



YOGI VEMANA UNIVERSITY

Vemanapuram, Kadapa - 516005, A.P.

ACADEMIC REGULATIONS FOR THREE YEAR (6-SEMESTER) DEGREE OF MASTER OF COMPUTER APPLICATIONS (M.C.A.) COURSE (To come into effect from the academic year 2018-19)

1 Admission into the PROGRAM

- a) A candidate seeking admission into the first semester of the MCA Program should have passed the graduate degree examination of the University or any other recognized university or as equivalent thereto and should have passed Intermediate examination conducted by the Board of Intermediate Education (BIE) or 10+2 examination conducted by Central Board of Secondary Examination (CBSE) or any other equivalent examination recognized by BIE or CBSE with mathematics as one of the optional subject.
- b) Candidates shall be selected for admission on the basis of their performance in the entrance test, the guidelines of which shall be framed by the Executive Council of this university or convener of common entrance test conducted by any other university at state level.

2 Scheme of Instruction

- a) The scheme of instruction shall be for duration of three academic years, each year consisting of two semesters i.e., six semesters for the entire course. In each semester there shall be 90 instruction days of 6 hours a day including days allotted for internal assessment tests and seminars, but excluding preparation holidays. The inter-semester break in any academic year shall be one week only.
- b) The Scheme of instructions for the degree shall be according to the scheme of examination, syllabi, list of text and reference books prescribed by the university from time to time.

3 Scheme of Examination

- a) There shall be 5 (five) theory papers and three practical papers in first, second, third and fourth semesters and in fifth semester there shall be five theory papers, two practical papers, and Mini project. Each student should submit an individual project in sixth semester with one seminar.
- b) Each theory paper shall carry 100 marks of which 25 marks are allotted for internal assessment and 75 marks are allotted for University Semester end examinations.
- c) Each practical shall carry 100 marks allotted for semester end university examinations including marks for record and viva-voce.

- d) The seminar is conducted by the internal examiners only in VI semester and carries 50 marks.
- e) The mini project shall carry 100 marks including marks for dissertation and viva-voce.
- f) The project work at the end of the sixth semester carry 250 marks of which 50 marks are allotted for internal assessment by the respective project guide and 200 marks are allotted for assessed by the internal and external examiners.
- g) There shall be two internal assessment tests for each theory paper and the better performed of the two shall be considered for the award of marks.
- h) If any student fails to appear in both the internal assessment tests for whatsoever the reason, he/she shall be deemed to have secured zero and no supplementary internal assessment test shall be conducted.
- i) The detailed scheme of examinations shall be laid down by the university on the recommendation of the Board of Studies (BOS).

Paper Category	Theory	Practical	Seminar	Minor Project Work	Major Project Work
Session Marks	25		50 Content Preparation (12)+ Communication Skills (12)+Presentation Skills (12)+ Attempting Queries (14)		50 Project Documentation (20)+ presentation(20)+ Viva Voce(10)
University Examination Marks	75	100 Record (10)+ Designing of the Program (25) +Program execution (40)+(25) Viva Voce		100 Project Documentation (40)+ Presentation (40)+ Viva Voce(20)	250 Paper Based on Project should be submitted to the National/International Conference and Published in the Proceedings OR Paper Based on Project should be Published in National/International Journals (100)+ Project Documentation (50)+ Presentation (50)+ Viva Voce (50)

- j) He/she secures 4 credits for each theory & practical papers of all semesters end examinations and project report secures 12 credits in VI Semester.

4 Attendance

a) Academic Requirements

- i. Any candidate shall get 75% of attendance in each semester in all the papers / practicals and seminars.
- ii. Condonation of shortage of attendance for theory classes alone may be recommended by the Head of the Department and Head of the Institution on medical grounds or other genuine reasons provided the student puts up 62.5% of attendance in all the theory papers.
- iii. The condonation of shortage of attendance is not allowed, in the case of practical instruction. However, the student shall put up 75% of attendance by attending extra classes on preparatory holidays / vacation period, etc., if the permission is given by Head of the Department. Such candidates shall be permitted to write the practical examinations after the fulfillment of the requirement.

b) Integral Requirements

Every candidate shall participate a minimum of 20 hours in each semester in any of the or all of the following extra-curricular activities put together.

- i. NCC/NSS
- ii. Game and Sports
- iii. Social work outside the campus & campus cleaning
- iv. Yogasanas and
- v. Cultural Programs

A certificate to the above effect from the principal and / appropriate authority must be enclosed at the time of registration of the candidate to the semester end examinations.

c) Detention

A student who shall not satisfy these requirements as given in Regulation-4 (a) and (b) shall have to repeat the semester and put in again minimum required attendance as stipulated in Regulation-4 (a) and (b) by paying regular tuition fee in force. The attendance put in by the candidate in any two semesters cannot be combined for computation.

5 Promotion

A student shall be eligible for promotion to the next semester, if he/she satisfy the minimum attendance requirements as stipulated in Regulation-4 (a) and (b) in semester and shall register for the semester end university examinations. The candidate shall register at the beginning of each semester by paying the prescribed fee in the office of the principal and submitting the details in the prescribed proforma.

6 Evaluation

- a) In the first five semesters out of five theory papers, each paper shall be valued by two examiners (one will be internal and other will be external). Each internal examiner within the university can evaluate two papers per semester and the remaining shall be by the external examiners. The practical papers shall be valued by both external and internal examiners. The setting of question papers shall be always by the other university expert members approved by the Board of Studies (BOS).
- b) The mini project in fifth semester and the major project shall be valued by both external and internal examiners including project viva-voce.
- c) Internal assessment test shall be conducted by the concerned faculty of the department on the date communicated by the Principal of College. These internal assessment marks shall be communicated to the Controller of Examinations one week before the commencement of the semester end university examinations.
- d) The syllabi, model question papers and date of examinations for the internal test shall be decided by the principal in consultation with the head of the department.

The performance of the students in each semester shall be evaluated paper wise. The scheme of instructions and Examinations shown in Regulation2 and 3 shall be followed.

7 Qualifying marks for Pass

A candidate shall fulfill the following requirements for a pass:

- a) A candidate appearing for the first time for any semester end University examination shall register for the whole examination. A candidate shall be declared to have passed the whole examination, if he/she secures a minimum grade of 4 on 10 point scale in each theory paper / practical/dissertation/comprehensive viva-voce in semester end university examination and internal assessment tests put together after revaluation of marks of all the students including supplementary student who have appeared for the examination.
- b) A candidate shall be declared to have failed in the examination in such paper(s) when he / she could not get a minimum grade of 4 on 10 point scale in semester end university examinations and internal assessment tests put together.

- c) A candidate shall be declared to have been exempted from appearing once again in such theory paper(s) and / practical(s) in which he/she has secured minimum grade of 4 on 10 point scale in semester end university examinations and internal assessment marks put together.
- d) Supplementary candidates, who failed shall register in all papers in which he/she failed and he/she shall be declared to have passed the examination when he/she fulfills the requirements as given in 7(a).
- e) There shall be no separate supplementary examinations. The failed candidates shall register and reappear for the examinations along with regular candidates of next batch.
- f) A candidate who failed and wishes to appear for the whole of the theory examination of any semester shall be allowed only after the cancellation of the all subjects passed in previous semester.

8 Classification of successful candidates

The classification of successful candidates shall be based on the total marks obtained in all the semesters and then computing the percentage. The following formula shall be adopted for converting the final percentage of marks into letter grade as given below:

Marks Range	Letter Grade	Grade Points	Qualitative Meaning
90-100	O	10	Outstanding
80-89	A+	9	Excellent
70-79	A	8	Very Good
60-69	B+	7	Good
50-59	B	6	Above Average
45-49	C	5	Average
40-44	P	4	Pass
<40	F	0	Fail
0	AB	0	Absent

The classification of student in on 10 point scale based on Semester Grade point Average (SGPA) at the end of each semester and Cumulative Grade Point Average (CGPA) at the end of the course as explained below.

$$\text{Semester Grade Point Average (SGPA)} \quad S_i = \sum (C_i * G_i) / \sum C_i$$

Where C_i is the number of credits of the i^{th} Course and G_i is the grade point scored by the student in the i^{th} course.

$$\text{Cumulative Grade Point Average (CGPA)} = \sum (C_i * S_i) / \sum C_i$$

Where S_i is the SGPA of the i^{th} semester and C_i is the total number of credits in that semester. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcript.

$$\text{Aggregate Percentage} = \text{CGPA} \times 10$$

9 Choice Based Credit System (CBCS)

Two non-core papers shall be introduced in IV and V semesters as Non-Core I and Non-Core II respectively as a part of CBCS. These papers shall be taught by other departments as per the choice of the student. The candidate shall pass in these Non-Core papers on par with other papers but the marks shall not be included in awarding the Grade point. These papers shall be evaluated by the single examiner either internal or external.

10 Award of Rank

There shall be no award of rank at the time of publication of results. However the names of gold medal awardees, Fellowship programmes, etc shall be announced at the time of convocation only in their subject in the university on the basis of total marks obtained in all the semester put together and who passed all the semester examinations in one attempt. Supplementary / improvement candidates are not eligible for the award of ranks.

11 Improvement

The candidates are permitted to improve their marks in one or more theory papers of any semester as per the regulations and syllabi in force. If the candidate fails to improve his / her marks / class, the original marks / class are unaltered. There is no provision for improving the marks of internal assessment / practical / Project.

12 Conditions of Award of Degree

A candidate for the award of M.C.A. degree shall be required:

- a) To have undergone the course of study in the university college/affiliated college over a period of three academic years consisting of six semesters.
- b) To have passed the examination for the MCA as prescribed above.

13 Transitory Regulations

- a) The course of study for the Master of Computer Applications Degree shall cover normally a period of 3 academic years comprising of six semesters.
- b) No candidate shall be permitted to obtain degree earlier than six semesters and shall not be permitted to appear to any semester of examination after six years.
- c) **The University shall have the right to amend or modify any or all of the above regulations whenever necessary.**

Scheme of Examination for I, II, III, IV, V & VI Semester

Paper Code	Title of the Paper	No. of Credits	Marks		Total Marks
			Internal	External	
SEMESTER I					
13001	Problem Solving and Programming using C	4	25	75	100
13002	Data Base Management Systems	4	25	75	100
13003	Computer Organization	4	25	75	100
13004	Mathematical Foundations for Computer Applications	4	25	75	100
13006	Accountancy & Financial Management	4	25	75	100
13001P	Programming in C Laboratory	4		100	100
13002P	Data Base Management Systems Laboratory	4		100	100
13003P	Computer Organization Laboratory	4		100	100
SEMESTER II					
23001	Data Structures	4	25	75	100
23002	Computer Networks	4	25	75	100
23003	Advanced Data Base Management System	4	25	75	100
23004	Operating Systems	4	25	75	100
23005	Probability & Statistics	4	25	75	100
23001P	Data Structures Laboratory	4		100	100
23002P	Computer Networks & Operating Systems Laboratory	4		100	100
23003P	Advanced Data Base Management Systems Laboratory	4		100	100
SEMESTER III					
33001	Object Oriented Programming through Java	4	25	75	100
33002	Software Engineering	4	25	75	100
33003	Network Programming	4	25	75	100
33004	Optimization Techniques	4	25	75	100
33005	Artificial Intelligence	4	25	75	100
33001P	Object Oriented Programming through Java Laboratory	4		100	100
33002P	Software Engineering Laboratory	4		100	100
33003P	Network Programming Laboratory	4		100	100
SEMESTER IV					
43001	Web Technologies	4	25	75	100
43002	Dot Net Programming	4	25	75	100
43003	Advanced Java Programming	4	25	75	100
Elective-I 43004	A. Formal Language Automata Theory	4	25	75	100
	B. Information Systems				
	C. Machine Learning				
	D. Big Data Analytics				
	A. Human Computer Interaction	4	25	75	100
	B. Management Information System				
	C. Computer Graphics				
	D. PHP				
*43006-I	Non-Core: Introduction to Computers and MS Office		25	75	100
43001P	Web Technologies Laboratory	4		100	100

43002P	Dot Net Programming Laboratory	4		100	100
43003P	Advanced Java Programming Laboratory	4		100	100
The Student has to choose one from each of the Elective I and Elective II					
SEMESTER V					
53001	Cryptography & Network Security	4	25	75	100
53002	Cloud Computing	4	25	75	100
53003	Data Warehousing & Data Mining	4	25	75	100
Elective-III 53004	A. Digital Image Processing	4	25	75	100
	B. Wireless & Ad-hoc Networks				
	C. E-Commerce				
	D. Grid Computing				
Elective-IV 53005	A. Enterprise Application Integration	4	25	75	100
	B. Distributed Systems				
	C. Software Testing				
	D. Theory of Computation				
*53006-II	Non Core: Internet and World Wide Web		25	75	100
53001P	Cryptography & Network Security Laboratory	4		100	100
53302P	Cloud Computing Laboratory	4		100	100
53001D	Mini Project	4		100	100
Note:1. Every Student must give the Seminar at least two times. 2. Seminar will be conducted only by Internal Staff					
The Student has to choose one from each of the Elective III and Elective IV					
SEMESTER VI					
63001S	Seminar Topics from papers published in referred journals	12	50	--	50
63001D	Major Project Work		50	150	250
	Viva-Voce			50	
Note: 1. Every Student must give the Seminar at least two times. 2. Seminar will be conducted only by Internal Staff					

Course Total Marks: 4300 (Core Papers)

***200 (Non-Core)**

Semester-I	Theory: 500 Marks, Practical 300 Marks (32 Credits)
Semester-II	Theory: 500 Marks, Practical 300 Marks (32 Credits)
Semester-III	Theory: 500 Marks, Practical 300 Marks (32 Credits)
Semester-IV	Theory: 500 Marks, Practical 300 Marks (32 Credits)
Semester-V	Theory: 500 Marks, Practical 200 Marks, Mini Project 100 Marks (32 Credits)
Semester-VI	Seminar: 50 Marks, Major Project: 200, Viva-Voce 50 Marks (12 Credits)

Examination Pattern: Each Theory Paper consists of Part-A and Part-B. Part-A consists of eight short Questions, students have to answer five out of eight questions and each question carries 3 marks. Part-B consists of four essay type questions with internal choice from each Unit carrying 15 marks.

Practical Examination Pattern: Final External Laboratory experiment may give by external practical Examiner, any one of from syllabus and need not be from the list of experiments.

*** Non Core paper marks will not be considered for awarding the grade point and credits, but the candidate should pass since these are part of CBCS.**