

(Abstract)

Scheme, Syllabus of Master of Computer Application Programme (CBCSS) - mark- rearrangement for the Courses in First, Second & Fourth semester - Modified - implemented in the University Department - w.e.f. 2020 Admission - Orders issued

ACADEMIC C SECTION

Acad/C4/650/2016

Dated: 19.11.2022

- Read:-1. U.O. No. Acad/C4/650/2016 dated 09.02.2021
2. Letter No . Acad/C4/12617/2020 Dated 17.08.2022
3. The Minutes of the meeting of the Department Council, Dept. of IT dated 06.10.2022D forwarding the
4. Letter from HoD forwarding the modified Scheme & Syllabus

ORDER

1. As per paper read (1) above the Revised Scheme, Syllabus and Model Question Papers of Master of Computer Application Programme (CBCSS) implemented in the University Department - w.e.f 2020 admission.
2. The meeting of the Department Council held on 06.10.2022, as per paper read (3) resolved to change the mark distributed for the courses in First, Second & Fourth semesters MCAIT01C06- Research Seminar shall be conducted internally by Department with CE mark 100, MCAIT02P03 Lab V- MOOC Course (Case Study), & MCAIT04C01 -Project mark modified to CE 40 & ESE 60 to comply with the Regulation for PG programmes (CBCSS) w.e.f 2020, and as requested as per paper read(2) above.
3. The Head, Dept. of IT submitted the modified Scheme, Syllabus with the aforementioned changes made in the Mark distribution for the Courses in the First, Second & Third semester of MCA Programme (CBCSS) as paper read (4) above, for implementation with effect from 2020 admission.
4. The Vice Chancellor after considering the matter in detail and in exercise of the powers of the Academic Council conferred under section 11 (1) Chapter III of Kannur University Act 1996 accorded sanction for the Mark rearrangement for course in the First, Second & Third semester of MCA Programme under Choice Based Credit Semester System, in the Department of IT Mangattuparamba Campus, with effect from 2020 admission, as detailed in para (2) above, and to report to the Academic Council.
6. The modified Scheme and Syllabus of MCA Programme (CBCSS) implemented with effect from 2020 admission are appended and uploaded in the University Website.(www.kannuruniversity.ac.in).
- 7.The UO read (1) above stands modified to this effect
Orders are issued accordingly.

Sd/-

BALACHANDRAN V K
DEPUTY REGISTRAR (ACAD)
For REGISTRAR

To: Head, Dept. IT
Mangattuparamba Campus, Kannur - 670567

- Copy To: 1. The Examination Branch (through PA to CE).
2. PS to VC / PA to PVC / PA to R
3. DR / AR I/ AR II (Acad).
4. The Web Manager (for uploading in the Website),
5.The Computer programmer
6. SF / DF /FC



Forwarded / By Order

SECTION OFFICER

MASTER OF COMPUTER APPLICATIONS
(Choice Based Credit Semester System)
Regulations, Curricula, Syllabus and Scheme of Evaluation
(With effect from 2020 admission onwards)

REGULATIONS

1. Duration of the MCA programme shall be 2 years, divided into 4 semesters. Each semester shall have 18 weeks. The maximum period of completion is eight semesters (4 years).

2. Eligibility for Admission:

A pass in BCA/ Bachelor Degree in Computer Science/Engineering or equivalent degree recognized by the Kannur University

OR

A pass in B.Sc./ B.Com/B.A with Mathematics at 10 + 2 Level or at Graduation Level or any equivalent degree recognized by the Kannur University with additional bridge course as per the norms of the Kannur University.

Obtained at least 50% marks (45% marks in case of candidates belonging to reserved category) in the qualifying examination.

3 Programme Structure: Programme Structure means a list of courses (Core, Elective and Open Elective) that makes up an Academic Programme, specifying the syllabus, Credits, hours of teaching, evaluation and examination schemes and the minimum number of credits required for the successful completion of the programme prepared as per the University Rules.

Choice Based Credit System: The CBCS provides an opportunity for the students to select both elective and open elective courses from the prescribed pool of courses.

Credits: The total minimum credits required to complete MCA programme is 80.

Core Course: Core Course means a course that a student admitted to a particular programme must successfully complete to receive the degree and which cannot be substituted by any other course.

Elective Course: Elective Course means an optional course to be selected by a student from the pool of courses.

Open Elective: Open Elective Course means an optional course to be selected by a student out of such courses offered in any other Department/Centre. Students of other Department will opt these courses subject to fulfilling of eligibility criteria as laid down by the Department offering the course.

Theory and Practical courses: The evaluation scheme for each Theory/ Practical course except research seminar and MOOC course shall contain two parts; (a) Continuous Assessment (CA) and (b) End Semester Evaluation (ESE); 40% marks shall be given to CA and the remaining 60 % to ESE.

Attendance: The minimum attendance required for each semester shall be 60% of the total number of classes conducted for that semester. Those who secure the minimum attendance in a semester alone will be allowed to register for the End Semester Examination. Condonation of shortage of attendance may be granted as per Kannur University PG regulations.

3.8. Continuous Assessment (CA)

Theory: The components of theory evaluation are as follows:

	COMPONENTS	% OF MARKS
I	Test paper	40%
ii	Assignment	20%
iii	Case Study/Seminar/Viva	40%

- i. Test Papers:** There shall be a minimum of two test papers to be conducted for each course. If more than two test papers are conducted, then two best scores shall be taken for the award of Internal Assessment (IA) marks. The dates of test papers shall be announced well in advance and the marks should be displayed in the notice board within one week of the test paper. Online tests such as objective type and open text book test paper (online or offline mode) also may be opted for conducting the test papers.
- ii. Assignments:** Two or more assignments (including practical assignments) shall be given for each course. The mode of assessment of the assignments shall be decided by the faculty concerned with due approval from the department council and shall be declared at the beginning of the semester. (It is suggested that to the extent possible, give individual assignments and also conduct short viva based on the assignment submitted). Assignment shall include practical assignments also. All the assignment works can be conducted either offline/ online mode. If a faculty wishes to conduct the internal assessment mode online, she/ he can be utilize any online learning platform (like **MOOCs** etc.) for the evaluation.
- iii. MOOC course**
- (a)** Each student shall successfully complete one MOOC course in the second semester courses (*Communicative English, Financial Accounting, Android programming, Windows programming, Environmental studies or any new topic/programming language/technology introduced recently etc.*) with a minimum period of eight (08) weeks offered by reputed organizations like NPTEL or Coursera.
- (b)** The Department should arrange facilities to the student for the online course and should provide one faculty in the department as in-charge of the program for giving guidance for choosing an appropriate online course. The concerned faculty-in charge will be responsible for the internal evaluation of the above program.
- (c)** Each student shall opt at least one MOOC course(s) at the beginning of each semester, in consultation with the faculty in-charge. The list of MOOC course opted by the students shall be placed before the Department council. The council may approve or reject the proposals on valid grounds. Once the list of MOOC course is finalized, the same may be forwarded to the University. The department shall ensure that the list is finalized and forwarded to the University at the beginning of each semester.
- (d)** The MOOC course completion certificate shall be submitted to the faculty in charge, who will verify it and forward the same along with the internal assessment marks to the Head of Department. After due verification, Head of Department shall forward the same to the University for awarding credit for the course.
- (e)** The grade / marks awarded by the MOOC courses provider will be normalized to 60 Marks, and internal assessment will be conducted for 40 marks by the Department. If MOOC course does not provide the mark/ grade Department will conduct both ESE and CE and it will be forwarded to university as CE mark/ grade.

iv. **Practical:** The Components of CA for practical courses except Case study as follows:

	COMPONENTS	% OF MARKS
i	Lab Test	40%
ii	Completion of the list of Lab assignments prescribed by the faculty	20%
iii	Periodical assessment of assignment in the Lab & viva	40%

v. **Case Study:**

	COMPONENTS	% OF MARKS
i	Periodical viva / short quizzes /short programming assignments to evaluate the basic knowledge/understanding of the topic/Tool.	30%
ii	Coding - Logic, Selection of appropriate constructs / features of the Tool, Style etc.	30%
iii	Execution of the case study - output	20%
iv	Viva based on case study	20%

vi. **Mini Project:**

The evaluation of mini project will have two components 40 marks for Continuous Assessment (CE) and 60 Marks for End semester Examination (ESE). The parameters for evaluation both CE and ESE will be as follows

	COMPONENTS	% OF MARKS
i	Understanding of the problem / concepts	20%
ii	Adhering to methodology	15%
iii	Quality of presentation and demonstration	15%
iv	Quantum of work / effort	25%
v	Organization and content of Project report	5%
vi	Viva based on Project	20%

Note: All the records in respect of Continuous Assessment (CA) must be kept in the department and must be made available for verification by the University. The results of the CA shall be displayed on the notice board within 5 working days from the last day of a semester. It should be get signed by the candidates. The marks awarded for various components of the CA shall not be rounded off, if it has a decimal part. The total marks of the CA shall be rounded off to the nearest whole number

End Semester Evaluation (ESE):

There shall be single valuation system of answer books by the Kannur University. However, there is a provision for revaluation, as per the University regulation.

- a. **Pattern of questions:** Questions shall be set to assess knowledge acquired, standard application of knowledge, application of knowledge in new situations, critical evaluation of knowledge and the ability to synthesize knowledge.
- b. **Question paper for end semester theory examination shall consist of:**

The ESE shall be made based on examinations for each course conducted by Controller of Examinations as per the common norms under the CCSS. The question paper for ESE for Theory Examinations shall contain three sections. The Question paper should contain minimum 3 questions from each unit and shouldn't contain more

than 5 questions from the same unit.. The distribution of the no of questions and marks are given in the following table.

Part	Marks	Number of questions to be answered	Number of questions in the question paper	Type of questions (Level - Bloom's Taxonomy)
A	15	5	6	1 Remembering 2 Understanding
B	15	3	5	6. Creating
C	30	3	5	3. Applying 4. Analysing 5. Evaluating
Total	60	11	16	

c. Practical Examination:

Practical Examination shall be conducted and evaluated by two examiners one internal and one external. Details of evaluation of ESE practical courses are given along with respective syllabus and the scheme of evaluation will be finalized by the Board of Examiners, from time to time.

Project: A project work has to be undertaken by all students. The project can be software development following all or some of the software development lifecycle or an R & D project. The hours allotted for project work may be clustered into a single slot so that students can do their work at a centre or location for a continuous period of time. The Major project work should be carried out in the Department /Institution or in an Industry / R & D organization of national repute. Project work shall be carried out under the supervision of a Teacher. If the project is carried out in an Industry / R & D organization outside the campus, then a co-guide shall be selected from the concerned organization. If the project work is of interdisciplinary nature, a co-guide shall be taken from the other department concerned. Every student should do the Project individually and no grouping is allowed. The candidates are required to get the synopsis and the guide approved by the department before the commencement of the project. A co-guide should be a postgraduate in CS/ Application/ IT or allied subject or a person of eminence in the area in which student has chosen the project. At the end of the semester the candidate shall submit the Project report (two bound copies and one soft copy) duly approved by the guide and co-guide for End Semester Evaluation. The project report shall be prepared according to the guidelines appended along with this regulations/ Guidelines approved by the University.

Evaluation of Project:

- i. A Departmental committee duly constituted by the Head of the Department will review the project periodically.
- ii. **Continuous Assessment of project work:** There shall be three internal presentations before the committee (Minimum two members, including the guide). The assessment is based on presentation, interim report and viva voce. The total mark for CA shall be divided among the **three** presentations in the ratio **20%:30%:50%**. Each internal presentation shall be evaluated based on the following components:

	COMPONENTS	% OF MARKS
i	Understanding of the problem / concepts	20%
ii	Adhering to methodology	15%
iii	Quality of presentation and demonstration	15%
iv	Quantum of work / effort	25%
v	Organization and content of Project report	5%
vi	Viva based on Project	20%

iii. End Semester Assessment of Project: A board of two examiners appointed by the University shall conduct ESE evaluation. The evaluation shall be based on the report, presentation of the work, demonstration of the work and a detailed viva voce based on the work carried out. A candidate will not be permitted to attend the Project evaluation without duly certified project reports. Also, a project will be evaluated only if the candidate attends the ESE presentation and Viva voce on the scheduled date and time. A board shall evaluate a maximum of 10 candidates in a day. The End Semester evaluation shall consist of the following components:

	COMPONENTS	% OF MARKS
I	Understanding of the problem/requirements/ concepts related to the project	15
li	Adhering to methodology (Software engineering phases or research methodology) and the candidates understanding of the components of methodology	15
lii	Quality of Modelling of the problem and solution/ database design / form design / reports / testing (For research projects - relevance /novelty of the work(s)/ use of data/ proposal of new models /analysis of algorithms/ comparison and analysis of results /findings)	20
lv	Quality of presentation / demonstration	15
v	Quantum of work / effort - assessed through the content of report, presentation and viva	25
Vi	Organization and content of report	10

- iv. A student shall pass in the Project course if she/he secures a separate minimum of 40 % for the external and 40% for ESE and CA put together.
- v. If a candidate fails in the evaluation of Project, he/she has to repeat the project course along with the next batch and undergo both CA and ESE. Unlike theory/practical courses, the CA mark will not be retained.
- vi. There shall be no improvement chance for the marks obtained in the Project course.

Guideline for preparing project Report (Both Mini and Major Project)

- i. Arrangement of contents:

The sequence in which the project report material should be arranged and bound should be as follows:

1. Cover Page & Title Page
2. Plagiarism Report

3. Bonafide Certificate
4. Abstract
5. Table of Contents
6. List of Tables
7. List of Figures
8. List of Symbols, Abbreviations and Nomenclature
9. Chapters

The chapters may be broadly divided into 3 parts (i) Introductory chapter, (ii) Chapters developing the main theme of the project work (iii) implementation details (if any) and Conclusion. The main text will be divided in to several chapters and each chapter may be further divided into several divisions and sub-divisions. Each chapter should be given an appropriate title.

Tables and figures in a chapter should be placed in the immediate vicinity of the reference where they are cited.

Footnotes should be used sparingly. They should be typed single space and placed directly underneath in the very same page, which refers to the material they annotate.

10. Appendices
11. References

The tables and figures shall be introduced at appropriate places.

ii. Page Dimension and Binding Specifications:

The dimension of the project report should be in **A4** size. The project report should be bound using flexible cover of the thick white art paper. The cover should be printed in black letters and the text for printing should be identical.

- iii.** All the project report submitted by the students should be plagiarism checked using **Turnitin software** and the plagiarism report generated by the software should be verified and signed by the Head of the Department or person-in charge of the Project Coordinator.

Research Seminar:

The research seminar helps the student to nurture scientific temper. During the preparation for research seminar, students will get an opportunity to work with leading researchers and experts which helps the students to refine their skills, searching scholarly information, text processing and presentation. This helps them to integrate their understanding; includes defining the hypothesis, providing a rationale for it and selecting a line of argument. Students then write term papers to showcase and review the results obtained during research seminars. The evaluation of research seminar will be totally internal and the secured marks will be forwarded to university as Continuous Assessment Marks (CE). The evaluation research seminar will be conducted by a panel of examiners (internal faculties) not less than two members constituted by the Head of the department.

Sl. No	Components	Marks. Max (100)
1	Report	32
2	Presentation and defense	48
3	Topic & content organization of presentation	20

Viva Voce: A general Viva Voce covering all courses in the Programme shall be conducted in the fourth semester. The Viva voce shall be conducted by two external examiners. The Viva voce shall not be clubbed with the project evaluation. The details of the mode of conduct and evaluation of Viva Voce shall be decided by the BOE.

4. Grading system

An alphabetical grading system shall be adopted for the assessment of student's performance in a course. The grade is based on a ten-point scale. The following table gives the range of marks, grade points and the alphabetical grade.

Range of Marks (%)	Grade points	Alphabetical grade
90-100	9	A+
80-89	8	A
70-79	7	B+
60-69	6	B
50-59	5	C
<50	0	F

A minimum of grade point 5 (Grade C) is needed for the successful completion of a course.

Performance of a student at the end of each semester is indicated by the Grade Point Average (GPA) and is calculated by taking the weighted average of grade points of the courses successfully completed. Following formula is used for the calculation. The average will be rounded off to two decimal places.

$$\text{GPA} = \frac{\text{Sum of (grade points in a course multiplied by its credit)}}{\text{Sum of credits of courses}}$$

The overall performance of a student is indicated by the Cumulative Grade Point Average (CGPA) and is calculated using the same formula given above.

Empirical formula for calculating the percentage of marks will be $\text{CGPA} \times 10 + 5$.

Based on CGPA overall letter grade of the student shall be in the following way.

CGPA	Overall letter grade
8.5 and above	A
7.5 and above but less than 8.5	A
6.5 and above but less than 7.5	B
5.5 and above but less than 6.5	B
4.5 and above but less than 5.5	C

Conversion of Grades into classification

Classification	Overall Letter Grade
First class with Distinction	A+ and A
First class	B+ and B
Second class	C

Supplementary Examinations for Failed Candidates:

- i) Candidates who have failed (F grade) in the semester examinations (except project work) can appear for the failed papers for the particular semester along with regular students. However, the Continuous Evaluation (CE) marks shall remain the same. Two such supplementary chances will be given for each semester within two years.
- ii) In the event of failure in Project Work the candidate shall re-register for project work, re do the project work and resubmit the project report a fresh for evaluation. The Continuous Evaluation marks shall be freshly allotted in this case.

Appearance for Continuous Evaluation and End Semester Evaluation are compulsory and no grade shall be awarded to a candidate if he/she is absent for CE/ESE or both.

A student who fails to complete the programme / semester can repeat the full programme / semester once, if the department council permits so.

There shall be no provision for improvement of CE or ESE.

No student shall be allowed to take more than eight consecutive semesters for completing MCA programme from the date of enrolment.

5. Grade Card: The Controller of Examination shall issue the Grade cards of all semesters and consolidated grade statement and certificates on completion of the programme, based on the authenticated documents submitted by the Head of the Department.

6. Grievance Redressal Mechanism

Committees will be constituted at the Department and University levels to look into the written complaints regarding continuous Evaluation (CE). Department Level Committee (DLC) will consist of the Department Council and a student nominee of the Department Student's Union from the concerned faculty.

University Level Committee (ULC) will consist of the Pro-Vice-Chancellor (Chairman and Convener), the Convener of the Curriculum Committee (vice-chairman), the Head of the Department concerned and a nominee of the Students' Union. Department Level Committee will be presided over by the HOD and the University Level Committee by the Pro-Vice Chancellor. Department Level Committee will have initial jurisdiction over weeks of publication of results of CE and disposed of within two weeks of receipt of complaint. Appeals to university Level Committee should be made within one month of the decision taken by the Department level committee and disposed within two months of the receipt of the complaint.

Complaints unsolved by the University Level Grievance committee shall be placed before the Vice Chancellor.

PROGRAMME SPECIFIC OUTCOME OF MCA PROGRAMME

PSO1	Familiar with the entrenched concepts of Computer Science and Applications.
PSO2	Enhance the knowledge and skills about System Software and Application Software.
PSO3	Attain skills to design Algorithms and Programs.
PSO4	Acquire the knowledge to setup Computer Networks.
PSO5	Design, build up, put into practice and test software systems to meet the given specifications by following the principles of Software Engineering.
PSO6	Furnish the candidate to do the real time jobs linked with Information Technology and Computer Application.

COURSE STRUCTURE

(With effect from 2020 admission onwards)

Semester	Core	Elective	Open Elective	Practical	Project	Total
I	15	0	0	6	0	21
II	14	0	0	8	0	22
III	9	3	4	2	2	20
IV	2	9	0	0	6	17
Total	40	12	4	16	8	80

SEMESTER I

Subject Code	Subject	Instructional Hours/Week			Marks			C
		L	P	T	ESA	CA	Tot	
MCAIT01C01	Digital Fundamentals and Computer Organization	3	0	0	60	40	100	3
MCAIT01C02	System software and Operating systems	3	0	0	60	40	100	3
MCAIT01C03	Python Programming	4	0	0	60	40	100	2
MCAIT01C04	Computer Network and Linux Administration	3	0	0	60	40	100	3
MCAIT01C05	Discrete Structures and Optimization	3	0	0	60	40	100	3
MCAIT01P01	Lab- I: Python Programming	0	5	1	60	40	100	3
MCAIT01P02	Lab- II: Network and Linux Administration	0	4	1	60	40	100	3
MCAIT01C06	Research Seminar (Internally conducted by Department)	0	0	3	--	100	100	1
Total		16	9	5	420	380	800	21

SEMESTER II

Subject Code	Subject	Instructional Hours/Week			Marks			C
		L	P	T	ESA	CA	Tot	
MCAIT02C01	Algorithm and Data Structure	4	0	0	60	40	100	3
MCAIT02C02	Programming in Java	3	0	0	60	40	100	3
MCAIT02C03	Database Management Systems	3	0	0	60	40	100	3
MCAIT02C04	Web Technology	3	0	0	60	40	100	2
MCAIT02C05	Software Engineering	3	0	0	60	40	100	3
MCAIT02P01	Lab- III: i) Data Structure; ii) Java	0	5	0	60	40	100	3
MCAIT02P02	Lab- IV: i) DBMS; ii) WT	0	4	0	60	40	100	3
MCAIT02P03	Lab- V: MOOC course (Case Study)	0	0	5	--	100	100	2
Total		16	9	5	420	380	800	22

SEMESTER III

Subject Code	Subject	Instructional Hours/Week			Marks			C
		L	P	T	ESA	CA	Tot	
MCAIT03C01	Machine Learning Techniques	3	0	0	60	40	100	3
MCAIT03C02	Theory of Computation	3	0	0	60	40	100	3
MCAIT03C03	Big Data Analytics	3	0	0	60	40	100	3
Offered by other departments	Open Elective	4	0	0	60	40	100	4
MCAIT03E01 /02/03/04/05/06	Elective - I	3	0	0	60	40	100	3
MCAIT03P01	Lab- VI: Machine Learning	0	5	3	60	40	100	2
MCAIT03P02	Mini Project	0	4	2	60	40	100	2
Total		16	9	5	420	280	700	20

Number of Open Elective Course: 1					
Open Elective Course		Theory	Practical	Tutorial	Credits
MCAIT03001	Design and Analysis of Algorithms	3	1	0	4
Total credits in elective courses		3	1	0	4

SEMESTER IV

Subject Code	Subject	Instructional Hours/Week			Marks			C
		L	P	T	ESA	CA	Tot	
MCAIT04E07 /08/09/10/11/12	Elective II	3	0	0	60	40	100	3
MCAIT04E13 /14/15/16/17/18	Elective- III	3	0	0	60	40	100	3
MCAIT04E19 /20/21/22/23/24	Elective-IV	3	0	0	60	40	100	3
MCAIT04C01	Project	0	16	5	60	40	100	6
MCAIT04C02	General Viva	0	0	0	100	0	100	2
Total		9	16	5	340	160	500	17

ELECTIVES:

POOL A (Elective- I) Subject Code: MCAIT03EXX

MCAIT03E01 ARTIFICIAL INTELLIGENCE
MCAIT03E02 BIOINFORMATICS
MCAIT03E03 FUZZY SETS & SYSTEMS
MCAIT03E04 GRAPH THEORY & COMBINATORICS
MCAIT03E05 SOFTWARE ARCHITECTURE
MCAIT03E06 FOUNDATIONS OF NATURAL LANGUAGE PROCESSING

POOL B (Elective- II) Subject Code: MCAIT04EXX

MCAIT04E07 DATA MINING AND WAREHOUSING
MCAIT04E08 ALGORITHMS IN COMPUTATIONAL BIOLOGY
MCAIT04E09 OBJECT ORIENTED ANALYSIS AND DESIGN
MCAIT04E10 COMPUTER VISION
MCAIT04E11 SOFTWARE PROJECT MANAGEMENT
MCAIT04E12 VISUAL CRYPTOGRAPHY

POOL C (Elective- III) Subject Code: MCAIT04EXX

MCAIT04E13 PATTERN RECOGNITION
MCAIT04E14 CYBER FORENSICS
MCAIT04E15 NATURAL LANGUAGE PROCESSING WITH PYTHON
MCAIT04E16 GRID AND CLOUD COMPUTING
MCAIT04E17 INFORMATION SECURITY
MCAIT04E18 BIOMETRIC IMAGE PROCESSING

POOL D (Elective- IV) Subject Code: MCAIT04EXX

MCAIT04E19 DATA AND INFORMATION VISUALIZATION
MCAIT04E20 INFORMATION RETRIEVAL SYSTEM
MCAIT04E21 OPERATIONS RESEARCH
MCAIT04E22 COMPUTER GRAPHICS WITH OpenGL
MCAIT04E23 DESIGN AND ANALYSIS OF ALGORITHMS
MCAIT04E24 NATURE INSPIRED COMPUTING

Open Elective Course Subject Code: MCAIT03O01

MCAIT03O01 DESIGN AND ANALYSIS OF ALGORITHMS
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BRIDGE COURSE

1. Introduction.

The bridge program comprises 80 hours teaching and learning activity. It consists of two theory papers and one laboratory papers. This course shall be conducted during the first semester of the MCA programme without affecting the actual work load of the semester. The course shall be offered in the department at which the candidates enrol for the MCA program. The mode conduct of the course is completely under the strict control the department at which the MCA program is offered. Total eighty (80) hours teaching and learning activities shall be completed before the notification of Ist semester examination by the University. The department has to complete the course by conducting classes and evaluation of the students before the commencement of the Ist semester MCA examination by the University. All those students who successfully complete the bridge course shall be given completion certificate by the department. The list of all successful candidates shall be forwarded to the University along with Continuous Assessment mark list of the Ist semester MCA program.

2. Conduct of classes

Department council shall schedule regular classes (may be online class – preferred MOOC) and completed eighty (80) hours programme before the Ist semester MCA end semester examination notification by the University. The classes shall be conducted either in the weekend mode or regular working day without affecting the actual regular teaching and learning activities of the Ist semester MCA curriculum.

3. Duration of the program

The course shall comprise three (03) papers i.e. two (02) theory papers and one (01) practical paper. Candidate has to appear examinations for all above papers at the end of the program conducted by the Department at which candidate has registered for the MCA program. The details of subjects and corresponding examination details are mentioned in the curriculum.

4. Conduct of examination

At the end of the course, department has to conduct the examinations on each theory paper with two (02) hours duration and complete the evaluation process of all those papers within two (02) weeks. The pattern of question papers and evaluation criteria for passing examinations are specified in the regulation.

5. Pattern of question paper for theory papers

Sl.	Question Type	Number Of Questions	No. Of Questions to be answered	Marks/ question	Max. Marks
1	Single word/MCQ/Fill in the blank	10	10	$10 \times 1 = 10$	10
2	Short answer	05	05	$05 \times 2 = 10$	10
3.	Short essay	05	03	$03 \times 4 = 12$	12
4	Essay	04	02	$02 \times 9 = 18$	18

6. Question Paper preparation

The faculty in-charge of the each course shall prepare three (03) unique set of question papers on the subject s(he) taught. Faculty should give utmost care in preparing the question paper. The question paper should contain four (04) different sections titled as Part A, Part B, Part C and Part D. In part A out of ten (10) questions, two (02) questions from each unit, for part B and Part C, out of five (05) questions, single (01) question from each unit and finally Part D comprises any four (04) questions from all the five (05) units. After preparing the question paper, faculty-in-charge shall submit these question papers to the Head of the department in sealed cover. The Head of the department shall then constitute question paper scrutiny committee comprising the Head of the department and two more senior faculties other than faculty-in charge