ACADEMIC REGULATIONS of M.Tech.

Applicable to the students admitted from the Academic year 2015-2016

MAHARAJ VIJAYARAM GAJAPATHI RAJ COLLEGE OF ENGINEERING

(Autonomous)

(Approved by AICTE, New Delhi, and permanently affiliated to JNTUK, Kakinada)

Re-Accredited by NBA, Re-accredidated by NAAC with 'A' Grade,

Listed u/s 2(f) & 12(B) of UGC Act 1956.

Vijayaram Nagar Campus, Chintalavalasa,

Vizianagaram-535005, Andhra Pradesh

Academic Regulations for M.Tech. Programmes

Applicable to the students admitted from the Academic year 2015-2016 onwards.

1. COURSE PATTERN:

- The program is for 2 academic years with 4 semesters.

2. AWARD OF DEGREE:

A student will be declared eligible for the award of degree if he/she fulfills the following academic regulations.

a) A student shall be declared eligible for the award of the degree, if he/she pursues a course of study for not less than Two academic years and not more than Four academic years.

b) The student shall register for 80 credits and secure all 80 credits.

c) Students who fail to complete their Two Years Course of study within Four years shall forfeit their seat and their admission shall stand cancelled.

3. COURSE STRUCTURE:

M.TECH:

The total course will consist of the following components.

a)	Core Mandatory(Theory)	CM	21-27 credits
b)	Core Mandatory(Lab)	CM(L)	02-06 credits
c)	Core Elective (Theory)	CE(T)	15-21 credits
d)	Comprehensive Viva voce	CV	01-03 credits
e)	Self Study(Prerequisite)	SS	01-03 credits
f)	Seminar	SE	01-03 credits
g)	Research methodologies	RM	01-02 credits
h)	Project phase 1	PR	06-12 credits
i)	Project phase 2	PR	09-15 credits

*For all the programs offered, in the list of courses for electives one of the choices would be “MOOCs”. Each department shall short list MOOCs course/(s) meeting the requirements of course duration, credits, etc., from time to time. The same shall be placed in the immediate BoS meeting for ratification.

4. ABOUT GRADING SYSTEM:

Performance of a student is evaluated in terms of earned credit weighed marking system

Earned credits are defined as the sum of course credits in which grade points above a certain cut off have been obtained for declaring student pass in that course

• Points earned in a semester:

Σ (course credits earned x Grade points)

Semester Grade Point Average (SGPA) for the current semester which is calculated on the basis of grade points obtained in all courses, except audit courses and courses in which satisfactory or course continuation has been awarded,

SGPA= Σ(course credits earned x Grade points) /

Σ(Total course credits in the semester.

Cumulative Grade Point Average (CGPA) is calculated on the basis of all pass grades obtained in all courses, except audit courses, obtained in all completed semesters

CGPA= Σ (course credits earned x Grade points) over all semesters / Σ (Total course credits in all the semesters.

The UGC recommends a 10-point grading system with the following letter grades as given below:

O	(Outstanding)	10
A+	(Excellent)	9
A	(Very Good)	8
B+	(Good)	7
B	(Above Average)	6
C	(Average)	5
P	(Pass)	4
F	(Fail)	0
Ab	(Absent)	0

- A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.

Illustration of Computation of SGPA and CGPA and Format for Transcripts

Computation of SGPA and CGPA

Illustration for SGPA

Course	Credit	Grade Letter	Grade point	Credit Point (Credit x Grade)
Course 1	3	A	8	3 X 8 = 24
Course 2	4	B+	7	4 X 7 = 28
Course 3	3	B	6	3 X 6 = 18
Course 4	3	O	10	3 X 10 = 30
Course 5	3	C	5	3 X 5 = 15
Course 6	4	B	6	4 X 6 = 24
	20			**139**

Thus, **SGPA** =139/20 = 6.95

Illustration for CGPA

Semester 1	**Semester 2**	**Semester 3**	**Semester 4**
Credit: 20	Credit: 22	Credit: 25	Credit: 26
SGPA: 6.9	SGPA: 7.8	SGPA: 5.6	SGPA: 6.0

Thus, **CGPA** = $\frac{20 \times 6.9 + 22 \times 7.8 + 25 \times 5.6 + 26 \times 6.0}{80}$ = **7.57**

M.TECH (COMPUTER NETWORKS AND INFORMATION SECURITY)

COURSE STRUCTURE

Semester I

S.No	Subject Code	Subject	L	T	P	Credits
1	A1CNT201	Advanced Computer Networks	4	-	-	4
2	A1CST202	Advanced Data Structures	3	-	2	4
3	A1CST203	OOP Using JAVA	3	-	2	4
4	A1CNT205	Information Security	3	-	-	4
5	A1CNT3XX	Elective – I	3	-	-	3
6	A1CNT3XX	Elective – II	3	-	-	3
7	A1CNL201	Networking Design Lab - I	-	-	3	2
Total Number of credits			19	-	7	24

Semester II

S.No	Subject Code	Subject	L	T	P	Credits
1	A1CST206	Relational Database Management Systems	4	-	-	4
2	A1CST207	Web Technologies & Tools	3	-	2	4
3	A1CST208	Theory of Operating Systems	3	-	2	4
4	A1CNT210	Information Security & Management Standards	3	-	-	4
5	A1CNT3XX	Elective - III	3	-	-	3
6	A1CST3XX	Elective - IV	3	-	-	3
7	A1CNL202	Networking Design Lab - II	-	-	3	2
Total Number of credits			19		7	24

Semester III

S.No	Subject Code	Subject	L	T	P	Credits
1	A1CNP601	Research Methodologies	-	-	-	2
2	A1CNP602	Comprehensive Viva	-	-	-	2
3	A1CNP603	Pre-requisite Study	-	-	-	2
4	A1CNP604	Seminar	-	-	-	2
5	A1CNP605	Project Phase - I	-	-	-	8
Total Number of Credits			-	-	-	**16**

Semester IV						
S.No	**Subject Code**	**Subject**	**L**	**T**	**P**	**Credits**
1	A1CNP606	Project Phase - II	-	-	-	16
Total Number of Credits			-	-	-	**16**

Elective - I		
S. No	**Subject Code**	**Subject**
1	A1CNT301	Computer Forensics & Investigations
2	A1CNT302	Sensor & Adhoc Networks
3	A1CNT303	Cyber Laws

Elective - II		
S. No	**Subject Code**	**Subject**
1	A1CNT304	Network Perimeter Security
2	A1CNT305	Secure Coding Practices
3	A1CNT306	Network Programming

Elective - III		
S. No	**Subject Code**	**Subject**
1	A1CNT307	Penetration Testing & Network Defense
2	A1CNT308	Database Security
3	A1CNT309	Web Application Security

Elective – IV		
S. No	**Subject Code**	**Subject**
1	A1CST307	Distributed Systems
2	A1CST308	Service Oriented Architecture
3	A1CST309	Grid & Cluster Computing