



GU/94/Acad-PG/Admn-MCA/24

Date: 12/ 04/ 2021

NOTIFICATION**ADMISSION TO MCA PROGRAMME FOR AY 2021-22**

Applications for admission to the **TWO year, Four Semesters, full-time Masters of Computer Application (MCA) Degree programme** offered at Goa Business School, Goa University for the academic year 2021-22 shall be accepted through the online mode from 19th April 2021. Interested candidates are informed to visit the Goa University website www.unigoa.ac.in for details.

Important Dates:

Details	Start Date	End Date
Availability of Online Application Form	19 th April 2021	28 th May 2021 [link will expire at 12.00 noon on 13 th May 2021]
Aptitude Entrance Test (Offline)	[Date, Time and Venue will be notified later]	
Declaration of Merit List I	4 th June 2021	
Admission Round I #	4 th June 2021	30 th June 2021 [till 12.00 noon]
Declaration of List II	5 th July 2021	
Admission Round II*	5 th July 2021	12 th July 2021 [till 12.00 noon]
Admission: Open Round [§]	15 th July 2021	

Selection Process

Lists of Selected Candidates will be declared on the website on **4th June 2021**. Selected Candidates will 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 latest by **30th June 2021**.

* Reserved category seats are to be transferred to General Category only after completion of Admission Round II.

\$Open Round Details:

Eligible candidates interested in taking admission to the programme should report to Computer Science & Technology office latest by 10.30 a.m. on the 15th of July, 2021 for the Open Round and sign on the register provided to indicate their interest.

At 11.a.m., two lists will be put up on the notice board:

- **List 1:** A list of waitlisted candidates based on their registration on 15th July 2021, ranked by their merit score in the Aptitude Entrance Test.
- **List 2:** A list of candidates who were selected for Admission Round I and II but did not book their seats. This list will be based on registration on 15th July 2021 and ranked by the merit score in the Aptitude Entrance Test.

The Open Round will be conducted for the candidates in the List I first.

Once List I candidates are exhausted and if seats are vacant, List 2 candidates will be given a chance.

The eligibility criteria for the programme can be found at [Eligibility Criteria](#).

The admission to the TWO-year MCA programme shall be strictly based on the Merit List prepared based on the Aptitude Entrance Test. The candidates are required to score a minimum of 30% marks to successfully qualify the Aptitude Entrance Test. Please refer [Aptitude Entrance Test](#) for details.

Please refer [syllabus](#) of Aptitude Entrance Test at [Appendix A](#)

Non-Computer Science Candidates who wish to apply for the Two-Year MCA programme from the academic year 2021-22 onwards shall have to undergo a Bridge course titled “Fundamentals in Computer Science”. The details for the Bridge course can be found at [Bridge Course for Non-Computer Science students](#)

Filling up of the application form:

- a) The **LAST DATE** for applying online is 13th May 2021(12.00 noon.)
- 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 Goa University.
- d) Printout of the application form is not required to be sent to the University.

Application Fees (Non-Refundable) (To be paid online through GUMS portal only):

- **INR 1,000** as application fees for unreserved candidates.
- **INR 500** in case of SC/ST candidates from Goa.*
- No fees shall be charged from Persons with Disability.

*Candidates applying for admission under these categories shall be required to submit a certificate to that effect issued by the officer of the rank of the Deputy Collector or above.

Refer [Seat Matrix](#) and [Fees](#):

Contact Details:

Queries/difficulties relating to application process to be sent to the Admission Team by filling the following Query Form [<https://forms.gle/PkVTb3w447cKgjHK6>] or email to admission.mca@unigoa.ac.in

A. Eligibility Criteria:

To be eligible for admission to the Two-Year MCA programme leading to the degree of “Master of Computer Applications” (MCA), a candidate shall have:

1. (i) Passed BCA/ Bachelor Degree in Computer Science/ Engineering or equivalent Degree with at least 50% marks (relaxation in minimum percentage for reserved categories shall be applicable as per State Government Rules).

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 (relaxation in minimum percentage for reserved categories shall be applicable as per State Government Rules). Such candidates shall be provisionally admitted until successful completion of Bridge courses.

Note:

- The eligibility of the Candidates will be verified at the time of Enrolment.
- Candidates awaiting graduation results/Non-Computer Science Candidates shall be provisionally admitted to the MCA degree programme. Their admission shall be confirmed after the results are declared based on the candidate meeting the eligibility criteria of the programme. In case a candidate fails to clear the Graduation Examination, the admission shall stand cancelled and the fees shall be refunded.

A.1 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, which shall be recommended by the Board of Studies from time to time. 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.

B. Aptitude Entrance Test

For the academic year 2021-22, a single round of the Aptitude Entrance Test **shall be conducted, on 23rd May 2021.**

1. The syllabus for the test for the AY 2021-22 will be based on the existing ‘GU-ART Computer Science’ Syllabus ([Appendix A](#)).
2. The test shall have 50 multiple choice questions of +2 marks each for a correct answer, with negative marking of -0.5 for each wrong answer. An unanswered question will have 0 marks.
3. The candidates are required to score a minimum of 30% marks (percentage obtained by candidate to be rounded up to the next integer) to successfully qualify the Aptitude Entrance Test.
4. The breakup shall be as follows:

Section	Level of Difficulty	No. of questions
I	Least Difficult	15
II	Medium Difficulty	15
III	Most Difficult	20

5. The tie breaking in creating the Merit list will be as follows:

1. Section III scores shall be the first level of tie breaker, followed by Section II.
2. In case the tie still exists, the University shall decide the order of merit.

C. Bridge Course for Non-Computer Science Candidates:

Non-Computer Science Candidates who wish to apply for the Two-Year MCA programme from the academic year 2021-22 onwards will have to undergo a Bridge course titled “Fundamentals in Computer Science” via self-study using content identified from existing MOOCs courses. The syllabus and suggested links to MOOCs courses for the same can be found in [Appendix B](#).

The evaluation of the Bridge course (from Appendix B) will be done in two parts: Part A and Part B and will be conducted by the Goa Business School. The evaluation for AY 2021-22 will be conducted in the following manner: -

Part	Total Marks	To be held in	Contents and weightage
A	100	2 nd month of Semester I	<ol style="list-style-type: none"> 1. Programming and Simple Linear Data Structures (Theory: 30 marks, Practical: 40 marks) 2. Computer Organization & Architecture and Fundamentals of Operating Systems (Theory: 30 marks)
B	100	1 st month of Semester II	<ol style="list-style-type: none"> 1. Discrete Mathematics (Theory: 50 marks) 2. Web Basics (Practical: 50 marks)

Candidates would be required to obtain a minimum of 40% marks separately in theory as well as in practical, in each component A and B to be considered as “passed” in the Bridge course.

Please note that the candidates will 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.

D. Seat Matrix:Refer Reservation Rules at [Appendix C](#)

Total Seats	SC	ST	OBC	PwD	Other Indian Universities	Wards of Ex Service men	General/ Unreserved Category	Economic Weaker Section (EWS)
75	2	9	20	3	2	1	31	7

Reserved category seats are to be transferred to General Category only after completion of Admission Round II.

E. Fees:

Particulars	Fees (Tentative)
Total Fees for Goa University students	43,776
Total Fees of Other University Students	46,676

Those applying under reserved categories should submit the certificate to that effect issued by the competent authority. No other certificate shall be considered for admission against these categories.

APPENDIX A

Syllabus for the Aptitude Entrance Test for Admissions to Master of Computer Application (MCA), Goa University

FOR AY 2021-22

Section I (least difficult) and Section II (medium difficulty) will consist of GENERAL ENGLISH (6 Questions)

Basic English Grammar, sentence structure, synonyms and antonyms, idioms and phrases, detecting misspelled words, comprehension.

ANALYTICAL ABILITY AND LOGICAL REASONING (24 questions)

Series, Analogies, Relationships, Classification, Coding, Permutations and Combinations, Inference, Statement Analysis, Blood Relationships, Direction Sense, Profit and Loss, Averages, Percentages, Calendar, Clock, Time and Work, Speed and Distance, Assertions, Rule Detection, Reasoning and Decision Making.

Section III (Most Difficult)

MATHEMATICS (20 questions)

Data Representation and Manipulation in Computers: binary and hexadecimal representations, binary arithmetic: addition, subtraction, multiplication, division, simple arithmetic and two's complement arithmetic, Boolean algebra, Truth tables.

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

Probability and Statistics: Basic concepts of probability theory, Averages, Dependent and independent events, frequency distributions, measures of central tendencies and dispersions.

Algebra: Fundamental operations in algebra, expansions, factorization, simultaneous linear /quadratic equations, indices, logarithms, arithmetic, geometric and harmonic progressions, determinants and matrices.

Coordinate Geometry: Rectangular Cartesian coordinates, distance formulae, equation of a line, and intersection of lines, pair of straight lines, equations of a circle, parabola, ellipse, and hyperbola.

Calculus: Limit of functions, continuous function, differentiation of function, tangents and normals, simple examples of maxima and minima. Integration of function by parts, by substitution and by partial fraction; definite integrals, applications of definite integrals to areas.

Matrices and Vectors: Matric Operations and Inverses, Position vectors, 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, heights and distances, general solutions of trigonometric Equations.

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APPENDIX B

Syllabus For MCA Bridge Course “Fundamentals In Computer Science” From AY 2021-22 Onwards

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 will be conducted by the programme. However, the marks obtained, although shown on the final year grade sheet, will not be added to the CPI/SPI.

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

Part A

(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, Preprocessor 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, colours, 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	Organised 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	http://www.nptelvideos.in/2012/11/discrete-mathematical-structures.html

	Madras	
Web Basics		https://www.youtube.com/watch?v=mU6anWqZJcc
UNIX fundamentals		https://nptel.ac.in/courses/117/106/117106113/ first 4 Modules

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APPENDIX C

RESERVATION UNDER VARIOUS CATEGORIES

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

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**. Candidates applying for admission under this category shall be required to submit a certificate to that effect issued by the officer of the rank of the Deputy Collector or above.

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**. Candidates applying for admission under this category shall be required to submit a certificate to that effect issued by the officer of the rank of the Deputy Collector or above.

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 other backward classes (**OBC**) of the **State of Goa** as per the directives of the State Government. Candidates applying under this category shall be required to submit a certificate issued to that effect by the officer of the rank of the Mamlatdar or above.

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

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

10% of total seats shall be reserved for **Economically Weaker Section of General Category (EWS)** as per the directives of the State Government. Candidates applying under this category shall be required to submit a 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.

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

Seats falling vacant under any of the above reserved categories shall be filled from the General Category candidates with the approval of the Vice Chancellor.

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 and are recommended by 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 will 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 the State Government.