

First Edition

ORDINANCES, CURRICULA *and* SYLLABI

Approved in First Meeting of Board of Management held on 14-3-2014, and
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Undergraduate Programs

for

Newly Admitted Students from Session 2014-2015

**MADAN MOHAN MALAVIYA
UNIVERSITY OF TECHNOLOGY
GORAKHPUR-273 010 (UP), INDIA**

First Edition

ORDINANCES, CURRICULA *and* SYLLABI

of

Undergraduate Programs

for

Newly Admitted Students from Session 2014-2015

Editor

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**MADAN MOHAN MALAVIYA UNIVERSITY OF TECHNOLOGY
GORAKHPUR-273 010 (UP), INDIA**

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DISCLAIMER

Extreme care has been taken in the compilation of Course Structure & Syllabi of different B.Tech. programmes. However, in case of any dispute regarding the credits of any subject, prerequisite subject given in the Course Structure, the prerequisite subjects and Credits given in the syllabi of respective subjects and as available with Academic Section of University will be final.

Therefore, Madan Mohan Malaviya University of Technology is not responsible for any typographical or inadvertent error in this publication

ABOUT THE UNIVERSITY

Madan Mohan Malaviya University of Technology, Gorakhpur erstwhile Madan Mohan Malaviya Engineering College, established in 1962 by Uttar Pradesh State Government, was reconstituted as non-affiliating technical University by UP Act No. 22 of 2013 of UP Government on December 1, 2013.

It is the only residential technological University of UP state and aims at making significant contribution towards technical manpower development, research and training. The University runs 6 Under Graduate and 14 Post Graduate level courses and Ph.D. in all emerging areas of Science, Engineering and Management. The University has good faculty members, well exposed to the cutting edge technologies in their respective areas.

Vision

To facilitate and promote studies, research, technology incubation, product innovation and extension work in Science, Technology and Management Education, and also to achieve excellence in higher technical education.

Mission

The distinctive Mission of the University is:

1. To serve society as a center of higher learning, providing long-term societal benefits through transmitting advanced knowledge, discovering new knowledge and functioning as an active working repository of organized knowledge.
2. To take leadership role by providing need based programs in engineering and technology, applied sciences, management, humanities, architecture, pharmacy, retail and fashion design, mass-communication, agriculture and other employable courses in emerging areas.
3. To promote compassionate care of the highest quality that translates new knowledge into meaningful improvements in technological outcomes through interdisciplinary collaboration, fiscal responsibility, support of diversity, a focus on quality and a culture of professionalism
4. To establish value creating networks and foster relationship with other leading institutes of higher learning and research, alumni and industries in order to provide significant contribution to national and international development;
5. To create an intellectually stimulating Infrastructure and conducive environment for technology research, scholarship, creativity, innovation, entrepreneurship and professional activity for service to community and economy.

Core Values

- Academic Integrity
- Accountability with transparency, respect and tolerance for views of all stakeholders
- Concern for social responsibilities and attention to all national/international issues needing technological intervention
- Recognition of creativity and intellectual excellence
- Spirit of learning, exploration, innovation and enterprise
- All round understanding and knowledge of human sciences

Bachelor of Technology Programmes

The intake for the following Bachelor of Technology programs is given below

S.N.	Branch	Intake
1.	Civil Engineering	120
2.	Computer Science & Engineering	120
3.	Electrical Engineering	120
4.	Electronics & Communication Engineering	120
5.	Mechanical Engineering	120
6.	Chemical Engineering with specialization in Sugar & Alcohol Technology	60

BACHELOR OF TECHNOLOGY ORDINANCES

MADAN MOHAN MALAVIYA UNIVERSITY OF TECHNOLOGY GORAKHPUR (UP) - INDIA

(Approved in First Meeting of Board of Management held on 14-3-2014)

First Ordinances

In pursuance of the provisions of section 31 of The Uttar Pradesh Madan Mohan Malaviya University of Technology Act, 2013, these are the first Ordinances for Madan Mohan Malaviya University of Technology, Gorakhpur:

The Uttar Pradesh Madan Mohan Malaviya University of Technology

FIRST ORDINANCES, 2014

Short title, commencement and Definitions Sec. 31 (1)

1. These Ordinances may be called the Madan Mohan Malaviya University of Technology, Gorakhpur. First Ordinances, 2014
2. They shall come into force at once.
3. Anything contained in ordinances, regulations and rules made there under in violation to provisions of Act shall be void and the provisions of Act shall prevail.
4. In these Ordinances, unless the context otherwise requires
 - (a) 'Act' means the Uttar Pradesh Madan Mohan Malaviya University of Technology Act, 2013 as amended from time to time.
 - (b) 'Section' means a section of the Act.
 - (c) 'University' means the Madan Mohan Malaviya University of Technology, Gorakhpur.
5. Words and expression used herein but not defined and defined in the Act shall have the same meaning as assigned to them in the Act.
6. **UNDER SECTION 31-1(a) - The Admission of students, the courses of Study and Fees therefore, the qualifications pertaining to the award of degrees, diploma, certificates and other academic distinctions, the conditions for the grant of fellowships and awards and the like**
 - (a) University may start the other Degree, Diploma, Certificate programmes and other academic distinctions as deemed necessary for fulfilling its objectives and the Ordinances for the same shall be as prescribed by Academic Council and Board of Management.
 - (b) Courses of Study shall be as prescribed by the Academic Council and approved by Board of Management.
 - (c) Fellowships and Awards shall be instituted as per the requirement with the approval of Vice Chancellor under intimation to the Academic Council and Board of Management
 - (d) Ordinances for Bachelor of Technology (B.Tech.), Master of Technology (M.Tech.), Master of Business Administration (M.B.A.), Master of Computer Applications (M.C.A.) and Doctor of Philosophy (Ph.D.) Degree programmes running in the University at the time of its reconstitution from Madan Mohan Malaviya Engineering College, Gorakhpur are

detailed ahead. Ordinances for other programmes as started from time to time shall be as prescribed by the Academic Council and Board of Management.

6.1 ORDINANCES FOR B.TECH. PROGRAMMES FROM ACADEMIC SESSION 2014-15

6.1.1 ADMISSION

- (a) University offers full time B.Tech. Degree Programme in various disciplines of Engineering and Technology.
- (b) Admission to B.Tech. first year in Semester I and lateral admission in B.Tech. second year in semester III (for B.Sc. graduates/Diploma Holder candidates only) will be made as per the rules prescribed by the University from time to time.
- (c) The reservation policy as prescribed by U.P. State Government or its directions regarding admission from time to time shall be adhered in the admission.
- (d) The selection will be based on the merit of the candidate in the admission process.
- (e) Admission on migration of a candidate from any other University to Madan Mohan Malaviya University of Technology is not permitted.
- (f) If, at any time after admission, it is found that a candidate has not fulfilled all the requirements stipulated in the offer of admission or has committed some fraudulent act or gross misconduct at any stage then the University reserves the right to revoke the admission of the candidate.

6.1.2 ELIGIBILITY FOR ADMISSION

6.1.2.1 For B. Tech. First Year

- (a) The candidate should have passed 10 + 2 examination with at least 45% marks (40% in case of candidate belonging to SC/ST category) and also with at least 50% marks (45% in case of candidate belonging to SC/ST category) in Mathematics, Physics and Chemistry each without grace.
- (b) Candidates who have passed Intermediate of U.P. Board or (10+2) standard from other recognized board with Agriculture securing minimum 50% marks or as prescribed by the University from time to time are eligible for admission to first year of 4 year B. Tech. (Agriculture Engineering).

6.1.2.2 For Admission to B. Tech. Second Year through Lateral Entry Scheme

- (a) Candidates who have passed 3/4 year Diploma with minimum 60% marks from institutions recognized by the U.P. Board of Technical Education or equivalent in any branch of Engineering/Technology except Agriculture Engineering or B.Sc. Graduates who have passed from any recognized University of the India securing minimum 60% marks with mathematics as a subject in B.Sc. and having passed 10+2 standard examination of U.P. Board or other recognized board securing minimum 50% marks in Physics & Mathematics as compulsory subjects in Intermediate of U.P. Board or from other recognized board or as prescribed by the University from time to time are eligible for admission to second year in any branch of Engineering/Technology except Agriculture Engineering.

- (b) Candidates who have passed 3/4 year Diploma with minimum 60% marks from institutions recognized by the U.P. Board of Technical Education in Agriculture Engineering are only eligible for admission to second year of Agriculture Engineering

6.1.2.3 Academic Council of the University has the power to repeal and modify the eligibility criteria for admission.

6.1.3 PROGRAMME DURATION

- (a) The duration of the B. Tech. programme for the candidates admitted in semester I will be four academic years (eight semesters).
- (b) The duration of the B. Tech. programme for the candidates admitted in semester III will be three academic years (six semesters).
- (c) The duration of each semester will generally be 90 working days or as prescribed by the University from time to time.
- (d) There are two regular semesters in a year. The semester that begins in July (*July to November/December*) is known as the *Odd Semester* and the semester that begins in December/January (*December/January to May*) is known as the *Even Semester*. Academic session may be scheduled in the summer season as well.
- (e) The maximum time allowed for completion of the programme for the candidates admitted in semester I/semester III (for diploma holders/B.Sc. Graduates) shall be six/five years respectively, beyond which the admission of the candidate shall be automatically cancelled. The candidate will not be allowed to continue in the subsequent years of the programme, if the sufficient time period is not available for its completion in stipulated maximum duration.
- (f) The student may complete the programme at a slower pace by taking more time but not more than prescribed maximum duration as per the provision of **Clause 6.1.9**.

6.1.4 CHANGE OF BRANCH

- 6.1.4.1** Change of Branch amongst the students having similar eligibility qualifications may be allowed in first year, after the last date of admission in semester I of B.Tech. on the basis of merit in the admission test of respective session on vacant seats subject to **Clause 6.1.4.2**.
- 6.1.4.2** After change of branch the number of students in that branch should not fall below the sanctioned intake by more than ten percent and should not go above the sanctioned intake. For this purpose, the intake refers to the total sanctioned intake in the class inclusive of NRI students and exclusive of fail students in the class & admissions granted on supernumerary basis such as Government nominee students etc. The branch change is not applicable to NRI students and the admissions granted on supernumerary basis such as Government nominee students, etc.

6.1.5 CURRICULUM STRUCTURE OF THE PROGRAMME

- 6.1.5.1** The University follows a specialized credit-based semester system. Every programme will have a specific curriculum for all semesters (semester I to semester VIII) with a syllabi consisting of theory, practical, project work, etc., as given below and shall be in accordance with the prescribed syllabus. The courses shall be covered through lectures, tutorials, laboratory classes, seminar, industrial and practical training, project, tours etc. as prescribed by the University.

Undergraduate Core Courses (UCC)

- (i) Basic Sciences & Maths (BSM)
- (ii) Engineering Fundamentals (EF)
- (iii) Departmental Core (DC)
- (iv) Management (M)
- (v) Humanities & Social Science Core (HSSC)
- (vi) Project (P)

Undergraduate Programme Electives (UPE)

- (i) Programme Electives (PE)
- (ii) Open Elective (OE)
- (iii) Humanities & Social Science Elective (HSSE)

Audit Courses

- (i) Audit Course (AC)
- (ii) Seminar
- (iii) Industrial/Practical Training (IPT)

Every department will prescribe Seminar as audit requirement for the B. Tech. Degree. Seminar is a course wherein under the guidance of a faculty member a student is expected to do an in-depth study in a specialized area by doing survey of published technical literature, understanding different aspects of the selected topic and arriving at a status report. While doing a seminar, the student is expected to critically analyze works of various authors/researchers, learn the investigation methodologies, study concepts, techniques and the results presented in these papers, and present a seminar report. It is mandatory to give a seminar presentation of stipulated duration before a panel constituted for the purpose by the department.

The duration for industrial/practical training of project based type preferably will be of 60 to 75 days duration after semester VI which could be under Cooperative Education Model (CO-OP Model). If student could not be assigned for 60 to 75 days project based training in industry, he/she has to complete 30 days industrial training along with 30 to 45 days society/ commercial/industrial problem related minor project under the supervision of designated faculty supervisor from his/her department of University. The student will submit a report on the industrial/practical

training and/or minor project report to the Head of Department for evaluation through a committee of faculty members constituted by the Head of Department.

Each course is assigned a certain number of credits as follows. Few audit courses as per demand and requirement of students shall be offered.

- (a) 1 credit per lecture hour per week
- (b) 1 credit per tutorial hour per week
- (c) 1 credit per 2 hours laboratory/practice/project per week.

The curriculum for any B.Tech. Programme of study has been designed with total minimum credits of 180 and total minimum 20 credits of audit courses for those admitted in 1st year of B.Tech. Program. The minimum credit requirement will be 130 and total minimum 14 credits of audit courses for lateral entry in II year of B. Tech.

6.1.5.2 Overall Credit Structure

Credit Courses			
Undergraduate Core Courses (UCC)		Undergraduate Programme Electives (UPE)	
Category	Min. Credits	Category	Min. Credits
Basic Sciences & Maths (BSM)	36	Program Electives (PE)	16
Engineering Fundamentals (EF)	24	Open Electives (OE) (Other Departments)	3
Departmental Core (DC)	78	Humanities & Social Science Elective (HSSE)	3
Management (M)	6		
Humanities & Social Science Core (HSSC)	4		
Project (P)	10		
Total	158	Total	22
Grand Total	180 (minimum)		
Audit Courses			
Audit Course (AC) (Min. 3 credits audit subjects from other departments will be offered during Semester I-V)			16
Seminar			3
Industrial/Practical Training (IPT)			1
Total	20 (minimum)		

Each student has to register for a set of courses as offered by his/her department in each semester by paying the stipulated fees, which include tuition fee, examination fee, enrolment fee, development fee, insurance fee, degree fee, alumni fee, internet charges, hostel fee, mess advance, miscellaneous user charges etc. as applicable from time to time.

6.1.5.3 NCC/NSS/NSO Training

One of the three activities, National Cadet Corps (NCC) or National Sports Organization (NSO) or National Social Service (NSS) training is compulsory for all the Undergraduate students. A student who has not completed the NCC/NSO/NSS requirements in first four semesters will not be permitted to continue the B.Tech. Degree Programme. These are normally conducted during evenings of week days or Sunday and are designed for character building and to sensitize the students towards social/national issues. These activities carry no credits and a student should satisfactorily complete the prescribed NCC/NSO/NSS programme by securing 'S' grade as prescribed in **Clause 6.1.6.1**.

6.1.5.4 Other Activities

The other general proficiency activities will include Games/Sports/Cultural/Literary/ Practical/Field Activities/Industrial visit/Extension Lectures. It will be carried out beyond class hours. Students may be taken on conducted tours through industrial works arranged by the department to expose them to various technologies employed in the industry. The curriculum will also include other curricular, co-curricular activities and extra curricular activities as may be prescribed by the University from time to time. The general proficiency remark as per **Clause 6.1.6.2(h)** shall appear in the Grade Card of the student in each semester.

6.1.6 GRADING SYSTEM AND ASSESSMENT PROCEDURE

6.1.6.1 Grading System

The academic performance evaluation of a student will be according to a Letter Grading system based on class performance of students. The Letter Grades and the corresponding Grade Points are as follows. Grades falling between A(+) and D in different subjects are called pass grades, while the students securing F grade will be treated fail in the subject and shall have to appear in re-major examination or repeat the semester as per provision of **Clause 6.1.7 & 6.1.9**, respectively.

Letter Grade	Grade Points	Description
A(+)	10	Outstanding
A	9	Excellent
B(+)	8	Very Good
B	7	Good
C	6	Average
D	5	Below Average
F	0	Fail
U	-	Short Attendance
W	-	Withdrawal
I	-	Incomplete
AP	-	Audit Pass
AF	-	Audit Fail
S	-	Satisfactory Completion
Z	-	Course Continuation

Grade Award System

Grade	Grade Points	Marks (in %)
A(+)	10	90-100
A	9	80-89
B(+)	8	70-79
B	7	60-69
C	6	50-59
D	5	40-49
F	0	<40

6.1.6.2 Tests & Examinations

The theory and practical examinations shall comprise of continuous assessment throughout the semester in all subjects and Major examination conducted by University at the end of the semester (November/December or April/May). The assessment of a course will be done on absolute marks basis. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain points, will be awarded as per the range of total marks (out of 100) obtained by the candidate, as detailed below. The rounding off shall be done on the higher side.

(a) Distribution of Marks for Theory based Subject

S. N.	Assessment Basis		Duration	Marks
1.	Continuous Evaluation	Minor Test-I	1 Hour	15
2.		Minor Test-II	1 Hour	15
3.		Minor Test-III	1 Hour	15
4.		Tutorial/Assignment/Quiz/ Attendance	-	15
5.	Major Examination		3 Hours	40

(b) Distribution of Marks for Practical based Subject

S. N.	Assessment Basis		Duration	Marks
1.	Continuou s Evaluatio n	Viva Voce-I	-	10
2.		Viva Voce-II	-	10
3.		Viva Voce-III	-	10
4.		Practical Work/Attendance/Record/ Viva Voce	-	30
5.	Major Examination		3 Hours	40

(c) **Distribution of Marks for Theory & Practical based Subject**

S. N.	Assessment Basis	Duration	Marks
1.	Continuous Evaluation	Minor Test-I	10
2.		Minor Test-II	10
3.		Minor test-III	10
4.		Tutorial/Attendance/Home Assignment/Quiz	10
5.	Practical Work/Record/Viva Voce/ Practical Examination		20
6.	Major Theory Examination		40

Note: The syllabus for Minor Test-I, Minor Test-II and Minor Test-III will be 25% each in a successive manner. However, the Major examination will be conducted from the entire syllabus of the subject.

Students, who are absent in Minor Test-I/Minor Test-II/Minor Test-III on genuine grounds such as admission to hospital or representing the University with prior permission and reporting to the Head of Department concerned within two days of rejoining, may be permitted for only one special test with the permission of the Head of Department concerned. The special test will be conducted after the Minor Test-III. The coverage for the special test shall be the combined syllabus of Minor Test-I/Minor Test-II/Minor Test-III of the subject.

(d) **Distribution of Marks for Project Based Industrial/Practical Training**

For evaluation of industrial/practical training, the respective industry shall nominate an In-charge/Supervisor from its organization under intimation to the University. For evaluation by the respective University department, Head of Department shall get it done by a panel of teachers. The three month industrial training of project based type could be under Cooperative Education Model (CO-OP Model)

60 to 75 days Industrial/Practical Training

There will be **two** parts in the evaluation process.

Part A:	Marks Awarded by the respective Industrial/Practical training organization	: 40
Part B :	Marks Awarded by the Department/Centre for Industrial/ Practical training	: 60

S. N.	Assessment Basis			Marks
1.	Part A	Technical Quality of the work		20
		Internal Marks	Attendance	5
			Discipline	5
			Involvement	5
			Interest of the student	5
2.	Part B	Project Work		20
		Viva Voce & Presentation		30
		Project Report		10

30 days Industrial Training and 30 to 45 days Minor Project in University Department

There will be **three** parts in the evaluation process.

Part A :	Marks Awarded by the respective Industrial/Practical training organization	: 20
Part B :	Marks Awarded by the Department/Centre for Industrial/Practical training	: 30
Part C :	Marks Awarded for Minor Project	: 50

S. N.	Assessment Basis			Marks
1.	Part A	Technical Quality of the work		10
		Internal Marks	Attendance	3
			Discipline	2
			Involvement	3
			Interest of the student	2
2.	Part B	Project Work/Learning in Industry		10
		Viva Voce & Presentation		15
		Project Report		5
3.	Part C	Relevance, Scope and Dimension of Project		10
		Application Methodology		10
		Analysis, Result and Report		10
		Final Product		20

(e) Distribution of Marks for Seminar

S. N.	Assessment Basis	Marks
1.	Quality of Material	30
2.	Quality of Presentation	30
3.	Quality & Extent of Response of Questions Asked	20
4.	Participation in Other Seminars (Attendance)	20

Any student securing less than 40 marks ('F' grade) in seminar shall have to repeat the seminar in the same semester. This will be limited to only one chance.

(f) Distribution of Marks for Project

In 7th Semester

S. N.	Assessment Basis		Duration	Marks
1.	Continuous Evaluation	Viva Voce-I/Presentation	-	15
2.		Viva Voce-II/ Presentation	-	15
3.		Viva Voce-III/ Presentation	-	15
4.		Preliminary Project Report, Effort and Regularity (awarded by supervisor)	-	25
5.	End Semester Presentation		1 Hour	30

In 8th Semester

S. N.	Assessment Basis		Duration	Marks
1.	Continuous Evaluation	Viva Voce-I/Presentation	-	10
2.		Viva Voce-II/ Presentation	-	10
3.		Viva Voce-III/ Presentation	-	10
4.		Final Project Report & Contribution Made to Literary World (awarded by supervisor)	-	30
5.	Major Examination		1Hour	40

Students are required to begin project work after the end of B.Tech. III year Major Examination. A project grade is awarded in both the semesters on the basis of the prescribed evaluation process. The project may be related to a theoretical modeling, simulation and analysis, experimental investigation, a proto-type design, product design and development, a new correlation and analysis of data, fabrication and setup of new equipment etc. preferably useful for the society/industry.

(g) Audit Courses

S. N.	Audit Status	Marks Obtained
1.	Audit Pass (AP)	50% and Above
2.	Audit Fail (AF)	Below 50% , Candidate has to repeat the course

(h) Distribution of Marks for General Proficiency

General proficiency remark will be based on the cumulative percentages of marks scored by the student during each semester through various components as detailed below. Detailed distribution for award of marks in each component and/or their weightage may be as prescribed by the University from time to time.

S. N.	Assessment	Weightage of Marks
1.	Discipline/Behaviour of Students Inside/Outside University campus	40%
2.	Games/Sports/Cultural/Literary Events	40%
3.	Academic & Research/Special Lecture/Extra-curricular Events & Industrial Visits	20%

S. N.	Marks Secured	Remark
1.	80-100%	Excellent
2.	60-79%	Very Good
3.	40-59%	Good
4.	20-39%	Satisfactory
5.	<20%	Average

6.1.7 RE-MAJOR EXAMINATION

Student with F grade in any subject will be required to appear in the re-major examination along with regular semester examinations in the forthcoming respective semester(s) in the same maximum marks as that of the previous major examination, provided she/he has scored at least 40% of the total marks allocated for continuous evaluation in the concerned subject. However, special re-major subject examination for the both odd & even semester subjects may be arranged annually in the month of June for the students who have already appeared in VI or VIII semester major examinations provided they could not improve F grade in respective subjects in regular semester examinations.

6.1.8 EVALUATION OF PERFORMANCE

The performance of a student will be evaluated in terms of two indices, viz. the Semester Grade Point Average (SGPA) which is the Grade Point Average for a semester, and Cumulative Grade Point Average (CGPA) which is the Grade Point Average for all the completed semesters at any point in time considered cumulatively.

Points Secured in the Semester = \sum (Course Credits \times Grade Point) for courses in which A(+) to D grade has been obtained

Total Credits Registered in the Semester Excluding Audit Courses = \sum (Course credits) for courses in which A(+) to D grade has been obtained

$$\text{SGPA} = \frac{\text{Points secured in the semester in all passed courses (A(+) to D Grade)}}{\text{Total Credits registered in the semester excluding audit courses}}$$

The CGPA is calculated on the basis of all pass grades, except audit courses and courses in which S or Z grade is awarded/secured in all completed semesters.

Cumulative Points secured in All Passed Courses = \sum (Course Credits \times Grade Point) for courses in which A(+) to D grade is obtained

Cumulative Total Credits Excluding Audit Courses = \sum (Course credits) for courses in which A(+) to D grade is obtained

$$\text{CGPA} = \frac{\text{Cumulative Points secured in all passed courses (A(+) to D Grade)}}{\text{Cumulative total credits excluding audits courses}}$$

An example of these calculations is given below.

ODD Semester

Course No.	Course Credits	Grade Awarded	Total Credits	Grade Point	Points Secured
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
XX101	5	B	5	7	35
XX102	4	C	4	6	24
XX103	4	A(+)	4	10	40
XX104	2	B(+)	2	8	16
XX106	4	D	4	5	20
XX107	-	S	-	-	-
XX108 (AC)	3	AP	-	-	-
Total	19		19		135

Credits registered in the semester excluding audit courses (total of column 2) = 19
 Total credits in the semester excluding audit courses (total of column 4) = 19
 Points secured in this semester (total of column 6 for all passed courses) = 135

$$\text{SGPA} = \frac{\text{Points secured in the semester in all passed courses (A(+) to D Grade)}}{\text{Total Credits registered in the semester excluding audit courses}} = \frac{135}{19} = 7.105$$

$$\text{CGPA} = \frac{\text{Cumulative Points secured in all passed courses (A(+) to D Grade)}}{\text{Cumulative total credits ,excluding audits courses}} = \frac{135}{19} = 7.105$$

Semester performance: Total credits (E.C.) = 19 SGPA = 7.105
 Cumulative performance: Total credits (E.C.) = 19 CGPA = 7.105

EVEN Semester

Course No.	Course Credits	Grade Awarded	Total Credits	Grade Point	Points Secured
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
XX151	5	B(+)	5	8	40
XX152	4	A	4	9	36
XX153	4	F	-	0	0
XX154	2	B	2	7	14
XX155	4	C	4	6	24
XX156	4	A(+)	4	10	40
XX157	-	S	-	-	-
XX158 (AC)	3	AF	-	-	-
Total	23		19		154

Credits registered in the semester excluding audit courses (total of column 2) = 23
Total credits in the semester excluding audit courses (total of column 4) = 19
Points secured in this semester (total of column 6 for all passed courses) = 154
Cumulative points in all passed courses = 135 (past semesters) + 154 (this sem.) = 289
Cumulative total credits = 19 (past semesters) + 19 (this sem.) = 38

$$SGPA = \frac{\text{Points secured in the semester in all passed courses (A(+) to D Grade)}}{\text{Total Credits registered in the semester excluding audit courses}} = \frac{154}{19} = 8.105$$

$$CGPA = \frac{\text{Cumulative Points secured in all passed courses (A(+) to D Grade)}}{\text{Cumulative total credits, excluding audits courses}} = \frac{135+154}{19+19} = 7.605$$

Semester performance: Total credits (E.C.) = 19 SGPA = 8.105
Cumulative performance: Total credits (E.C.) = 38 CGPA = 7.605

6.1.9. ACADEMIC CRITERIA FOR CONTINUATION

6.1.9.1 A minimum 5.0 CGPA is required in order to qualify for continuation of registration at any stage and award of the degree at the end of 8th semester.

6.1.9.2 A student must register a minimum of 18 credits in a semester which shall essentially include the pre-requisite subjects. It allows the students to progress at an optimum pace suited to individual ability and convenience, subject to fulfilling minimum requirement for continuation in stipulated duration.

(a) For B.Tech. 1st Year Students

They must earn 50% of total Credits (i.e. min. 23 credits) in odd and even semester of an academic session for promotion to 2nd Year in all branches failing which they have to re-register & repeat complete 1st Year.

(b) **For B.Tech. 2nd Year Students**

They must earn 90% of total Credits (i.e. min. 45 credits) in the 1st year and 50% of total (i.e. min. 23 credits) Credits in odd and even semester of an academic session of 2nd year for promotion to 3rd year failing which they have to re-register & repeat complete 2nd Year or earn the requisite credits through re-major examination in respective year as case may be.

(c) **For B.Tech. 3rd Year Students**

They must earn 90% of total Credits in the 2nd year and 50% Credit in the 3rd year for promotion to 4th year failing which they have to re-register & repeat complete 3rd Year or earn the requisite credits through re-major examination in respective year as case may be.

6.1.9.3 A student is considered to pass in a particular subject if he/she secures A (+) to D grade in it and the marks obtained are 40% or more in continuous evaluation of the subject. In case of the marks in continuous evaluation of any subject of a semester being less than 40% then the student has to repeat that subject completely and continue as per **Clause 6.1.9.2**.

6.1.10 AWARD OF DIVISION, RANK AND MEDALS

6.1.10.1 A candidate who satisfies the course requirements for all semesters and who passes all the examinations prescribed for all the eight semesters (six semesters for lateral entry candidates) within a maximum period of six years (five years for lateral entry candidates) reckoned from the commencement of the first semester/third semester to which the candidate was admitted shall be declared to have qualified for the award of degree subject to the fulfillment of requirements of **Clause 6.1.9.1**. Award of the Division in the degree shall be governed by the provisions given below.

- (a) A candidate who qualifies for the award of the degree securing D or above grades in all subjects pertaining to all semesters in his/her first attempt within eight consecutive semesters (four academic years)/six consecutive semesters (three academic years) as applicable, and in addition secures a CGPA of 7.5 and above for the semesters I to VIII shall be declared to have passed the examination in **FIRST DIVISION WITH HONOURS**.
- (b) A candidate who qualifies for the award of the degree by securing D or above grades in all subjects of all the semesters within a maximum period of eight semesters/six semesters as applicable, after his/her commencement of study in the 1st/3rd semester and in addition secures CGPA not less than 6.5 shall be declared to have passed the examination in **FIRST DIVISION**.
- (c) All other candidates who qualify for the award of degree by securing D or above grades in all subjects of all semesters within a maximum period of eight semesters/six semesters as applicable, after his/her commencement of study in

the 1st/3rd semester shall be declared to have passed the examination in **SECOND DIVISION**.

6.1.10.2 For the Award of **Ranks** for each branch of study and overall for the programme, the CGPA secured in all semesters shall be considered and it is mandatory that such candidate should have passed all the subjects by securing D or above grades in all the semesters in the first attempt in 4/3 year duration of programme as applicable. Rank certificates in the form of “Certificate of Merit” would be issued to top three students as 1st, 2nd & 3rd rank in each branch of study and to one student as “University topper of B.Tech.” on the overall basis in the programme selected on the basis of CGPA in particular academic session.

6.1.10.3 Following **Medals** will be awarded annually by the University to the passing out students identified as prescribed in **Clause 6.1.10.2**.

- (a) **Chancellor Gold Medal**-This gold medal is awarded to the “University topper of B.Tech.” i.e. the passing out B.Tech. students who is adjudged to be the academically best, securing the highest CGPA at the end of the eighth semester in first attempt for B.Tech. Degree programme amongst the graduating students of all B.Tech. Courses as per the **Clause 6.1.10.2**.
- (b) **Vice-Chancellor Gold Medal**-The Gold Medal is awarded to the student who secures the highest CGPA at the end of semester VIII in first attempt, i.e. 1st Rank holder for each branch of the B. Tech. programme.
- (c) **Vice-Chancellor Silver Medal**-The Silver Medal is awarded to the student who secures the second highest CGPA at the end of semester VIII in first attempt i.e. 2nd Rank holder for each of the B.Tech. Course.

6.1.11 ATTENDANCE

6.1.11.1 Every faculty member handling a course will record attendance from the scheduled date of commencement of classes upto 3 calendar days before the last instructional day in the semester as per academic calendar. The cumulative percentages of attendance will be recorded in the office of the Dean handling academic affairs of such students of the University. The attendance remark in the grade card will be shown based on the cumulative percentages of attendance calculated for the period between the date of commencement of classes and the last date for recording the attendance in all the registered subjects (credits and audit courses) in the semester as per the following table. Cumulative attendance remark shall appear in the Grade Card in each semester

S. N.	Attendance	Remark
1.	90-100%	Very Good
2.	80-89%	Good
3.	75-79%	Satisfactory
4.	<75%	Poor

6.1.11.2 A student is expected to attend all classes, laboratory, seminar, project, tour and tutorial sessions that are formally scheduled and a formal attendance will be taken in each such session. It is recognized that due to illness and other emergent reasons there may be instances when a student is unable to join the scheduled academic activities; a leave application duly recommended and forwarded by the student's Head of Department should be submitted in such cases at the earliest to office of the Dean. Such absence can not be more than 25% of the total classes held in a subject which needs to be got condoned as prescribed in **Clause 6.1.11.3**.

6.1.11.3 For the students who have less than 100% but more than 75% attendance in a semester if their medical leave is considered for condonation of attendance then they are eligible for seeking the privilege of upgradation of the attendance remark.

6.1.11.4 A student, who has a cumulative attendance lower than 75% in the semester whatever, may be the reason for the shortfall in attendance, will not be permitted to appear in the University Major Examinations. Such candidates will have to repeat their study in the same semester in coming academic session and his/her registration for that semester will be treated as cancelled, and she/he shall be awarded 'U' in that semester.

6.1.12 REGISTRATION AND ENROLMENT

6.1.12.1 The University follows a specialized credit based semester system, therefore registration at the beginning of each semester on the prescribed dates announced in the Academic Calendar, is mandatory for every student till she/he completes her/his programme. If a student does not register in a particular semester, her/his studentship is liable to be cancelled. Without registration, any academic activity (course/seminar/project etc) undergone by a student will not be counted towards the fulfillment of requirements of her/his degree.

6.1.12.2 Every student admitted shall have his/her unique registration number. The registration number shall have ten digits. First four digit shall indicate year of admission; next two shall indicate his/her branch of study, next one shall indicate his/her level (Undergraduate, Postgraduate, Ph.D., etc.) and last three digits shall indicate his/her serial number/roll number or as prescribed from time to time. Every student shall be identified by this registration number through out his stay in the University.

6.1.12.3 Registration should be carried out by the student himself/herself on stipulated date, but not later than the first week of each semester as late registration upon payment of

prescribed late fees as decided from time to time. In any case, registration must be completed before the prescribed last date for registration, failing which he/she will not be registered in that particular session. Such students will have to register in coming next academic session if it is permissible under **Clause 6.1.3** else his/her studentship is liable to be cancelled except for those availing provision of **Clause 6.1.13**.

6.1.12.4 Students having any kind of outstanding dues to the University or hostel shall be permitted to register only after clearing the outstanding dues.

6.1.12.5 In-absentia registration may be allowed only in rare cases at the discretion of the Vice-Chancellor of the University in case of serious illness/natural calamities/ unavoidable circumstances upon the recommendation of Dean.

6.1.13 TEMPORARY DISCONTINUATION OF COURSE

6.1.13.1 Discontinuation of the course will not be allowed to B.Tech. first year students. However, if a student of other years wishes to temporarily discontinue the course for valid reasons, she/he shall apply through the Head of Department in advance and obtain a written order from the University permitting discontinuance.

6.1.13.2 A candidate after temporary discontinuance may rejoin the course only at the commencement of the semester at which she/he discontinued, provided she/he pays the prescribed fees to the University for the discontinuation period also. The total period of completion of the course reckoned from the commencement of the first semester to which the candidate was admitted shall not in any case exceed six academic years (five academic years for lateral entry), including of the period of discontinuance.

6.1.14 UNFAIR MEANS

Cases of unfair means shall be dealt as per the rules of the University.

6.1.15 GENERAL ELIGIBILITY FOR AWARD OF B. TECH. DEGREE

A student shall be declared to be eligible for award of the B.Tech. Degree if he/she has

- (a) registered and successfully completed all the required core/elective/audit courses and projects and other requirements of programme as prescribed in this Ordinance or as prescribed by the University from time to time;
- (b) successfully acquired the minimum required credits/audits as specified in the curriculum corresponding to the branch of his/her study within the stipulated time as prescribed in this Ordinance or as prescribed by the University from time to time;
- (c) earned the specified credits in all the categories of subjects;
- (d) completed the NCC/NSO/NSS requirements;
- (e) has no dues to the University, Hostels, Libraries, NCC/NSS/NSO etc., and
- (f) no disciplinary action is pending against him/her.

6.1.16 POWER TO MODIFY

Notwithstanding all that has been stated above, the Academic Council has the right to modify partly or completely the provisions of above ordinances with the approval of Board of Management. Under extreme exceptional circumstances arising out of certain inconsistency in the ordinance or otherwise, the Vice-Chancellor can take suitable decision in deference to the laid down provisions provided standard of evaluation is not compromised and the same shall be reported to ensuing Academic Council/Board of Management with suitable justification. Such actions of Vice-Chancellor shall not be treated as precedence under any circumstances.

6.1.17 CURRICULUM FOR B.TECH. PROGRAMMES

The curriculum for any B.Tech. Programme of study has been designed with total minimum credits of 180 and total minimum 20 credits of audit courses for those admitted in 1st year of B. Tech. Programme. The minimum credit requirement will be 130 and total minimum 16 credits of audit courses for lateral entry in II year of B.Tech. Programme. A student must register a minimum of 18 credits in each semester.

Freshman Year, Semester I

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM			3	1	0/2	4/5
2.	BSM			3	1	0/2	4/5
3.	EF			3	1	2	5
4.	EF			3	1	0/2	4/5
5.	HSSC			3	1	0/2	4/5
6.	EF			0	0	4	2
7.	AC						-
			Total	15	5	6/14	23/27

Freshman Year, Semester II

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM			3	1	2	5
2.	BSM			3	1	0/2	4/5
3.	BSM			3	1	0/2	4/5
4.	EF			3	1	0/2	4/5
5.	HSSE			2/3	1	0	3/4
6.	EF			0	0	4	2
7.	AC						-
			Total	14/15	5	6/12	22/26

Sophomore Year, Semester III

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM			3	1	0/2	4/5
2.	BSM			3	1	0/2	4/5
3.	EF			3	1	0/2	4/5
4.	DC			2/3	1	0/2	3/5
5.	DC			3	1	2	5
6.	EF			0	0	4	2
7.	AC						-
			Total	14/15	5	6/14	22/27

Sophomore Year, Semester IV

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM			3	0/1	0/2	3/5
2.	M			2/3	1	0	3/4
3.	DC			3	1	2	5
4.	DC			3	1	0/2	4/5
5.	DC			3	1	0/2	4/5
6.	EF			0	0	4	2
7.	AC						-
			Total	14/15	4/5	6/12	21/26

Junior Year, Semester V

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	M			2/3	1	0	3/4
2.	DC			3	1	0/2	4/5
3.	DC			3	1	0/2	4/5
4.	DC			3	1	2	5
5.	DC			3	1	2	5
6.	AC						
			Total	14/15	5	4/8	21/24

Junior Year, Semester VI

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	DC			3	1	0/2	4/5
2.	DC			3	1	0/2	4/5
3.	DC			3	1	0/2	4/5
4.	DC			3	1	2	5
5.	DC			3	1	2	5
6.	AC		Seminar				-
			Total	15	5	4/10	22/25

Senior Year, Semester VII

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	DC			3	1	2	5
2.	DC			3	1	0/2	4/5
3.	PE1			3	1	0/2	4/5
4.	PE2			3	1	0	4
5.	P		Project Part-I	0	0	10	5
6.	AC		Industrial/ Practical Training				-
			Total	12	4	12/16	22/24

Senior Year, Semester VIII

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	DC			3	1	2	5
2.	PE3			3	1	0/2	4/5
3.	PE4			3	1	0	4
4.	OE			3	1	0	4
5.	P		Project Part-II	0	0	10	5
			Total	12	4	12/14	22/23