

ACADEMIC REGULATIONS of M.Tech.

Applicable to the students admitted from the
Academic year 2017-2018



MAHARAJ VIJAYARAM GAJAPATHI RAJ COLLEGE OF ENGINEERING (Autonomous)

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

Re-Accredited by NBA, Re-accredited 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 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.
- The student shall register for 80 credits and secure all 80 credits.
- 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,

$SGPA = \frac{\Sigma(\text{course credits earned} \times \text{Grade points})}{\Sigma(\text{Total course credits in the semester})}$

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

$CGPA = \frac{\Sigma(\text{course credits earned} \times \text{Grade points}) \text{ over all semesters}}{\Sigma(\text{Total course credits in all the semesters})}$

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** = $20 \times 6.9 + 22 \times 7.8 + 25 \times 5.6 + 26 \times 6.0$

= 7.57

M.Tech Communication Systems
COURSE STRUCTURE
Department of Electronics and Communication Engineering

S. No	Subject Code	I-Semester	L	T	P	C
1	A1CST101	Digital Communication Systems	3	1	0	4
2	A1CST102	Detection and Estimation Theory	3	1	0	4
3	A1CST103	Satellite Communications	3	1	0	4
4	A1CST104	Coding Theory and Techniques	3	1	0	4
Elective I						
5	A1CST201	Advanced Digital Signal Processing	3	0	0	3
	A1CST202	IoT and Applications				
	A1CST203	RF Systems and Circuits				
Elective II						
6	A1CST204	Radar Signal Processing	3	0	0	3
	A1CST205	Telecommunication Systems				
	A1CST206	Speech Processing				
	A1CSL101	Communication Systems Lab	0	0	3	2
			18	4	3	24

S. No	Subject Code	II-Semester	L	T	P	C
1	A1CST105	Optical Fiber Communications	3	1	0	4
2	A1CST106	Modeling and Simulation of Communication Systems	3	1	0	4
3	A1CST107	Wireless Communication Systems	3	1	0	4
4	A1CST108	Data Communication and Networks	3	1	0	4
Elective III						
5	A1CST207	GPS and Navigational Systems	3	0	0	3
	A1CST208	Wireless Sensor Networks				
	A1CST209	Multimedia Communication Systems				
Elective IV						
6	A1CST210	Cognitive Radio	3	0	0	3
	A1CST211	MIMO Communication Systems				
	A1CST212	Cryptography and Network Security				
7	A1CSL102	Modeling and Simulation of Communication Systems Lab	0	0	3	2
			18	4	3	24

Sl. No.	Subject Code	III – Semester	C
1	A1CST109	Research Methodologies	2
2	A1CSV401	Comprehensive Viva-Voce	2
3	A1CSR401	Self-Study (Pre-requisite)	2
4	A1CSS501	Seminar	2
5	A1CSP501	Project Phase – I	8
			16

Sl. No.	Subject Code	IV – Semester	C
1	A1CSP502	Project Phase – II	16
			16