

ACADEMIC REGULATIONS & COURSE STRUCTURE

Master of Computer Applications (MCA)

(Applicable for the batches admitted from 2016-17)



SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY

Seetharampuram, Narsapur – 534 280, W.G.Dt.

Andhra Pradesh

ACADEMIC REGULATIONS FOR MCA (Regular) DEGREE COURSE
(Effective for the students admitted into first year from the academic year 2016-17)

The MCA Degree of the Swarnandhra College of Engineering & Technology shall be conferred on candidates who are admitted to the program and fulfill all the requirements for the award of the Degree.

Swarnandhra College of Engineering & Technology, an autonomous institution, follows Semester pattern for all the three years of its Postgraduate MCA programme with internal and external evaluation.

Semester Pattern: Each academic year shall be divided into two semesters: each semester consists of 22 weeks duration with a minimum of 110 working days which includes instruction, mid examinations and final examinations.

1. ELIGIBILITY FOR ADMISSIONS

Admission into first year MCA : Admissions into first year of MCA Program of Swarnandhra College of Engineering & Technology (Subsequently referred to as SCET) will be as per the norms stipulated by Jawaharlal Nehru Technological University Kakinada & Govt. of Andhra Pradesh. Admissions into the program in the Institution are classified into CATEGORY – A, through convener, ICET and CATEGORY- B filled by the college management.

2. AWARD OF MCA DEGREE

2.1. A student shall be declared eligible for the award of MCA degree, if he pursues a course of study and completes it successfully for not less than three academic years and not more than six academic years.

2.2. A Student, who fails to fulfill all the academic requirements for the award of the degree within six academic years from the year of their admission, shall forfeit his seat in MCA course.

3. ATTENDANCE

3.1 A candidate shall be deemed to have eligibility to write End Semester examinations if he has

put in a minimum of 75% of attendance in aggregate of all the subjects.

3.2 Condonation of shortage of attendance up to 10% i.e. 65% and above, and below 75% may be given by the College academic committee.

3.3 Condonation of shortage of attendance shall be granted only on genuine and valid reasons on representations by the candidate with supporting evidence

3.4 Shortage of attendance below 65% shall in NO case be condoned

3.5 A candidate shall not be promoted to the next semester unless he fulfills the attendance requirements of the previous semester.

3.6 A stipulated fee shall be payable towards condonation of shortage of attendance

4. DISTRIBUTION AND WEIGHTAGE OF MARKS:

4.1 The performance of the candidate in each semester shall be evaluated subject-wise, with a maximum of 100 marks for theory and 100 marks for Laboratory, on the basis of Internal Evaluation and End Semester Examination.

4.1.1 External Evaluation

For the theory subjects 60 marks shall be awarded based on the performance in the End Examination Marks. External examination shall be conducted for a duration of 180 minutes with 5 questions to be answered out of 8 questions.

4.1.2 Internal Evaluation

40 marks shall be awarded based on the Internal Evaluation. Internal Evaluation shall be made based on the weighted Average of the marks secured in the two Mid Term - Examinations conducted, one in the middle of the Semester and the other immediately after the completion of instruction. The weights are 80% for the mid in which the students secured highest marks and 20% for mid in which the student secured lowest marks. Each mid examination shall be conducted for duration of 120 minutes with 4 questions to be answered out of 4 questions

4.2 For practical subjects, 40 marks for Internal Evaluation and 60 for external examination. Out of 40 Internal marks 20 marks shall be awarded for day-to-day work including

Record work and the remaining 20 marks to be awarded by conducting internal laboratory test. The External Laboratory examination for MCA course must be conducted with two examiners. One of them is the Laboratory Class Teacher, and the second examiner will be external examiner from outside college

- 4.3** A candidate shall be deemed to have secured the minimum academic requirement in a subject if he secures a minimum of 40% of marks in the End Examination and a minimum aggregate of 50% of the total marks in the End Semester Examination and Internal Evaluation taken together. If a candidate secures a minimum of 40% of marks in the End Examination and 40% - 49% of the total marks in the End Semester Examination and Internal Evaluation taken together and secures an overall aggregate of 50% in the total semester he may be passed in those subjects also
- 4.4** In case the candidate does not secure the minimum academic requirement in any subject (as specified in 4.3) he has to reappear for the End Examination in that subject. A candidate shall be given one chance to re-register for each subject provided the internal marks secured by a candidate are less than 50% and he has failed in the end examination. In such case candidate must re-register for subjects(s) and secure required minimum attendance. Attendance in the re-registered subjects(s) shall be calculated separately to decide upon the eligibility for writing the end examination in those subjects (s). In the event of taking another chance, the internal marks and end examination marks obtained in the previous attempt are nullified. At a given time a candidate is permitted to re-register for maximum of two subjects in addition to the subjects of regular semester.
- 4.5** A candidate shall be allowed to submit the project report only after fulfilling the attendance requirements of all the semesters. The viva-voce examination shall be conducted at the end of the course work (6th semester).
- 4.6 Seminar:** There shall be a Seminar presentation during III semester The Seminar paper has two components one from the current study (course work), and the other component is suggested by the staff advisor. A hard copy of the information on seminar paper topic in the form of a report is to be submitted for evaluation along with presentation. The two components of the seminar are distributed between two halves of the semester paper and are internally evaluated for 50 marks each. The average of the two components shall be taken as

the final score. A minimum of 50% of maximum marks shall be obtained to earn the corresponding credits.

4.7 Mini Project: The Mini Project shall be carried out during the summer break for a minimum of 4 weeks after the 4th semester and to be completed before the start of V semester. A report has to be submitted at the beginning of V semester for the assessment by an internal evaluation committee comprising Head of the Department and two Senior faculty of the department. A minimum of 50% of maximum marks shall be obtained to earn the corresponding credits.

4.8 Soft Skills Lab: This lab is internal evaluation and will be evaluated for 50 marks in a semester. A minimum of 50% of maximum marks shall be obtained to earn the corresponding credits.

4.9 Term Paper: There shall be a Term Paper presentation during VI semester. For Term paper, a student under the supervision of a faculty member, shall collect the literature on a topic and critically review the literature and submit it to the Department in a report form and shall make an oral presentation before the Department Committee. The Department Committee consists of Head of the Department, supervisor and two other senior faculty members of the department. For Term Paper there will be only internal evaluation of 50 marks. A minimum of 50% of maximum marks shall be obtained to earn the corresponding credits.

5. EVALUATION OF PROJECT WORK

Every candidate shall be required to submit thesis or dissertation after taking up a topic approved by the Project Review Committee.

5.1 A Project Review Committee (PRC) shall be constituted with Principal / Director as chairperson, Head of the Department and two other senior faculty members of the concerned department.

5.2 Registration of Project Work: A candidate is permitted to register for the project work after satisfying the attendance requirement of all the subjects (theory and practical subjects) up to V semester.

- 5.3 After satisfying 5.2, a candidate has to submit, in consultation with his project supervisor, the title, objective and plan of action of his project work to the Project Review Committee for its approval before the fifth semester end examinations. After obtaining the approval of the Committee the student can initiate the Project work after the fifth semester end examinations.
- 5.4 Every candidate shall work on projects approved by the PRC of the College
- 5.5 The duration of the project is for one semester.
- 5.6 If a candidate wishes to change his supervisor or topic of the project he can do so with approval of the PRC. However, the Project Review Committee (PRC) shall examine whether the change of topic/supervisor leads to a major change of his initial plans of project proposal. If so, his date of registration for the project work starts from the date of change of Supervisor or topic as the case may be.
- 5.7 A candidate shall submit status report in two stages at least with a gap of one month between them.
- 5.8 The work on the project shall be initiated in the beginning of the Sixth semester and the duration of the project is for one semester. A candidate shall be allowed to submit the project report only with the approval of PRC and not earlier than 20 weeks from the date of registration of the project work. For the approval of PRC the candidate shall submit the draft copy of thesis to the Principal (through Head of the Department) and shall make an oral presentation before the PRC.
- 5.9 Three copies of the Project Thesis certified by the supervisor & HOD shall be submitted to the College / Department.
- 5.10 The Project thesis shall be adjudicated by one examiner selected by the Principal from a panel of three examiners, who are eminent in the field and nominated by the concerned Head of the Department.
- 5.11 The viva-voce examination shall be conducted by a board consisting of the supervisor, Head of the Department and the examiner who adjudicated the Thesis. The Board shall jointly

report candidates work as:

- A. Excellent
- B. Good
- C. Satisfactory
- D. Unsatisfactory

If the report of the viva-voce is unsatisfactory, the candidate will retake the viva- voce examination after three months. If he fails to get a satisfactory report at the second viva-voce examination, he will not be eligible for the award of the degree unless the candidate is asked to revise and resubmit. If the report of the examiners is unfavorable again, the project shall be summarily rejected.

Head of the Department shall coordinate and make arrangements for the conduct of Viva - Voce examination.

SEMESTER WISE DISTRIBUTION OF CREDITS

Semester	Theory	Lab	Total Credits
1 st Semester	5	3	26
2 nd Semester	5	2	24
3 rd Semester	5	2 + Seminar	26
4 th Semester	5	2 + Soft Skills	26
5 th Semester	5	2 + Mini Project	26
6 th Semester	Project + Term Paper		02
Total			130

6. GRADING SYSTEM

6.1 Award of Grade:

(i) Grade Point Average (GPA):

a) The Grade Point Average (GPA) will be calculated according to the formula.

$$GPA = \frac{\sum C_i G_i}{\sum C_i}$$

Where C_i = number of credits for the subject i

G_i = grade points obtained by the student in the subject.

- b) To arrive at Cumulative Grade Point Average (CGPA), the formula is used considering the student's performance in all the courses taken in all the semesters completed up to the particular point of time.

$$CGPA = \frac{\sum C_i G_i}{\sum C_i}$$

Where C_i = number of credits for the subject i

G_i = grade points obtained by the student in the subject.

- (ii) After a student satisfies the requirements prescribed for the award of UG/PG Program he/she shall be placed in one of the following four grades. The award of the degree is based on CGPA on a grade point scale of 10.

CGPA	Award of Division
$\geq 8.00^*$	First Class with Distinction
≥ 7.00	First Division
≥ 6.00	Second Division
< 6.00	Unsatisfactory

* In addition to the required CGPA of 8, the student must have necessarily passed all the courses of every semester in the minimum stipulated period for the programme.

6.2 Award of Grade in Each Semester:

- (i) Based on the student performance during a given semester, a final letter grade will be awarded at the end of the semester for each subject. The letter grades and the corresponding grade points are as given in the Table.

Percentage of Marks Scored	Letter Grade	Grade points
≥ 90	S	10
80 - 89	A	9
70-79	B	8
60-69	C	7
50-59	D	6
< 50	F	Fail

- (ii) A student earns a minimum of 6 grade points (D grade) in a subject is declared to have successfully completed the subject, and is deemed to have earned the credits assigned to that subject. However it should be noted that a pass in any subject/term paper/seminar/project/mini project shall be governed by the rules mentioned in against them
- (iii) Grade Sheet: A grade sheet (memorandum) will be issued to each student indicating his/her performance in all courses taken in that semester and also indicating the grades.
- (iv) Transcripts: After successful completion of the total programme of study, a Transcript containing performance of all academic years will be issued as a final record. Duplicate transcripts will also be issued up to any point of study to any student on request and by paying the stipulated fee in force.
- (v) Candidates shall be permitted to apply for recounting/revaluation within the stipulated period with payment of prescribed fee.
- (vi) The Academic Council has to approve and recommend to the JNTUK, Kakinada for the award of a degree to any student.

7. WITH HOLDING OF RESULTS:

If the candidate has not paid any dues to the College or if any case of indiscipline is pending against him, the result of the candidate will be withheld. The issue of degree is liable to be withheld in such cases.

8. TRANSISTORY REGULATIONS

Candidates who have discontinued or have been detained for want of attendance or who have failed after having undergone the course are eligible for admission to the same or equivalent subjects as and when subjects are offered, subject to 4.4

9. GENERAL

9.1. The academic regulations should be read as a whole for purpose of any interpretation.

9.2. In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the

Principal is final

- 9.3.** The College may change or amend the academic regulations and syllabus at any time and the changes and amendments made shall be applicable to all the students with effect from the date notified by the college.
- 9.4.** Wherever the word he, him or his occur, it will also include she, her and hers



Ragging

Prohibition of ragging in educational institutions Act 26 of 1997

Salient Features

- ⇒ Ragging within or outside any educational institution is prohibited.
- ⇒ Ragging means doing an act which causes or is likely to cause Insult or Annoyance of Fear or Apprehension or Threat or Intimidation or outrage of modesty or Injury to a student

	Imprisonment upto		Fine Upto
Teasing, Embarrassing and Humiliation	 6 Months	+	Rs. 1,000/-
Assaulting or Using Criminal force or Criminal intimidation	 1 Year	+	Rs. 2,000/-
Wrongfully restraining or confining or causing hurt	 2 Years	+	Rs. 5,000/-
Causing grievous hurt, kidnapping or Abducts or rape or committing unnatural offence	 5 Years	+	Rs. 10,000/-
Causing death or abetting suicide	 10 Months	+	Rs. 50,000/-

In Case of Emergency CALL TOLL FREE NO. : 1800 - 425 - 1288

LET US MAKE SCET A RAGGING FREE COLLEGE

Ragging

ABSOLUTELY NO TO RAGGING

1. Ragging is prohibited as per Act 26 of A.P. Legislative Assembly, 1997.
2. Ragging entails heavy fines and/or imprisonment.
3. Ragging invokes suspension and dismissal from the College.
4. Outsiders are prohibited from entering the College and Hostel without permission.
5. Girl students must be in their hostel rooms by 7.00 p.m.
6. All the students must carry their Identity Cards and show them when demanded
7. The Principal and the Wardens may visit the Hostels and inspect the rooms any time

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MCA Course Structure R16
(Applicable for the Batches admitted from 2016-17)

First Semester

S.NO	Subject Code	SUBJECT TITLE	L	P	C	I	E	TM
1	16MC1T01	Computer Programming using C	4		4	40	60	100
2	16MC1T02	Digital Logic and Computer System Organization	4		4	40	60	100
3	16MC1T03	Discrete Mathematical Structures and Graph Theory	4		4	40	60	100
4	16MC1T04	Probability and Statistical Applications	4		4	40	60	100
5	16MC1T05	Accounting and Financial Management	4		4	40	60	100
6	16MC1L01	Digital Logic and Computer System Organization Lab		4	2	40	60	100
7	16MC1L02	C Programming Lab		4	2	40	60	100
8	16MC1L03	Communication Skills Lab		4	2	40	60	100
Total					26	320	480	800

Second Semester

S.NO	Subject Code	SUBJECT TITLE	L	P	C	I	E	TM
1	16MC2T01	OOPS through JAVA	4		4	40	60	100
2	16MC2T02	Operating Systems	4		4	40	60	100
3	16MC2T03	Data Structures using C	4		4	40	60	100
4	16MC2T04	Operations Research	4		4	40	60	100
5	16MC2T05	Perspectives of Organization and Management	4		4	40	60	100
6	16MC2L01	OOPS through Java Lab		4	2	40	60	100
7	16MC2L02	Data Structures using C Lab		4	2	40	60	100
Total					24	280	420	700

Third Semester

S.NO	Subject Code	SUBJECT TITLE	L	P	C	I	E	TM
1	16MC3T01	Database Management Systems	4		4	40	60	100
2	16MC3T02	Computer Networks	4		4	40	60	100
3	16MC3T03	Design and Analysis of Algorithms	4		4	40	60	100
4	16MC3T04	Unix Programming	4		4	40	60	100
5	16MC3T05	Software Engineering	4		4	40	60	100
6	16MC3L01	Database Management Systems Lab		4	2	40	60	100
7	16MC3L02	Unix Programming Lab		4	2	40	60	100
8	16MC3S01	Seminar		-	2	50	-	50
Total					26	330	420	750

Fourth Semester

S.NO	Subject Code	SUBJECT TITLE	L	P	C	I	E	TM
1	16MC4T01	Data Warehousing and Data Mining	4		4	40	60	100
2	16MC4T02	Web Technologies	4		4	40	60	100
3	16MC4T03	Software Testing Methodologies	4		4	40	60	100
4	---	Elective – I	4		4	40	60	100
5	---	Elective – II	4		4	40	60	100
6	16MC4L01	Data Warehousing and Data Mining Lab		4	2	40	60	100
7	16MC4L02	Web Technologies Lab		4	2	40	60	100
8	16MC4L03	Soft Skills / Aptitude Lab		4	2	50	-	50
Total					26	330	420	750

Elective-I

Elective-II

S. No	Subject Code	SUBJECT TITLE	S. No	Subject Code	SUBJECT TITLE
1	16MC4E01	Human Computer Interaction	1	16MC4E05	Computer Graphics
2	16MC4E02	ERP and Supply Chain Management	2	16MC4E06	Scripting Languages
3	16MC4E03	Management Information Systems	3	16MC4E07	Cloud Computing
4	16MC4E04	Distributed Systems	4	16MC4E08	Artificial Intelligence

Fifth Semester

S.NO	Subject Code	SUBJECT TITLE	L	P	C	I	E	TM
1	16MC5T01	Cryptography and Network Security	4		4	40	60	100
2	16MC5T02	Object Oriented Analysis and Design Using UML	4		4	40	60	100
3	16MC5T03	Mobile Computing	4		4	40	60	100
4	---	Elective – III	4		4	40	60	100
5	---	Elective – IV	4		4	40	60	100
6	16MC5L01	UML Lab		4	2	40	60	100
7	16MC5L02	Mobile Application Development Lab		4	2	40	60	100
8	16MC5M01	Mini Project		-	2	50	-	50
Total					26	330	420	750
Elective-III				Elective-IV				
S. No	Subject Code	SUBJECT TITLE	S. No	Subject Code	SUBJECT TITLE			
1	16MC5E01	E-Commerce	1	16MC5E05	Software Project Management			
2	16MC5E02	Animation and Gamming	2	16MC5E06	Internet of Things			
3	16MC5E03	Computer Forensics	3	16MC5E07	Big Data Analytics			
4	16MC5E04	Multimedia Application Development	4	16MC5E08	Cyber Security			

Sixth Semester

S.NO	Subject Code	SUBJECT TITLE	L	P	C	I	TM
1	16MC6Q01	Term Paper	-	-	2	50	50
2	16MC6P01	Dissertation/Thesis	-	-	-	--	Excellent/Good /Satisfactory/ Unsatisfactory

S.NO	Semester	Credits	Internal Marks	External Marks	Total Marks
1	Semester – I	26	320	480	800
2	Semester – II	24	280	420	700
3	Semester – III	26	330	420	750
4	Semester – IV	26	330	420	750
5	Semester – V	26	330	420	750
6	Semester – VI	2	50	---	50
Total		130	1640	2160	3800

