

MASTER OF COMPUTER APPLICATION (MCA)

COURSE ORDINANCE

- 1. Scope:**

This Ordinance will be applicable to Master of Computer Applications programme (MCA).
- 2. Duration and Nomenclature:**

The duration of MCA programme shall be three academic years. Each year shall be divided into two semesters. Thus this programme shall comprise six semesters spread over three years. On the completion of all the six semesters, the student will be awarded Masters degree with nomenclature as given under Clause 1 above. The student shall complete all the six semesters within a maximum period of 5 years from the date of admission to the first semester.
- 3. Admission to the Course:**

Admission to the above programme shall be made on the terms & conditions as prescribed in Chapter 2 of the 1st Ordinance of SGT University, Gurgaon as amended from time to time.
- 4. Admission schedule and receipt of fees:**

The admission schedule along with last date for the receipt of admission forms and fees shall be fixed by the Vice-Chancellor every academic year.
- 5. Eligibility for Admission:**

Eligibility for admission to 1st Year (1st Semester):

 - (i) Candidates need to complete their graduation degree with at least 45% marks in aggregate from recognized University and must be studied Mathematics/Statistics (core or elective or functional) at least at the Senior School Certificate Examination (Class XII) of the CBSE or any other board.
 - (ii) Candidates can pass the 3 year BCA/BIT/BIS with 45% Marks from recognized University.
- 6. Selection of candidates for admission:**

The candidates shall be selected for admission to the above courses on the basis of their academic merit to be determined by the marks obtained either in Entrance Examination conducted by SGT University, or the qualifying examination whichever mode is decided by the University from time to time.
- 7. Syllabus:**

Each student shall be examined in the subject(s) as laid down in the curriculum and syllabi prescribed by the Board of Studies, Faculty of Engg. & Technology and approved by Academic Council.

8. Medium of Instruction and Examinations:

The medium of the instruction and the examination shall be English only.

9. Curriculum of Examinations:

The curriculum of Examinations shall be as approved by Board of Studies/Academic Council of the University from time to time.

10. University Examinations:

(i) End Term Examinations:

The examination for the 1st, 3rd and 5th semesters shall ordinarily be held in the month of December and those of the 2nd, 4th and 6th semesters in the month of May or on such dates as may be fixed by the Controller of Examinations with the approval of the Vice-Chancellor.

(ii) Supplementary/ Re-appear Examinations:

Supplementary examinations of the 1st, 3rd and 5th semesters will be held along with the regular semester examinations of 1st, 3rd and 5th semesters in December and those of 2nd, 4th and 6th semesters will be held along with regular semester examinations of 2nd, 4th and 6th semesters in May or on such dates as may be fixed by the Controller of Examinations with the approval of the Vice-Chancellor. However the supplementary examinations of 5th semester may be held in the month of May along with even semester examinations and of 6th semester may be held in the month December along with odd semester examinations. A candidate on the rolls of Department/ Faculty or an ex-student shall submit his/her application for admission to an examination on the prescribed form with the requisite certificate duly countersigned by the HoD/Dean of the Faculty.

11. Distribution of Marks:

The distribution of marks in various papers shall be as given in the Scheme of Examinations approved by the Board of Studies/the Academic Council.

12. Attendance Requirements/Eligibility to Appear in Examination:

The student should fulfill the following criteria to be eligible for appearing in the end term examination:

- (i) He/She should bear a good moral character.
- (ii) He/she should be on the rolls of the University during the Semester.
- (iii) He/She should have not less than 75% of the attendance during the respective semester. Twenty five (25%) of attendance relaxation shall account for illness and contingencies of serious and unavoidable nature.
- (iv) Dean of the Faculty of his own or on the recommendation of the HoD shall have the power to give relaxation upto 5% on genuine grounds over the minimum 75% attendance.
- (v) Further, the Vice Chancellor of his own or on the recommendation of the Dean shall have the power to give further relaxation upto 5% on genuine grounds over the above relaxation given the Dean.

- (vi) He/she should not be a defaulter in payment of tuition fee or any other dues of the University and no disciplinary action is pending against the student.

13. Exemption from Attendance / Shortage of attendance to be condoned:

The shortage of lectures to the maximum limit as under can be condoned by the competent authority:

Sr. No	Exemptable No. of Lectures	Ground of Exemption	Competent Authority
1	All periods of the day of donation	Voluntarily blood donation to the Blood Bank.	Dean of the Faculty
2	All periods of the day of Examination	For appearing in the supplementary examinations(Theory /Practical/Viva-voce)	-do-
3	07 days attendance during a semester	For participation in University or Inter-Collegiate Sports Tournaments/ Youth Festivals, NCC/NSS Camps/University Educational Excursions/ Mountaineering Courses	-do-
4	10 days attendance during a semester	For participation in National/International Competition, Inter-University Sports / Youth Festivals	-do-

Provided:

- (i) that he/she has obtained prior approval of the Dean, Faculty of Physical Sciences.
- (ii) that credit may be given only for the days on which lectures were delivered or tutorials or practical work done during the period of participation in the aforesaid events.

14. Attendance Shortage Warning:

Attendance shortage warning will be displayed on the Student's Notice Board and University Website by 10th day of every month.

15. Detained students:

A student, who does not fulfill the criteria prescribed in Clauses 12-13, will not be eligible for appearing in the End Term Semester Examination in that particular paper and will be deemed as Detained in that paper. Such student will repeat the course/paper along with the regular students of the subsequent batch to fulfill

the prescribed conditions to appear in the “End Term” examination of the course/ paper.

16. Submission of Examination Forms and Payment of Fees:

The Dean, Faculty of Engineering & Technology shall submit the examination admission forms of those students who satisfy the eligibility criteria to appear in the examinations to the Controller of Examinations as per schedule of examination circulated by him from time to time.

17. Setting of Question Papers:

- (i) The Head of the Department/Dean of the Faculty shall supply the panel of internal and external examiners, duly approved by the Board of Studies, to the Controller of Examinations. The paper(s) will be set by the examiner(s) nominated by the Vice-Chancellor from the panel of examiners.
- (ii) An examiner shall be allowed to set not more than two papers in a semester examination.
- (iii) The examiner(s) will set the question papers as per criteria laid down in the Scheme of Examinations as approved by the Board of Studies/Academic Council.
- (iv) All the question paper will be scrutinized by the internal expert committee and moderated up to 25% of original question paper with an approval of the concerned department head.

18. Evaluation Process – Theory, Practical and Viva Voce:

(i) Evaluation of Answer Books:

The answer books may be evaluated either by paper setter or any other internal or external examiner to be nominated by the Controller of Examinations with the approval of the Vice-Chancellor from the panel of examiners. In case, such examiner does not evaluate the answer book in time, the Controller of Examinations may get the answer book(s) evaluated from any other expert in the subject with the approval of the Vice-Chancellor. After evaluation of answer sheets the audit committee of the faculty of engineering and technology will be auditing for correctness of the evaluation.

(ii) Re-evaluation of Answer Books:

- (a) Re-evaluation will be permitted only for the theory /External Examinations conducted by this University.
- (b) No re-evaluation will be allowed for examination in practical/Viva-Voce/ Training Report/ Project Report/ sessional/ theses or dissertation, etc. or any other paper wherein there is a joint evaluation by two examiners.
- (c) The candidate must apply for re-evaluation in theory paper only on the prescribed form in an examination taken by him/her within the 10 days of the declaration of the result along with a copy of Detail-Mark Certificate or the downloaded result and prescribe fee. No re-

evaluation form will be accepted thereafter under any circumstances.

- (d) The University will not be responsible for postal delay in the receipt of the form from the Candidate, if sent by post.
- (e) Award of Re-Evaluation Marks/Score:

(a) When Increase/Decrease is up to 15% of the Maximum Marks of the paper concerned	Higher grade/marks will be awarded to the candidate
(b) When Increase/Decrease is more than 15% of the Maximum Marks of the paper concerned	Answer Book will be sent to the second Re-Evaluator and average of two highest scores will be given.

- (f) The final result of re-evaluation favorable or against will be binding upon the candidate and it will supersede the original score/result.

(iii) Practical Examinations:

- (a) Practical examinations shall be conducted by a Board of Examiners consisting of one internal and one external examiner to be nominated by the Vice-Chancellor from the panel of examiners.
- (b) The candidate who fails to obtain pass marks in practical examination shall be allowed to re-appear before Board of Examiners as laid down under (i) above as per schedule specified for Supplementary Examinations.

(iv) Viva-Voce:

- (a) Comprehensive Viva-Voce shall be conducted by a Board of Examiners consisting of one internal and one external examiner to be nominated by the Controller of Examinations with the approval of Vice-Chancellor from the panel of examiners.
- (b) The Viva voce shall be conducted at the time of practical examinations.
- (c) The marks obtained by the student for the viva-voce shall be taken into account when he/she appears in any future examination under re-appear clause.
- (d) A candidate who fails to obtain pass marks in viva-voce shall be allowed to re-appear in supplementary examinations before the Board of Examiners as laid down under (i) above.

19. Continuous Evaluation Process:

S.No	Course Category	Internal Assessment	External Assessment	Total Mark
1	Theory	50	50	100
2	Practical	60	40	100
3	Project/Seminar	150	50	200

- (i) **Theory Course:** Fifty (50) Marks shall be assigned to each theory course as Internal Assessment and Fifty (50) Marks shall be assigned to each theory course as External Assessment which shall be awarded as per the criteria given below:

Mode	Tentative Schedule	Marks Allotted	Marks Considered	Final Marks
INTERNAL ASSESSMENT				
Seasonal Exam -1 / Continuous Assessment Test – I (CAT – I)	6 th Week from the commencement of semester	50	15	50
Seasonal Exam -II / Continuous Assessment Test – II (CAT – II)	12 th Week from the commencement of semester	50	15	
Quiz / Assignment / Micro Project / Seminar (Based on Course Content Pre-Approval from BOS / Course Committee is mandatory)	During entire semester (Pre-Announced / Unannounced)	50	15	
Attendance Percentage (95% - 100% - 5 Marks, 90% - 94% - 4 Marks, 85% - 89% - 3 Marks, 80% - 84% - 2 Marks, 75% - 79% - 1 Marks)	Throughout Semester	5	5	
EXTERNAL ASSESSMENT				
End Semester Examination (100% of Course Content should be covered)	As per Schedule from COE	100	50	50
TOTAL MARKS				100

There will be at least two (2) Internal/Mid Tem Tests in each semester. Each Test will be of 50 marks of one and half hour duration and should

cover 50% syllabus. The dates of Tests will be decided by the Dean/HoD. The answer books will be supplied by the Examination Branch.

- (ii) **Practical Course:** Sixty (60) marks shall be assigned to each practical paper as Internal Assessment and Forty (40) marks shall be assigned to each practical paper as External Assessment which shall be awarded as per the criteria given below:

Mode	Tentative Schedule	Marks Allotted	Marks Considered
INTERNAL ASSESSMENT			
Objective & Theory/ Principle	Before commencement of each Laboratory Session	5	60
Procedure, Precaution & Observation Table	During each Laboratory Session	15	
Calculation / Programme	Before commencement of next Laboratory Session	10	
Graph / Output	Before commencement of next Laboratory Session	10	
Result & Inference	Before commencement of next Laboratory Session	10	
Continuous Assessment of Laboratory Performance	Throughout Semester	5	
Attendance Percentage (95% - 100% - 5 Marks, 90% - 94% - 4 Marks 85% - 89% - 3 Marks, 80% - 84% - 2 Marks 75% - 79% - 1 Marks)	Throughout Semester	5	
EXTERNAL ASSESSMENT			
End Semester Examination (100% of Course Content should be covered)	As per Schedule from COE	100	40
TOTAL MARKS			100

- (iii) **Project/Seminar Course:** One hundred and Fifty (150) marks shall as an Internal Assessment and Fifty (50) marks as External Assessment shall be assigned to Industry/Research project phase – II course which shall be awarded as per the criteria given below:

Mode	Tentative Schedule	Marks Allotted	Marks Considered
INTERNAL ASSESSMENT			
Zeroth Review	Before commencement of Project Phase (PP)	10	150
First Review	4 th Week of PP	15	
Second Review	8 th Week of PP	30	
Third Review	12 th week of PP	40	
Final Review	14 th Week of PP	50	
Attendance Percentage (95% - 100% - 5 Marks, 90% - 94% - 4 Marks 85% - 89% - 3 Marks, 80% - 84% - 2 Marks 75% - 79% - 1 Marks)	Throughout PP	5	
EXTERNAL ASSESSMENT			
End Semester Examination (100% of Course Content should be covered)	As per Schedule from COE	100	50
GRAND TOTAL MARKS			200

- (iv) In case of ex-students, those appearing for re-appear / improvement examination in any semester, their previous Internal Assessment marks will be counted.
- (v) The concerned teacher shall preserve records on the basis of which the Internal Assessment marks have been awarded and shall make the same available to the Controller of Examinations whenever required.
- (vi) The Head of the Department/ Dean of the Faculty shall ensure:
 - (a) That the internal assessment marks are got displayed on the Notice Board for information of the students at least seven (07) days before the commencement of the examinations of each semester.
 - (b) That the internal assessment marks are submitted to the Controller of Examinations at least seven (07) days before the commencement of the examinations of each semester.

20. Criteria for Promotion to Higher Semester:

A student shall be promoted to the next year only if he/she passes 60% of the total numbers of theory papers in the year(two semesters). Those who are unable to pass 60% of the theory papers shall get year back.

21. Pass Percentage:

- (i) The minimum percentage of marks to pass the examination in each semester will be 50% of marks in all different type of courses namely Theory, Practical and Project; in this both internal and external assessment marks shall be taken together.
- (ii) However the minimum passing mark in external examination will be 30% of total marks appeared and the passing minimum is not mandatory for internal assessment mark.

22. Improvement Examination:

The student may be permitted to improve his/her result subject to the following conditions:

- (i) The student will be permitted to appear in improvement examination as an ex-student with regular batches for the purpose of improvement.
- (ii) The student will be permitted to improve his/her CGPA only in those papers in which he/she has obtained grade less than 'First Division' in aggregate.
- (iii) Only one chance for a paper will be given. The chance must be availed of within a period of two years of initially passing of the final examination.
- (iv) If the status/nature of the student's result does not improve, his/her improvement result will be declared "PRS" (Previous Result Stands).
- (v) The candidate shall be allowed to appear in the improvement examination (s) along with regular candidates as and when the course is offered. No separate examination will be held for improvement of result. In case of change of syllabi, the student shall have to appear for improvement in accordance with the changed syllabii of the concerned course applicable to the regular students of that exam.

23. Credit Based Grading System:

(i) Key Definitions:

- Programme:** An educational programme leading to award of a Degree, Diploma or Certificate.
- Course:** Usually referred to as 'paper' is a component of a programme. All courses need not carry the same weight.
- Credit:** A unit by which the course work is measured. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours for practical work/field work per week. A Research Based Paper /Project is equal to 5 credits.
- Credit Point:** It is the product of grade point and number of credits for a course i.e. Credit Point = No. of credits in a course X "grade value" of the grade obtained in the course.
- Grade Point Average (GPA):** There are two types of GPAs as given hereunder:
a) Semester Grade Point Average (SGPA)

- b) **Cumulative Grade Point Average (CGPA)**
Every student earns a distinct SGPA and a distinct CGPA at the end of each specified semester.

Semester Grade SGPA is a measure for performance of student in a Semester. It is the Point Average ratio of sum of the product of number of credits with the grade points

(SGPA): scored by the student in all the courses taken by him/her and the sum of the number of credits of all the Courses undergone by the student i.e. $SGPA (S_i) = \frac{\sum (C_i \times G_i)}{\sum C_i}$

Cumulative Grade CGPA is a measure of performance up to any specified semester Point Average beginning from the first Semester. It is also calculated in the same (CGPA) manner as SGPA taking into account all the courses undergone by a student over all the semesters of programme i.e. $CGPA = \frac{\sum (C_i \times S_i)}{\sum C_i}$

Grade Point: It is a numerical weight allotted to each letter grade on a 10-point scale.

Letter Grades: It is an index of the performance of a student in a said course. The Grades are denoted by letters O, A+, A, B+, B, C, P, F and Ab.

(ii) Credits, Semesters, Courses and total Credit Points:

BCA : In the 6th semester programme (i.e. 3-year programme) of BCA, there will be, 24 theory courses and 21 practical courses and hence 141 total credits.

(iii) Grading Method

The grading method for evaluating students' performance involves award of grade according to the range of total marks in the course. The range of marks between any two grades is framed in such a manner that the effect of individual marking/checking techniques on the overall grading is minimal. The grades will be awarded based on marks out of 100 as under:

Score	Grade	Grade Point
85% and above	O	10
80% and above but less than 85%	A+	9
75% and above but less than 80%	A	8
70% and above but less than 75%	B+	7
65% and above but less than 70%	B	6
60% and above but less than 65%	C+	5
55% and above but less than 60%	C	4
50% and above but less than 55%	D	3

Below 50%	F	0
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(iv) Calculation of SGPA & CGPA

SGPA is calculated by dividing the sum of 'Credit Points' in a Semester divided by the sum of 'Course Credits' in that Semester.

CGPA is calculated by dividing the sum of 'Credit Points' by the sum of 'Course Credits' of the current semester + all pervious semesters.

Hypothetical Example for Computation of SGPA and CGPA :

Let us assume that Mr. X has registered for four courses in the 1st semester and his performance in these courses in this semester is given in the Table below:

Course/Paper Code	Course Credit	Grade Awarded to the Student	Grade Value	Credit Points
Course/Paper I	4	A+	9	36
Course/Paper II	4	A	8	32
Course/Paper III	4	B	6	24
Course/Paper IV	4	B+	7	28
TOTAL	16		30	120

Calculation of SGPA :

'Credits' of the Courses registered by Mr. X in 1st Semester = 16
 'Credit Points' of Mr. X in 1st Semester = 120
 SGPA of 1st Semester (120/16) = 7.5

Calculation of CGPA:

'Credits' of the courses registered by Mr. X upto 1st Semester = 16
 'Credit Points' of Mr. X in 1st Semester = 120
 CGPA of 1st Semester (120/160) = 7.5

Let us, now, assume that the Mr. X has performed in 2nd Semester as under :

Course/Paper Code	Course Credit	Grade Awarded to the Student	Grade Value	Credit Points
Course/Paper V	4	C+	5	20
Course/Paper VI	4	C	4	16
Course/Paper VII	4	A+	9	36
Course/Paper VIII	4	B+	7	28
TOTAL	16		25	100

Calculation of SGPA of 2nd Semester:

'Credits' of the courses registered by Mr. X in 2nd Semester = 16
 'Credit Points' of Mr. X in 2nd Semester = 100

$$\text{SGPA of 2nd Semester (100/16)} = 6.25$$

Calculation of CGPA upto 2nd Semester:

'Credits' of the courses registered Mr. X in 1 st & 2nd Semesters (16+16)	= 32
'Credit Points' of Mr. X in 1 st & 2 nd Semesters (120+100)	= 220
CGPA upto 2 nd Semester (220/32)	= 6.87

24. Declaration of Results:

- (i) After the semester examinations are over, the Controller of Examinations shall publish the results of those students who had appeared in the examinations as early as possible and endorse a copy to the Dean of the Faculty.
- (ii) Each successful student/ the student placed in reappear shall receive a copy of the Detailed Marks Card of each semester examination.
- (iii) The student whose result is declared late without any fault on his/her part may attend classes for the next higher semester provisionally at his /her own risk and responsibility, subject to his /her passing the concerned semester examination. In case, the student fails to pass the concerned semester examination, his/her attendance/internal assessment in the next higher semester in which he / she was allowed to attend classes provisionally will stand cancelled.

25. Classification of Performance:

Performance of the successful students after the 8th i.e. last semester examinations on basis of final CGPA obtained by him / her in the 1st to 8th semester examinations shall be classified as under:

CGPA (with equivalent* % marks)	Classification of Performance
CGPA of 8.25 (equivalent to 75% marks) or more in first attempt	First Division with Distinction
CGPA of 8.25 (equivalent 75%) or more marks in second or subsequent attempt	First Division
CGPA of 6.75 (equivalent to 60% marks) or more but less than 8.25(equivalent to 75% marks)	First Division
CGPA above Pass Grade (equivalent to 50% marks) but less than 6.75 (equivalent to 60% marks)	Second Division
CGPA less than Pass Grade (equivalent to 50% marks)	Fail

*Formula for conversion from CGPA to % marks shall be: $(\text{CGPA} - 0.75) \times 10 = \% \text{ of marks}$

26. Other Provisions:

- (i) Provisions of Chapter 5 (Conduct of Examinations) of 1st Ordinance of the University will be applicable in case of matters which are not covered by this Subject Ordinance.
- (ii) Each student shall study “Environmental Studies”. It will be a qualifying compulsory paper. Its marks will not be taken into consideration while determining the Division/Grade. Paper for this course will be set and evaluated by the internal examiner to be appointed by the Controller of Examination with the approval of the Vice-Chancellor. It will be taken up for study by the student in the semester as prescribed in the Scheme of Examinations.
- (iii) Nothing in the Ordinance shall debar the University from amending the Ordinance and the same shall be applicable to all the students whether old or new.
- (iv) Any other provision not contained in the Ordinance shall be governed by the rules and regulations framed by the University from time to time.
- (v) In case of any dispute, the Vice-Chancellor will be competent authority to interpret the rules and his interpretation shall be final.

Note:

Degree will be given to only those students whose CGPA is minimum 3.0

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