payment of application fee to avoid the possibility of disconnection/inability/ failure to log on to the website on account of heavy load on the website.
c. Goa University does not assume any responsibility to candidates in case they are unable to submit their application by the last date on account of the aforesaid reasons or for any other reason beyond the control of the University.
d. Printout of the application form is **NOT REQUIRED** to be submitted to the University.
e. After payment and submission of the application candidates shall not be permitted to change their details.

Application Fees (Non-refundable) (To be paid online through GUMS portal only):
- INR 1500/- in case Un-reserved/ EWS/OBC(NCL)
- INR 750/- in case of SC/ST of Goa.
- No fees shall be charged from Persons with Disability.

a. Valid Category Certificate (if applicable);
b. OBC (non-creamy layer) Certificate is valid for three years from the date of issue.
c. EWS Category Certificate shall be valid for one financial year.
d. EWS and OBC (NCL) Category candidates are required to submit a valid certificate issued to that effect by the Officer of the rank of the Mamlatdar or any other Authorized Officer as notified by the Government of Goa.

G. **Goa University-Computer Science Admission Test (GU-CSAT) Details**

The GU-CSAT shall be conducted as per the procedure given below:

1. The GU-CSAT shall be based on the syllabus at **Annexure C** which consists of:
   Part 1: Analytical Ability and Logical Reasoning
   Part 2: Mathematics
   Part 3: Computer Science

   The breakup shall be as follows:

Section	Topic/s	No. of questions
I	Analytical Ability and Logical Reasoning	15
II	Mathematics	10
III	Computer Science	25

2. The test shall have 50 multiple choice questions carrying 2 marks each for a correct answer, with a negative marking of 0.5 for each wrong answer. An unanswered question shall have 0 marks.
3. The duration of the Test shall be 90 minutes.
4. To qualify for admission to MCA, a candidate is required to score a minimum of 30% marks (percentage obtained by the candidate to be rounded up to the next integer) with 5% relaxation for SC/ST/OBC(NCL) category candidates in the GU-CSAT. Merit list shall be generated based on the performance in the GU-CSAT.
5. In case of ties in scores/marks secured in the test, the following procedure shall be followed to generate the rank/merit list:
   i. Section III scores shall be the first level of tie-breaker, followed by Section II.
   ii. In case the tie still exists, the University shall decide the order of ranking/merit.

H. Relevant Ordinances of Goa University governing Admission, Eligibility, etc.

The Admission for the academic year 2024-25 shall be based on the following Ordinances:

OA-20	Ordinance relating to the Policy of Admission to the Post Graduate Academic Programmes of Goa University
OA-35	Ordinance governing the M.A., M.Sc. M.Com., M.S.W., M.T.T.M., M.P.Ed., M.L.I.Sc., MBA, MBA (FS), MCA and Masters in International Hospitality and Tourism Management (MIHTM), Post Graduate Diploma and other such Masters Programmes of study conducted by the on-campus Schools of Goa University and its Affiliated Colleges based on the Choice Based Credit System of Instruction based on NEP 2020.

I. Bridge Course

For Non-Computer Science candidates in MCA programme:

Non-Computer Science candidates who have been admitted to the Two-Year MCA programme shall have to undergo a Bridge course titled "Fundamentals in Computer Science" via self-study using existing MOOCs courses. Refer **Annexure D** for Syllabus.

The evaluation of the Bridge course shall be done in two parts: Part A and Part B. The evaluation shall be conducted by the Goa Business School in the following manner: -

Part	Total Marks	To be held in	Contents and weightage
A	100	During End Semester Examination of Sem I	1. Programming and Simple Linear Data Structures (Theory:30 marks, Lab : 40 marks) 2. Computer Organization & Architecture and Fundamentals of Operating Systems (Theory: 30 marks)
B	100	During End Semester Examination of Sem II	1. Discrete Mathematics (Theory: 50 marks) 2. Web Basics (Lab: 50 marks)

- Candidates would be required to obtain a minimum of 40% marks separately in theory as well as in lab, in each component A and B to be considered as "passed" in the Bridge course.
- Please note that the candidates shall need to pass the Bridge course to be admitted to the 3rd semester of the MCA programme.
- Candidates are preferably advised to undergo the Bridge course before the start of the programme.

J. <u>Contact Details:</u>

- For queries:
    - Check [FAQ](#)
    - Submit via query form [https://forms.gle/7tctMSrhZKwg8AmEA] or
    - Email to : csgbsadmissions@unigoa.ac.in
    - Contact : 8669609191 during office hours.

Sd/-

(Prof. V . S . Nadkarni)

REGISTRAR

ANNEXURE A
RESERVATION
GUIDELINES

Reservation of seats for admission to the various Programmes of study shall be on the basis of the Reservation Policy of the Goa State Government.

Candidates applying for admission under the Reserved Categories shall be required to submit a valid Certificate to that effect issued by the Officer of the rank of the Deputy Collector or any other authorized Officer as notified by the Government of Goa.

1. **2%** of seats in each of the Post Graduate programmes of study, subject to a minimum of **one seat**, shall be reserved for candidates belonging to SC Category of Goa State.

2. **12%** of seats in each of the Post Graduate programmes of study, subject to a **minimum of one seat,** shall be reserved for candidates belonging to **ST Category of Goa State**.

3. **27%** of total seats, subject to a **minimum of two seats**, for admission to various programmes of study, shall be reserved for candidates belonging to the **Other Backward Classes (Non Creamy Layer) of the State of Goa** as per the directives of the State Government.

4. **5%** of total seats, subject to **minimum one seat** for admission to the various programmes of study, shall be reserved for **Person with Disability (PwD) candidates as per State Government directives.**

5. **10%** of seats, subject to a **maximum of two seats and a minimum of one seat** in each programme of study, shall be made available for candidates of other Indian Universities.

6. **10%** of total seats shall be reserved for **Economically Weaker Section of Un-Reserved Category (EWS)** as per the directives of the State Government.

7. **1%** of total seats shall be reserved for **Ex-servicemen.**

8. **15%** of seats, over and above the allotted number of seats, shall be reserved as supernumerary seats for the overseas candidates, who are eligible for admission andare recommended by the Govt. of India under Scholarship from Govt. of India or under exchange programme (ICCR Programme). These seats shall be filled in accordance with the UGC Guidelines. Out of the 15% supernumerary seats, one seat in each program shall be reserved for Kashmiri Migrants (KM) as per directives of the UGC.

Percentage of seats mentioned above is subject to change depending upon the Directives of theGoa State Government.

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ANNEXURE B
REFUND OF COURSE
FEES

a) If a student chooses to withdraw from the programme of study in which s/he is enrolled, thefollowing five tier system shall be followed for the refund of fees remitted by her/him.

Sr. No.	Point of time when notice of withdrawal of admission is served to the Institution	% of refund of Aggregate fees*
1.	15 days or more before the formally notified last date of admission. #	100%
2	Less than 15 days before the formally notified last date of admission.	90%
3	15 days or less after the formally notified last date of admission.	80%
4	30 days or less, but more than 15 days after the formally notified last date of admission.	50%
5	More than 30 days after the formally notified last date of admission.	0%

* Inclusive of tuition fees and non-tuition fees but exclusive of Caution Deposit# Last date of admission shall be notified later on the university website.

b) In case of (1) in the table above, 5% of the aggregate fees paid by the student, subject to amaximum of Rs. 5,000/- shall be deducted as processing charges from the refundable amount.
c) Fees shall be normally refunded to an eligible student within fifteen days from the date ofreceiving the application.
d) All other cases of refund of fees shall be decided on a case to case basis on its merit.
e) The Seat Confirmation Fee is fully refundable in case of withdrawal of provisional admissionwithin 60 days from the last date of admission.

Syllabus for Goa University-Computer Science Admission Test (GU-CSAT)

Part 1: Analytical Ability and Logical Reasoning:

The questions in this section shall cover analytical and logical reasoning and are based on Series, Relationships, Classification, Coding, Permutations and Combinations and Inference, Numerical Problems.

Part 2: Mathematics:

Set Theory, Probability and Statistics, Logarithms, Geometric and Harmonic progressions, Determinants and Matrices, Coordinate Geometry & Applications. Basic Calculus: Limit of functions, continuous function, differentiation of function, Integration and their applications. Trigonometry & applications. Vectors: Concepts of vectors & vector algebra, applications of Vectors.

Fundamentals of logic, Relations and Functions, Counting Techniques: Basics of Counting, Pigeonhole Principle, Recurrence relations, Graphs: Basic concepts of Graph and its applications. Introduction to trees, Applications of trees, Boolean Algebra and Circuits.

Part 3: Computer Science

Programming and Basic Data Structures:

Introduction to Algorithms, Flow charts, Assembly language and high-level language, Programming in C: Tokens, Identifiers, Data Types, Sequence Control, Subprogram Control, Arrays, Structures, Functions. Data Structures: Abstract data types, stacks, queues, Singly Linked Lists.

Basic sorting algorithms: bubble sort, selection sort, insertion sort.

Computer Organization & Architecture and Operating Systems:

Basic functional blocks of a computer, Number Systems, Conversion & Arithmetic, Complements.

Introduction to operating systems, Structure and Basic functions, types of OS, Operating System Services.

Application development:

Internet and WWW Architecture, The Web browsers, HTML, Structural & formatting tags, Page elements, Tables, forms

ANNEXURE D
Syllabus for Bridge Course for MCA Programme

Mode of conduct: Self-Study via MOOCs

To be qualified for the MCA degree, candidates are required to pass the test in the individual theory and laboratory components of the Bridge course (40% marks to be obtained in theory and lab separately) which shall be conducted by Goa Business School. However, the marks obtained, although shown on the final year grade sheet, shall not be added to the CPI/SPI.

The content of the Bridge course(s) shall consist of the fundamentals in the following topics (percentages indicate weightage assigned to the topic for the purpose of evaluation)

<u>Part A</u>   **(100 marks)**
Programming and Simple Linear Data Structures: (70%)
> Introduction to Algorithms, Flow charts, Assembly language and high-level language Programming in C: Tokens, Identifiers, Data Types, Sequence Control, Subprogram Control, Arrays, Structures, Union, String, Pointers, Functions, File Handling, Command Line Arguments, Pre-processor directives.
> Data Structures: Abstract data types, Linear Data Structures: stacks, queues, and their applications. Linked Lists: singly linked list.
> Basic sorting algorithms: bubble sort, selection sort, insertion sort

Computer Organization and Architecture & Fundamentals of Operating Systems: (30%)
> Data Representation: Data Types, Number Systems and Conversion, Complements,
> Fixed Point Representation, Floating Point Representation,
> Binary Arithmetic - Addition and Subtraction.
> Computer System: Computer Components and Functions, interconnection structures,
> Bus Interconnections.

> Processor Organization: Instruction Formats, addressing modes, Processor
> Organization, Register Organization, Instruction Cycle, Instruction Pipelining.
> Memory System Organization: Memory Hierarchy, Internal Memory, Cache Memory.

Input/output Organisation: Peripheral devices. I/O interface, Asynchronous Data Transfer, I/O Processor.

Introduction to Operating Systems, Structures and Basic functions of monolithic OS, System services.

Part B **(100 marks)**

Discrete Mathematics: **(50%)**

Set Theory: Concepts of sets – Union, Intersection, Cardinality. Elementary counting; permutations and combinations.

Fundamentals of logic: Propositional and Predicate Logic, Propositional equivalences, Predicates and Quantifiers, Rules of Inference.

Relations and Functions: Cartesian Product, Relations and their types, Properties of Relations

Functions, Types of Functions, Operations on Functions

Counting Techniques: Basics of Counting, Pigeonhole Principle, Recurrence relations.

Boolean Algebra, Boolean Expression, Boolean Functions.

Web Basics (HTML, CSS)   **(50%)**

Web browsers

HTML Overview, DOCTYPE, HTML page structure, structural HTML tags, formatting text tags, semantic & generic HTML tags, HTML links, adding image and other page elements, Tables, frames, image mapping, HTML forms, attributes, form elements, type types, HTML entities, symbols, charset, comments, HTML audio, video

CSS overview, inline/internal/external css, @import, CSS selectors, combinators, pseudo-class & pseudo element, attribute selectors, colors, backgrounds, Border, padding, margin, box model, CSS width/height, min-/max- width/height, CSS text and font properties, CSS text and element alignment, CSS table & list, CSS units, CSS display, position, float, overflow, visibility, z-index, CSS 2D transform

Suggested links to MOOCs Courses

Course name	Organized by	Link
Computer Organization	Prof. S. Raman, Department of Computer Science and Engineering, IIT Madras.	http://www.nptelvideos.in/2012/11/computer-organization.html
Programming and data structure	Dr. P.P. Chakraborty, Department of Computer Science and Engineering, IIT Kharagpur.	http://www.nptelvideos.in/2012/11/programming- and-data-structure.html
Operating system	PROF.SANTANU CHATTOPADHYAY Department of Computer Science Engineering IIT Kharagpur	https://nptel.ac.in/courses/106/105/106105214/ First two weeks
Discrete Mathematical Structure	Prof. Kamala Krithivasan, Department of Computer Science and Engineering, IIT Madras	http://www.nptelvideos.in/2012/11/discrete-mathematical-structures.html
Web Basics		https://www.youtube.com/watch?v=mU6anWqZJcc
UNIX fundamentals		https://nptel.ac.in/courses/117/106/117106113/ first 4 Modules