

MAHARISHI MARKANDESHWAR (DEEMED TO BE UNIVERSITY)
MULLANA (AMBALA) – 133207, HARYANA



Programmes with Choice-Based Credit System (CBCS)*

* Since all supporting documents for this metric exceeds the upload limit of 5Mb, we are providing samples as shown below. If required, we will provide all/any supporting documents.

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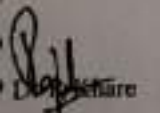
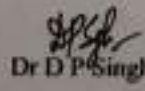




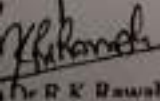
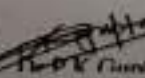
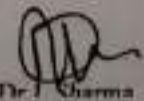
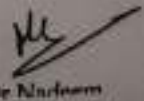

BSc Medical/Non-Medical/Chemistry Honours Scheme BOS 27th Aug. 2018.
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Maharishi Markandeshwar (Deemed to be University)
Mullana-133207(Ambala), Haryana (India)
 (Established under Section 3 of the UGC Act, 1956 vide Notification No. F.9-65/2006-U.3 (A) dated 12-6-2007)
 WEBSITE: www.mmumullana.org

M. M. ENGINEERING COLLEGE, CHEMISTRY DEPARTMENT
 (An ISO 9001-2002 Certified Institute) E-Mail: hod.chemistry@mmumullana.org, Tel. No.: 01731-304229

**Name of the Discipline: B.Sc. (Medical)-General (CBCS)
 (CHEMISTRY, BOTANY AND ZOOLOGY)-2017 onward**

Sem.	Core Course (Credit)(Hours)	Ability Enhancement Compulsory Course (AECC) (2)	Ability Enhancement Elective Course (AEEC) (2) (Skilled Based)	Elective Discipline Specific (DSE) (4)
I	Chemistry-I(4L+4P=8) (8hrs)	(English) Communication (2)(2 hrs)		
	Botany-I (4L+4P=8) (8hrs)			
	Zoology-I(6+2=8)(8hrs)			
	General= Total Credit =20,		Teaching hrs=26	
II	Chemistry-II (4L+4P=8) (8hrs)	EVS(2)(2hrs)		
	Botany-II(4L+4P=8) (8hrs)			
	Zoology-II(6+2=8)(8hrs)			
	General= Total Credit =20,		Teaching hrs=26	
III	Chemistry-III(4L+4P=8) (8hrs)		SEC- I (2)(2 hrs) (IT Skills for Chemists)	
	Botany-III(4L+4P=8) (8hrs)			
	Zoology-III(6+2=8)(8hrs)			
	General= Total Credit =20,		Teaching hrs=26	
IV	Chemistry-IV(4L+4P=8) (8hrs)		SEC-II(2)(2 hrs) (Chemistry)	
	Botany-IV(4L+4P=8) (8hrs)			
	Zoology-IV(6+2=8)(8hrs)			
	General= Total Credit =20,		Teaching hrs=26	
V			SEC-III(2)(2 hrs) (Botany)	DSE-1(4L+4P=8) (8hrs)(Chemistry-V) DSE-2(4L+4P=8) (8hrs) (Botany-V) DSE-3(4L+4P=8) (8hrs) (Zoology-V)
	General= Total Credit =20,		Teaching hrs=26	
VI			SEC-IV(2)(2 hrs) (Zoology)	DSE-4(4L+4P=8) (8hrs) (Chemistry-VI) DSE-5(4L+4P=8) (8hrs) (Botany-VI) DSE-6(4L+4P=8) (8hrs) (Zoology-VI)
	General= Total Credit =20,		Teaching hrs=26	

Total Credits= 120

 Dr. P. K. Rawal
  Dr. D. P. Singh
  Mr. Keemat Jain
  Dr. A. K. Gupta
  Dr. P. Dogra
  Dr. R. C. Saini
 Dr. R. K. Rawal
  Dr. V. Prakash
  Dr. J. Sharma
  Dr. N. D. Singh
  Dr. P. Saini



BSc Medical/Non-Medical/Chemistry Honours Scheme BOS 27th Aug. 2018,
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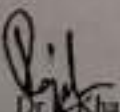
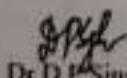


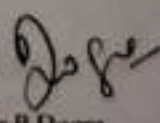
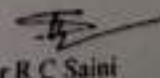
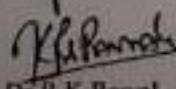
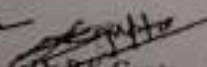

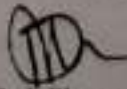
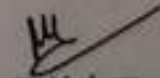

SCHEME B.Sc. (Medical: July 2018 onwards)
CHOICE BASED CREDIT SYSTEM

FIRST SEMESTER

S.N o.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	Core	BC-111	Chemistry-I	4	-	-	4	100(60+40)
2	Core	BC-112	Chemistry Practical-I	-	4	-	2	50(20+30)
3	Core	BB-111	Botany-I	4	-	-	4	100(60+40)
4	Core	BB-112	Botany Practical-I	-	4	-	2	50(20+30)
5	Core	BZ-111	Zoology-I	4	-	-	4	100(60+40)
6	Core	BZ-112	Zoology Practical-I	-	4	-	2	50(20+30)
7	AECC	BE-111	English Communication	2	-	-	2	50(30+20)
		Total		14	12	-	20	500

SECOND SEMESTER

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	Core	BC-121	Chemistry-II	4	-	-	4	100(60+40)
2	Core	BC-122	Chemistry Practical-II	-	4	-	2	50(20+30)
3	Core	BB-121	Botany-II	4	-	-	4	100(60+40)
4	Core	BB-122	Botany Practical-II	-	4	-	2	50(20+30)
5	Core	BZ-121	Zoology-II	4	-	-	4	100(60+40)
6	Core	BZ-122	Zoology Practical-II	-	4	-	2	50(20+30)
7	AECC	ES-101	Environmental Science	2	-	-	2	100(60+40)
		Total		14	12	-	20	550

 Dr. N. Khare
  Dr. D.P. Singh
  Mr. Keemat Jatin
  Dr. A.K. Gupta
  Dr. P. Dogra
  Dr. R.C. Saini
 Dr. R.K. Raval
 Dr. K. Gupta
 Dr. V. Prakash
 Dr. J. Sharma
 Dr. Narain
 Dr. P. Chahi



BSc Medical/Non-Medical/Chemistry Honours Scheme BOS 27th Aug. 2018,

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Maharishi Markandeshwar (Deemed to be University)

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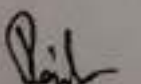
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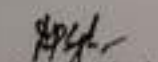
THIRD SEMESTER (2017-20 & 2018 onwards)

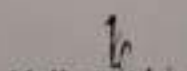
S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	Core	BC-231	Chemistry-III	4	-	-	4	100(60+40)
2	Core	BC-232	Chemistry Practical-III	-	4	-	2	50(20+30)
3	Core	BB-231	Botany-III	4	-	-	4	100(60+40)
4	Core	BB-232	Botany Practical-III	-	4	-	2	50(20+30)
5	Core	BZ-231	Zoology-III	4	-	-	4	100(60+40)
6	Core	BZ-232	Zoology Practical-III	-	4	-	2	50(20+30)
7	SEC	BIT-231	IT Skills for chemists	2	-	-	2	50(30+20)
		Total		14	12	-	20	500

FOURTH SEMESTER(2017-20 & 2018 onwards)

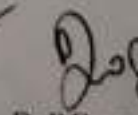
S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	Core	BC-241	Chemistry-IV	4	-	-	4	100(60+40)
2	Core	BC-242	Chemistry Practical-IV	-	4	-	2	50(20+30)
3	Core	BB-241	Botany-IV	4	-	-	4	100(60+40)
4	Core	BB-242	Botany Practical-IV	-	4	-	2	50(20+30)
5	Core	BZ-241	Zoology-IV	4	-	-	4	100(60+40)
6	Core	BZ-242	Zoology Practical-IV	-	4	-	2	50(20+30)
7	SEC	BC-243/ BB-243/ BZ-243	Basic Analytical Chemistry	2	-	-	2	50(30+20)
		Total		14	12	-	20	500

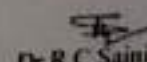

Dr. P. Khare

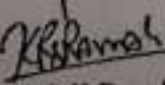

Dr. D. P. Singh

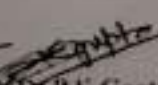

Mr. Keemal Jain

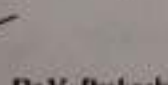

Dr. A. K. Gupta

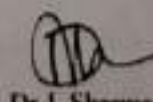

Dr. P. Dogra

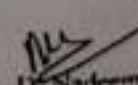

Dr. R. C. Saini

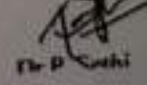

Dr. R. K. Rawal


Dr. P. K. Gupta


Dr. V. Prakash


Dr. J. Sharma


Dr. N. K. Sharma


Dr. P. Chahi



BSc Medical/Non-Medical/Chemistry Honours Scheme BOS 27th Aug. 2018,
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Maharishi Markandeshwar (Deemed to be University)
Mullana-133207 (Ambala), Haryana (India)

(Established under Section 3 of the U.G.A. Act, 1956 vide Notification No. F.9-65/2006-U.3(A) dated 12-6-2007)

WEBSITE: www.mmmullana.org

M. M. ENGINEERING COLLEGE, CHEMISTRY DEPARTMENT

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FIFTH SEMESTER (2017-20 & 2018 onwards)

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	DSE	BC-351	Chemistry-V	4	-	-	4	100(60+40)
2	DSE	BC-352	Chemistry Practical-V	-	4	-	2	50(20+30)
3	DSE	BB-351	Botany-V	4	-	-	4	100(60+40)
4	DSE	BB-352	Botany Practical-V	-	4	-	2	50(20+30)
5	DSE	BZ-351	Zoology-V	4	-	-	4	100(60+40)
6	DSE	BZ-352	Zoology Practical-V	-	4	-	2	50(20+30)
7	SEC	BC-353/ BB-353/ BZ-353	Analytical Clinical Biochemistry	2	-	-	2	50(30+20)
Total				14	12	-	20	500

SIXTH SEMESTER (2017-20 & 2018 onwards)

S.N o.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	DSE	BC-361	Chemistry-VI	4	-	-	4	100(60+40)
2	DSE	BC-362	Chemistry Practical-VI	-	4	-	2	50(20+30)
3	DSE	BB-361	Botany-VI	4	-	-	4	100(60+40)
4	DSE	BB-362	Botany Practical-VI	-	4	-	2	50(20+30)
5	DSE	BZ-361	Zoology-VI	4	-	-	4	100(60+40)
6	DSE	BZ-362	Zoology Practical-VI	-	4	-	2	50(20+30)
7	SEC	BC-363/ BB-363/ BZ-363	Pesticide Chemistry	2	-	-	2	50(30+20)
Total				14	12	-	20	500

Total Credits = 120

Dr. P. Khare

Dr. D. P. Singh

Mr. Keemrajain

Dr. A. K. Gupta

Dr. P. Dogra

Dr. R. C. Saini

Dr. R. K. Rawal

Dr. P. K. Gupta

Dr. V. Prakash

Dr. J. Sharma

Dr. N. Gaur

Dr. P. Chhila



B.Sc. Medical/Non-Medical/Chemistry Honours Scheme BOS 27th Aug. 2018,
FET Annexure 13.11.3 (page No. 168)

Maharishi Markandeshwar (Deemed to be University)
Mullana-133207 (Ambala), Haryana (India)

It established under Section 3 of the UGC Act, 1956 vide Notification No. F.9-65/2006-11.3 (A) dated 12-6-2007.
WEBSITE: www.mmmullana.org

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Scheme for B.Sc. (Non-Medical: (2017-20 & 2018 onwards))
CHOICE BASED CREDIT SYSTEM

FIRST SEMESTER (2018 onwards)

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	Core	BC-111	Chemistry-I	4	-	-	4	100(60+40)
2	Core	BC-112	Chemistry Practical-I	-	4	-	2	50(20+30)
3	Core	BP-111	Physics-I	4	-	-	4	100(60+40)
4	Core	BP-112	Physics Practical-I	-	4	-	2	50(20+30)
5	Core	BM-111	Mathematics-I	6	-	2	7	150(90+60)
6	AECC	BE-111	English Communication	2	-	-	2	50(30+20)
		Total		16	08	2	21	500

SECOND SEMESTER (2018 onwards)

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	Core	BC-121	Chemistry-II	4	-	-	4	100(60+40)
2	Core	BC-122	Chemistry Practical-II	-	4	-	2	50(20+30)
3	Core	BP-121	Physics-II	4	-	-	4	100(60+40)
4	Core	BP-122	Physics Practical-II	-	4	-	2	50(20+30)
5	Core	BM-121	Mathematics-II	6	-	2	7	150(90+60)
6	AECC	ES-101	Environmental Science	2	-	-	2	100(60+40)
		Total		16	08	2	21	550

Dr. R. Khare

Dr. D. P. Singh

Mr. Keshav Jain

Dr. A. K. Gupta

Dr. P. Dogra

Dr. R. C. Saini

Dr. H. K. Bhatnagar

Dr. K. Gupta

Dr. V. Deshpande

Dr. I. Sharma

Dr. N. Narayan

Dr. P. Chhibi



BSc Medical Non-Medical Chemistry Honours Scheme DOS 27th Aug. 2018.
FET Annexure 13.11.3 (page No. 1c)

Maharishi Markandeshwar (Deemed to be University)

Mullana-133207 (Ambala), Haryana (India)

(Established under Section 3 of the U.O. Act 1956 vide Notification No. 1005/2006-D-1 (dated 17.6.2007)

WEBSITE: www.mmmullana.org

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(An ISO 9001:2002 Certified Institute) E-Mail: hod.chemistry@mmmmullana.org, Tel. No.: 01731-404229

THIRD SEMESTER (2017 onwards)

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex. + In.)
				Lecture	Practical	Tutorial		
1	Core	BC-231	Chemistry-III	4	-	-	4	100(60+40)
2	Core	BC-232	Chemistry Practical-III	-	4	-	2	50(20+30)
3	Core	BP-231	Physics-III	4	-	-	4	100(60+40)
4	Core	BP-232	Physics Practical-III	-	4	-	2	50(20+30)
5	Core	BM-231	Mathematics-III	6	-	-	7	150(90+60)
6	SEC	BI-231	IT Skill for Chemist	2	-	-	2	50(30+20)
		Total		16	08	2	21	500

FOURTH SEMESTER (2017 onwards)

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex. + In.)
				Lecture	Practical	Tutorial		
1	Core	BC-241	Chemistry-IV	4	-	-	4	100(60+40)
2	Core	BC-242	Chemistry Practical-IV	-	4	-	2	50(20+30)
3	Core	BP-241	Physics-IV	4	-	-	4	100(60+40)
4	Core	BP-242	Physics Practical-IV	-	4	-	2	50(20+30)
5	Core	BM-241	Mathematics-IV	6	-	2	7	150(90+60)
6	SEC	BC-243	Basic Analytical Chemistry	2	-	-	2	50(30+20)
		BP-243	Computational Physics					
		BM-242						
		Total		16	08	2	21	500

[Signature]
Dr. R. K. Khare

[Signature]
Dr. D. H. Singh

[Signature]
Mr. Keshav Jain

[Signature]
Dr. A. K. Gupta

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Dr. P. Dogra

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Dr. R. C. Saini

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Dr. R. K. Raut

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Dr. P. K. Gupta

Dr. V. Deekuch

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Dr. J. Sharma

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Dr. N. Sharma

[Signature]
Dr. P. Gupta



BSc Medical Non-Medical/Chemistry Honours Scheme BOS 27th Aug. 2018,
 FKT Annexure 13.11.3 (page No. 10)

Maharishi Markandeshwar (Deemed to be University)
Mullana-133207 (Ambala), Haryana (India)

(Established under Section 3 of the U.G. Act, 1956 vide Notification No. F.9-65/2006-U.3 (A) dated 12-6-2007)
 WEBSITE: www.mmmullana.org

M. M. ENGINEERING COLLEGE, CHEMISTRY DEPARTMENT
 (An ISO 9001:2002 Certified Institute) E-Mail: hod.chemistry@mmumullana.org, Tel. No.: 01731-304229

FIFTH SEMESTER (2017 onwards)

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	DSE	BC-351	Chemistry-V	4	-	-	4	100(60+40)
2	DSE	BC-352	Chemistry Practical-V	-	4	-	2	50(20+30)
3	DSE	BP-351	Physics-V	4	-	-	4	100(60+40)
4	DSE	BP-352	Physics Practical-V	-	4	-	2	50(20+30)
5	DSE	BM-351	Mathematics-V	6	-	2	7	150(90+60)
6	SEC	BC-353/ BP-353/ BM-352	Analytical Clinical Biochemistry	2	-	-	2	50(30+20)
Total				16	08	2	21	500

SIXTH SEMESTER (2017 onwards)

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	DSE	BC-361	Chemistry-VI	4	-	-	4	100(60+40)
2	DSE	BC-362	Chemistry Practical-VI	-	4	-	2	50(20+30)
3	DSE	BP-361	Physics-VI	4	-	-	4	100(60+40)
4	DSE	BP-362	Physics Practical-VI	-	4	-	2	50(20+30)
5	DSE	BM-361	Mathematics-VI	6	-	2	7	150(90+60)
6	SEC	BC-363/ BP-363/ BM-362	Pesticide Chemistry	2	-	-	2	50(30+20)
Total				16	08	2	21	500

Total Credits = 126

Dr. P. Khare
 Dr. D. P. Singh
 Mr. Keesha Jain
 Dr. A. K. Gupta
 Dr. P. Dogra
 Dr. R. C. Saini
 Dr. R. K. Dinesh
 Dr. P. K. Gupta
 Dr. V. Prakash
 Dr. I. Sharma
 Dr. N. Sharma
 Dr. P. Gohil

B Sc. Biotechnology- Scheme (2015-16 Onwards)**1st Semester (1st Year B. Sc-Biotechnology Course)**

Sr.No.	Course Description			Teaching Scheme			
	Type of subject	Course Code	Course Title	Contact Hrs/WK			Credit
				L	T	P	
1	Core	BBT-101	Biochemistry & Metabolism	3	1	-	4.0
2	Core	BBT-103	Cell Biology	3	1	-	4.0
3	AECC	BBT-105	English	3	1	-	4.0
4	GE	BBT-107	Biotechnology and Human Welfare	3	1	-	4.0
5	Core	BBT-109	Biochemistry & Metabolism Lab	-	-	6	3.0
6	Core	BBT-111	Cell Biology Lab	-	-	6	3.0

2nd Semester (1st Year B. Sc-Biotechnology Course)

Sr.No.	Course Description			Teaching Scheme			
	Type of subject	Course Code	Course Title	Contact Hrs/WK			Credit
				L	T	P	
1	Core	BBT-202	Mammalian Physiology	3	1	-	4.0
2	Core	BBT-204	Microbial and Plant Physiology	3	1	-	4.0
3	AECC	BBT-206	EVS	3	1	-	4.0
4	GE	BBT-208	Entrepreneurship Development	3	1	-	4.0
5	Core	BBT-210	Mammalian Physiology Lab	-	-	6	3.0
6	Core	BBT-212	Microbial and Plant Physiology lab	-	-	6	3.0


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 M.M.E.C. Muluru (Andhra)

3rd Semester (2nd Year B. Sc-Biotechnology Course)

Sr.No.	Course Description			Teaching Scheme			
	Type of subject	Course Code	Course Title	Contact Hrs/WK			Credit
				L	T	P	
1	Core	BBT-301	Genetics	3	1	-	4.0
2	Core	BBT-303	General Microbiology	3	1	-	4.0
3	Core	BBT-305	Chemistry - 1	3	1	-	4.0
4	SEC	BBT-307	Enzymology	3	1	-	4.0
5	GE	BBT-309	Bioethics and Biosafety	3	1	-	4.0
6	Core	BBT-311	General Microbiology Practical	-	-	6	3.0
7	Core	BBT-313	Chemistry Lab	-	-	6	3.0

4th Semester (2nd Year B. Sc-Biotechnology Course)

Sr.No.	Course Description			Teaching Scheme			
	Type of subject	Course Code	Course Title	Contact Hrs/WK			Credit
				L	T	P	
1	Core	BBT-402	Molecular Biology	3	1	-	4.0
2	Core	BBT-404	Immunology	3	1	-	4.0
3	Core	BBT-406	Food Biotechnology	3	1	-	4.0
4	GE	BBT-408	Developmental Biology	3	1	-	4.0
5	SEC	BBT-410	Molecular Diagnostics	3	1	-	4.0
6	Core	BBT-412	Molecular Biology Lab	-	-	6	3.0
7	Core	BBT-414	Immunology and Molecular Diagnostics Lab	-	-	6	3.0


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5th Semester (3rd Year B. Sc-Biotechnology Course)

Sr.No.	Course Description			Teaching Scheme			
	Type of subject	Course Code	Course Title	Contact Hrs/WK			Credit
				L	T	P	
1	Core	BBT-501	Industrial Fermentations	3	1	-	4.0
2	Core	BBT-503	Recombinant DNA Technology	3	1	-	4.0
3	DSE	BBT-505	Bioinformatics	3	1	-	4.0
4	DSE	BBT-507	Biostatistics	3	1	-	4.0
5	Core	BBT-509	Bioinformatics Lab	-	-	6	3.0
6	Core	BBT-511	Industrial Fermentation Lab	-	-	6	3.0
7	SEC	BBT-513	Training Seminar		2		1.0

6th Semester (3rd Year B. Sc-Biotechnology Course)

Sr.No.	Course Description			Teaching Scheme			
	Type of subject	Course Code	Course Title	Contact Hrs/WK			Credit
				L	T	P	
1	Core	BBT-602	Bio Analytical Tools	3	1	-	4.0
2	Core	BBT-604	Genomics and Proteomics	3	1	-	4.0
3	DSE	BBT-606	Plant Biotechnology	3	1	-	4.0
4	DSE	BBT-608	Environmental Biotechnology	3	1	-	4.0
5	Core	BBT-610	Environmental Biotechnology Lab	-	-	6	3.0
6	Core	BBT-612	Bio Analytical Tools Lab	-	-	6	3.0


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M.M. ENGINEERING COLLEGE, MULLANA (AMBALA)

Study Scheme for Batches 2018-2022 onwards

Branch: Civil Engineering Department

Bachelor of Technology -1st Semester								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Basic Science Courses	BSC-001	Physics –I	3	1	0	4	4
2	Basic Science Courses	BSC-002 / BSC-002A	Mathematics –I (Common for all branches except Biotechnology) Mathematics –I (Biotechnology Only)	3	1	0	4	4
3	Engineering Science Courses	ESC-001	Basic Electrical Engineering	3	1	0	4	4
4	Engineering Science Courses	ESC-002	Engineering Graphics & Design	0	0	5	5	2.5
5	Engineering Science Courses	ESC-003	Engineering Mechanics	3	1	0	4	4
6	Basic Science Courses	BSC-003	Physics Lab-I	0	0	2	2	1
7	Engineering Science Courses	ESC-004	Computer Programing Lab-I	0	0	4	4	2
8	Engineering Science Courses	ESC-005	Basic Electrical Engineering Lab	0	0	2	2	1
9	Engineering Science Courses	ESC-006	SAP-01	0	0	2	2	1
Total				12	4	15	31	23.5
Bachelor of Technology: 2nd Semester								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Basic Science Courses	BSC-008	Physics-II	3	1	0	4	4
2	Basic Science Courses	BSC-009 / BSC-009A	Mathematics-II (Common for all branches except Biotechnology) Mathematics –II (Biotechnology Only)	3	1	0	4	4
3	Engineering Science Courses	ESC-007	Manufacturing Process	2	0	0	2	2
4	Basic Science Courses	BSC-004 / BSC-005	Chemistry-I / Biology	3	1	0	4	4
5	Humanities and Social Science including Management Course	HSMC-001	English	2	0	0	2	2
6	Engineering Science Courses	ESC-008	Workshop Practice	0	0	3	3	1.5
7	Basic Science Courses	BSC-006 / BSC-007	Chemistry-I / Biology Lab	0	0	3	3	1.5
8	Humanities and Social Science including Management Course	HSMC-002	English Lab	0	0	2	2	1
9	Engineering Science Courses	ESC-009 / ESC-010	Advance Computer Programing Lab / SAP-02	0	0	3	3	1.5
10	Personality Development Course	PDC-001	Personality Development (Non-Creditable)	2	0	0	2	0
11	Mandatory Course	ES-101	Environmental Studies	3	0	0	3	0
Total				18	3	11	32	21.5

Optional

BCIV-029/A

Internship

Three to Six Weeks

M.M. ENGINEERING COLLEGE, MULLANA (AMBALA)

Study Scheme for Batches 2018-2022 onwards

Branch: **Civil Engineering Department**

BOS: 13.06.2019

Annexure-I

Bachelor of Technology: 3rd Semester								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Basic Science Course	BMAT-003	Mathematics-III	3	1	-	4	4
2	Professional Core Course	BCIV-001	Introduction to Fluid Mechanics	3	1	-	4	4
3	Professional Core Course	BCIV-002	Introduction to Solid Mechanics	2	2	-	4	4
4	Professional Core Course	BCIV-003	Surveying & Geomatics	3	1	-	4	4
5	Professional Core Course	BCIV-004	Materials, Testing & Evaluation	3	-	-	3	3
6	Mandatory Course		Indian Constitution	2	-	-	2	-
7	Professional Core Course	BCIV-005	Fluid Mechanics Lab	-	-	2	2	1
8	Professional Core Course	BCIV-006	Surveying & Geomatics Lab	-	-	2	2	1
Total				16	5	4	25	21

Bachelor of Technology: 4th Semester								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Core Course	BCIV-007	Design of Concrete Structures-I	2	2	-	4	4
2	Professional Core Course	BCIV-008	Concrete Technology	3	-	-	3	3
3	Humanities and Social Science including Management Course		Humanities -I	3	-	-	3	3
4	Professional Elective Course		Elective - I	3	-	-	3	3
5	Professional Core Course	BCIV-009	Concrete Technology Lab	-	-	2	2	1
6	Professional Core Course	BCIV-010	Structural Mechanics Lab	-	-	2	2	1
7	Engineering Science Courses	BCIV-011	Building Construction Drawing	-	-	2	2	1
8	Project	BCIV-012	Project- I	-	-	4	4	2
9	Professional Core Course	BCIV-013	Environmental Engineering	2	1	-	3	3
Total				13	3	10	26	21

Optional

BCIV-029/B

Internship

Three to Six Weeks

Bachelor of Technology: 5th Semester								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Core Course	BCIV-014	Geotechnical Engineering	3	1	-	4	4
2	Professional Core Course	BCIV-015	Transportation Engineering	2	1	-	3	3
3	Professional Elective Course		Elective-II	3	-	-	3	3
4	Professional Elective Course		Elective-III	2	1	-	3	3
5	Open Elective Course		Open Elective-I	3	-	-	3	3
6	Professional Core Course	BCIV-016	Transportation Engineering Lab	-	-	2	2	1
7	Professional Core Course	BCIV-017	Geotechnical Engineering Lab	-	-	2	2	1
8	Project	BCIV-018	Survey Camp	-	-	-	-	2
9	Engineering Science Courses	BCIV-019	Environmental Engineering Lab	-	-	2	2	1
10	Project	BCIV-020	Project - II	-	-	4	4	2
Total				13	3	10	26	23

M.M. ENGINEERING COLLEGE, MULLANA (AMBALA)

Study Scheme for Batches 2018-2022 onwards

Branch: **Civil Engineering Department**

Bachelor of Technology: 6th Semester								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Core Course	BCIV-021	Hydrology & WaterResource Eegeeniring/Irrigation Engineering	3	1	-	4	4
2	Professional Core Course	BCIV-022	Design of Steel Structures	2	2	-	4	4
3	Professional Elective Course		Elective-IV	3	-	-	3	3
4	Open Elective Course		Open Elective-II	3	-	-	3	3
5	Open Elective Course		Open Elective-III	3	-	-	3	3
6	Project	BCIV-023	Project-III	-	-	4	4	2
7	Mandatory Course		Essence of Indian Traditional Knowledge	2	-	-	2	0
8	Project	BCIV-024	Seminar	-	-	2	2	1
9	Engineering Science Courses	BCIV-025	Computer-aided-Civil Engineering Design	-	-	2	2	1
Total				16	3	8	27	21

Optional

BCIV-029/C

Internship

Three to Eight Weeks

Bachelor of Technology: 7th Semester								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Core Course	BCIV-26	Engineering Economics, Estimation & Costing	2	2	-	4	4
2	Professional Elective Course		Elective-V	3	-	-	3	3
3	Professional Elective Course		Elective-VI	3	-	-	3	3
4	Open Elective Course		Open Elective-IV	3	-	-	3	3
5	Humanities and Social Science including Management Course		Humantities -II	3	-	-	3	3
6	Engineering Science Courses	BCIV-027	Concrete Structure Drawing	-	-	2	2	1
7	Project	BCIV-028	Project-IV	-	-	8	8	4
Total				14	2	10	26	21

Bachelor of Technology: 8th Semester								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Project	BCIV-029	Internship	-	-	-	-	8
Total				0	0	0	0	8

OR

Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Core Course	BCIV-030	Airport Planning and Design	3	1	-	4	4
2	Professional Core Course	BCIV-031	Bridge Engineering	3	1	-	4	4
3	Professional Elective Course		Elective-VII	3	1	-	4	4
4	Professional Elective Course		Elective-VIII	3	1	-	4	4
5	Professional Elective Course		Elective-IX	3	1	-	4	4
Total				15	5	0	20	20

M.M. ENGINEERING COLLEGE, MULLANA (AMBALA)

Study Scheme for Batches 2018-2022 onwards

Branch: **Civil Engineering Department**

Total Credit	160
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Total No. of Credits Offered	160+21(Swayam)+8(Internship)+12(Honors)=201
Credits required for Honours Degree	180
Credits required for B. Tech. Degree	160
Maximum permissible Internship	8 Weeks/8 Credits for normal B.Tech degree

Elective - I								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Elective Course	BCIV-032	Construction Equipments	3	-	-	3	3
2	Professional Elective Course	BCIV-033	Building Construction Practice	3	-	-	3	3
3	Professional Elective Course	BCIV-034	Ecological Engineering	3	-	-	3	3
4	Professional Elective Course	BCIV-035	Air and Noise Pollution and Control	3	-	-	3	3
5	Professional Elective Course	BCIV-036	Masonry Structures	3	-	-	3	3
6	Professional Elective Course	BCIV-037	Structural Geology	3	-	-	3	3

Elective - II								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Elective Course	BCIV-038	Pavement Materials	3	-	-	3	3
2	Professional Elective Course	BCIV-039	Construction Engineering Materials	3	-	-	3	3
3	Professional Elective Course	BCIV-040	Solid and Hazardous Waste Management	3	-	-	3	3
4	Professional Elective Course	BCIV-041	Groundwater Engineering	3	-	-	3	3
5	Professional Elective Course	BCIV-042	Engineering Materials for Sustainability	3	-	-	3	3
6	Professional Elective Course	BCIV-043	Foundation Engineering	3	-	-	3	3

Elective - III								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Elective Course	BCIV-044	Geometric Design of Highways	2	1	-	3	3
2	Professional Elective Course	BCIV-045	Transportation Economics	2	1	-	3	3
3	Professional Elective Course	BCIV-046	Construction Cost Analysis	2	1	-	3	3
4	Professional Elective Course	BCIV-047	Urban Hydrology and Hydraulics	2	1	-	3	3
5	Professional Elective Course	BCIV-048	Structural Analysis	2	1	-	3	3
6	Professional Elective Course	BCIV-049	Soil Mechanics-I	2	1	-	3	3

M.M. ENGINEERING COLLEGE, MULLANA (AMBALA)

Study Scheme for Batches 2018-2022 onwards

Branch: **Civil Engineering Department**

Elective - IV								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Elective Course	BCIV-050	Traffic Engineering and Management	3	-	-	3	3
2	Professional Elective Course	BCIV-051	Pavement Construction and Management	3	-	-	3	3
3	Professional Elective Course	BCIV-052	Environmental Impact Assessment and Life Cycle Analyses	3	-	-	3	3
4	Professional Elective Course	BCIV-053	Rock Mechanics	3	-	-	3	3
5	Professional Elective Course	BCIV-054	Ground Improvement Technique	3	-	-	3	3

Elective - V								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Elective Course	BCIV-055	Urban Transportation Planning	3	-	-	3	3
2	Professional Elective Course	BCIV-056	Contracts Management	3	-	-	3	3
3	Professional Elective Course	BCIV-057	Repairs & Rehabilitation of Structures	3	-	-	3	3
4	Professional Elective Course	BCIV-058	Environmental Laws and Policy	3	-	-	3	3
5	Professional Elective Course	BCIV-059	Environmental Geo-technology	3	-	-	3	3

Elective - VI								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Elective Course	BCIV-060	Construction Project Planning & Systems	3	-	-	3	3
2	Professional Elective Course	BCIV-061	Sustainable Construction Methods	3	-	-	3	3
3	Professional Elective Course	BCIV-062	Environmental Systems	3	-	-	3	3
4	Professional Elective Course	BCIV-063	Physico-Chemical Processes for Water and Wastewater Treatment	3	-	-	3	3
5	Professional Elective Course	BCIV-064	Sewage and Sewerage Treatment	3	-	-	3	3

Elective - VII								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Elective Course	BCIV-065	Pavement Design	3	1	-	4	4
2	Professional Elective Course	BCIV-066	Railway Engineering	3	1	-	4	4
3	Professional Elective Course	BCIV-067	River Engineering	3	1	-	4	4
4	Professional Elective Course	BCIV-068	Environmental Fluid Mechanics	3	1	-	4	4
5	Professional Elective Course	BCIV-069	Prestressed Concrete	3	1	-	4	4

M.M. ENGINEERING COLLEGE, MULLANA (AMBALA)

Study Scheme for Batches 2018-2022 onwards

Branch: **Civil Engineering Department**

Elective - VIII								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Elective Course	BCIV-070	Public Transportation Systems	3	1	-	4	4
2	Professional Elective Course	BCIV-071	Open Channel Flow	3	1	-	4	4
3	Professional Elective Course	BCIV-072	Surface Hydrology	3	1	-	4	4
4	Professional Elective Course	BCIV-073	Structural Dynamics	3	1	-	4	4
5	Professional Elective Course	BCIV-074	Geotechnical Design	3	1	-	4	4

Elective - IX								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Professional Elective Course	BCIV-075	Construction Engineering & Management	3	1	-	4	4
2	Professional Elective Course	BCIV-076	Transport of Water and Wastewater	3	1	-	4	4
3	Professional Elective Course	BCIV-077	Design of Concrete Structures-II	3	1	-	4	4
4	Professional Elective Course	BCIV-078	Structural Engineering	3	1	-	4	4
5	Professional Elective Course	BCIV-079	Soil Mechanics-II	3	1	-	4	4

Open Elective Floated by Civil Engineering Department								
Sr. No.	Category	Code	Course Title	Hours per week			Total hours	Credits
				L	T	P		
1	Open Elective Course	BCIV-080	Disaster Management	3	-	-	3	3
2	Open Elective Course	BCIV-081	Project Management	3	-	-	3	3
3	Open Elective Course	BCIV-082	General Principles of Building Construction	3	-	-	3	3
4	Open Elective Course	BCIV-083	Planning for Sustainable Development	3	-	-	3	3



Dr. Vanita Aggarwal
Professor and Head
Department of Civil Engineering

BPharma

Tables-X: Schemes for internal assessments and end semester examinations semester wise

Semester I

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP101T	Human Anatomy and Physiology I- Theory	10	15	1 Hr	25	75	3 Hrs	100
BP102T	Pharmaceutical Analysis I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP103T	Pharmaceutics I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP104T	Pharmaceutical Inorganic Chemistry – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP105T	Communication skills – Theory *	5	10	1 Hr	15	35	1.5 Hrs	50
BP106RBT BP106RMT	Remedial Biology/ Mathematics – Theory*	5	10	1 Hr	15	35	1.5 Hrs	50
BP107P	Human Anatomy and Physiology – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP108P	Pharmaceutical Analysis I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP109P	Pharmaceutics I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP110P	Pharmaceutical Inorganic Chemistry – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP111P	Communication skills – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
BP112RBP	Remedial Biology – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
Total		70/75[§]/80[#]	115/125[§]/130[#]	23/24[§]/26[#] Hrs	185/200[§]/210[#]	490/525[§]/ 540[#]	31.5/33[§]/ 35[#] Hrs	675/725[§]/ 750[#]

[#] Applicable ONLY for the students studied Mathematics / Physics / Chemistry at HSC and appearing for Remedial Biology (RB)course.

[§] Applicable ONLY for the students studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics (RM)course.

* Non University Examination (NUE)

Semester II

Course code	Name of the course	Internal Assessment			End Semester Exams		Total Marks	
		Continuous Mode	Sessional Exams		Total	Marks		Duration
			Marks	Duration				
BP201T	Human Anatomy and Physiology II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP202T	Pharmaceutical Organic Chemistry I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP203T	Biochemistry – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP204T	Pathophysiology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP205T	Computer Applications in Pharmacy – Theory*	10	15	1 Hr	25	50	2 Hrs	75
BP206T	Environmental sciences – Theory*	10	15	1 Hr	25	50	2 Hrs	75
BP207P	Human Anatomy and Physiology II – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP208P	Pharmaceutical Organic Chemistry I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP209P	Biochemistry – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP210P	Computer Applications in Pharmacy – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
Total		80	125	20 Hrs	205	520	30 Hrs	725

* The subject experts at college level shall conduct examinations

Semester III

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP301T	Pharmaceutical Organic Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP302T	Physical Pharmaceutics I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP303T	Pharmaceutical Microbiology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP304T	Pharmaceutical Engineering – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP305P	Pharmaceutical Organic Chemistry II – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP306P	Physical Pharmaceutics I – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP307P	Pharmaceutical Microbiology – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP308P	Pharmaceutical Engineering – Practical	5	10	4 Hr	15	35	4 Hrs	50
Total		60	100	20	160	440	28Hrs	600

Semester IV

Course code	Name of the course	Internal Assessment			End Semester Exams		Total Marks	
		Continuous Mode	Sessional Exams		Total	Marks		Duration
			Marks	Duration				
BP401T	Pharmaceutical Organic Chemistry III- Theory	10	15	1 Hr	25	75	3 Hrs	100
BP402T	Medicinal Chemistry I- Theory	10	15	1 Hr	25	75	3 Hrs	100
BP403T	Physical Pharmaceutics II- Theory	10	15	1 Hr	25	75	3 Hrs	100
BP404T	Pharmacology I- Theory	10	15	1 Hr	25	75	3 Hrs	100
BP405T	Pharmacognosy I- Theory	10	15	1 Hr	25	75	3 Hrs	100
BP406P	Medicinal Chemistry I- Practical	5	10	4 Hr	15	35	4 Hrs	50
BP407P	Physical Pharmaceutics II- Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP408P	Pharmacology I- Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP409P	Pharmacognosy I- Practical	5	10	4 Hrs	15	35	4 Hrs	50
Total		70	115	21 Hrs	185	515	31 Hrs	700

Semester V

Course code	Name of the course	Internal Assessment			End Semester Exams		Total Marks	
		Continuous Mode	Sessional Exams		Total	Marks		Duration
			Marks	Duration				
BP501T	Medicinal Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP502T	Industrial PharmacyI– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP503T	Pharmacology II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP504T	Pharmacognosy II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP505T	Pharmaceutical Jurisprudence – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP506P	Industrial PharmacyI– Practical	5	10	4 Hr	15	35	4 Hrs	50
BP507P	Pharmacology II – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP508P	Pharmacognosy II – Practical	5	10	4 Hr	15	35	4 Hrs	50
Total		65	105	17 Hr	170	480	27 Hrs	650



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Semester VI

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP601T	Medicinal Chemistry III – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP602T	Pharmacology III – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP603T	Herbal Drug Technology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP604T	Biopharmaceutics and Pharmacokinetics – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP605T	Pharmaceutical Biotechnology– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP606T	Quality Assurance– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP607P	Medicinal chemistry III – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP608P	Pharmacology III – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP609P	Herbal Drug Technology – Practical	5	10	4 Hrs	15	35	4 Hrs	50
Total		75	120	18 Hrs	195	555	30 Hrs	750

Semester VII

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP701T	Instrumental Methods of Analysis – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP702T	Industrial Pharmacy – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP703T	Pharmacy Practice – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP704T	Novel Drug Delivery System – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP705 P	Instrumental Methods of Analysis – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP706 PS	Practice School*	25	-	-	25	125	5 Hrs	150
Total		70	70	8Hrs	140	460	21 Hrs	600

* The subject experts at college level shall conduct examinations


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Semester VIII

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP801T	Biostatistics and Research Methodology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP802T	Social and Preventive Pharmacy – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP803ET	Pharmaceutical Marketing – Theory	10 + 10 = 20	15 + 15 = 30	1 + 1 = 2 Hrs	25 + 25 = 50	75 + 75 = 150	3 + 3 = 6 Hrs	100 + 100 = 200
BP804ET	Pharmaceutical Regulatory Science – Theory							
BP805ET	Pharmacovigilance – Theory							
BP806ET	Quality Control and Standardization of Herbals – Theory							
BP807ET	Computer Aided Drug Design – Theory							
BP808ET	Cell and Molecular Biology – Theory							
BP809ET	Cosmetic Science – Theory							
BP810ET	Experimental Pharmacology – Theory							
BP811ET	Advanced Instrumentation Techniques – Theory							
BP812PW	Project Work							

Total	40	60	4 Hrs	100	450	16 Hrs	550
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Principal
 17/11/2020 College of Pharmacy
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 Mullana-133207 (Ambala) HR

FIRST SEMESTER								
	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
Discipline Specific Core (DSC)	HM 101	Food Production Foundation -I	4	-	40	60	100	4
	HM 103	Food & Beverage Service Foundation -I	4	-	40	60	100	4
	HM 105	Accommodation & Front Office Operations Foundations -I	4	-	40	60	100	4
Discipline Specific Core (DSC) Practical	HM 101 Pr	Food Production Foundation -I	-	4	60	40	100	2
	HM 103 Pr	Food & Beverage Service Foundation -I	-	2	60	40	100	1
	HM 105 Pr	Accommodation & Front Office Operations Foundations -I	-	2	60	40	100	1
AECC SEC	ES 101	Environmental science	3	-	40	60	100	3
	HM 109	Applications of Computers in Hospitality & Tourism	2	-	40	60	100	2
DSE	HM 111	Fundamentals of Management	3	-	40	60	100	3
		Total	20	08			900	24

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22/6/18



SECOND SEMESTER

	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
Discipline Specific Core (DSC)	HM 102	Food Production Foundation -II	4	-	40	60	100	4
	HM 104	Food & Beverage Service Foundation -II	4	-	40	60	100	4
	HM 106	Accommodation & Front Office Operations Foundations -II	4	-	40	60	100	4
Discipline Specific Core (DSC) Practical	HM 102 Pr	Food Production Foundation -II	-	4	60	40	100	2
	HM 104 Pr	Food & Beverage Service Foundation -II	-	2	60	40	100	1
	HM 106 Pr	Accommodation & Front Office Operations Foundations -II	-	2	60	40	100	1
AECC	HM 108	Communication	2	2	40	60	100	3
SEC	HM 110	Foreign Language Skill - I (French)	2	-	40	60	100	2
DSE	HM 112	Basics of Nutrition	3	-	40	60	100	3
		Total	19	10			900	24

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THIRD SEMESTER								
	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
Discipline Specific Core (DSC)	HM 201	Introduction to Indian Cookery	4	-	40	60	100	4
	HM 203	Food & Beverage Service Operations	4	-	40	60	100	4
	HM 205	Accommodation & Front Office Operations	4	-	40	60	100	4
Discipline Specific Core (DSC) Practical	HM 201 Pr	Introduction to Indian Cookery	-	4	60	40	100	2
	HM 203 Pr	Food & Beverage Service Operations	-	2	60	40	100	1
	HM 205 Pr	Accommodation & Front Office Operations	-	2	60	40	100	1
SEC	HM 207	Accounting Skills for Hospitality	2	-	40	60	100	2
DSE	HM 209	Choose Any Two	3	-	40	60	100	3
	HM211		3	-	40	60	100	3
Total			20	8			900	24

FOURTH SEMESTER								
	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
SEC	HM 202	Personality Skills For Hospitality	-	4	60	40	100	2
DSE Theory (Choose any one)	HM 204	a. Regional Cuisines of India -/ b. Food & Beverage Service Management -/ c. Accommodation Management-I	3	-	40	60	100	3
DSE Practical (As per theory)	HM 204 Pr	a. Regional Cuisines of India -/ b. Food & Beverage Service Management -/ c. Accommodation Management-I	-	4	60	40	100	2
DSE	HM206	Hospitality Marketing	3	-	40	60	100	3
DSE	HM208	Hospitality Laws	3	-	40	60	100	3
DSE	HM 210	Choose Any Two	3	-	40	60	100	3
	HM 212		3	-	40	60	100	3
Total			15	8			700	19

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Course Structure: B.H.M.C.T.(CBCS) Applicable from Session 2016-17

FIFTH SEMESTER									
	Course Code	Course Title	Evaluation Criteria	Contact Hours		Weight age		Total Marks	Credit
				Pr.	Internal	External			
Discipline Specific Core (DSC)	HM301	Practice School (Industrial Exposure)	Training Log Book/ Training Report	22 Weeks	100	-	100	22	
	HM303		Presentation		100	-	100		
	HM305		Viva - Voce		-	100	100		
			Total	22 weeks			300	22	

SIXTH SEMESTER								
	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
SEC	HM 302	Skill Enhancement for Media & Journalism in Hospitality	-	4	60	40	100	2
DSE Theory (Choose any one)	HM 304	a. Regional Cuisines of India -II/ b. Food & Beverage Service Management -II/ c. Accommodation Management-II	3	-	40	60	100	3
DSE Practical (As per theory)	HM 304 Pr	a. Regional Cuisines of India -II/ b. Food & Beverage Service Management -II/ c. Accommodation Management-II	-	4	60	40	100	2
DSE	HM 306	Project Report	-	10	-	100	100	5
DSE	HM 308	Researching for Hospitality & Tourism Management	3	-	40	60	100	3
DSE	HM 310	Choose Any Two	3	-	40	60	100	3
	HM 312		3	-	40	60	100	3
		Total	12	18			700	21

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Course Structure: B.H.M.C.T.(CBCS) Applicable from Session 2016-17

SEVENTH SEMESTER								
	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
SEC	HM 401	Communication & Soft Skills in Hospitality	2	-	40	60	100	2
DSE	HM 403	Human Resource Management	3	-	40	60	100	3
DSE	HM 405	Safety, Security & Travel Documentation	3	-	40	60	100	3
DSE	HM 407	Choose Any Three	3	-	40	60	100	3
	HM 409		3	-	40	60	100	3
	HM 411		3	-	40	60	100	3
DSE (Practical)	HM 407	Choose Any Three		2	60	40	100	1
	HM 409			2	60	40	100	1
	HM 411			2	60	40	100	1
Total			17	6			900	20

EIGHTH SEMESTER								
	Course Code	Course Title	Evaluation Criteria	Contact Hours	Weight age		Total Marks	Credit
				Pr.	Internal	External		
Discipline Specific Core (DSC)	HM 402	Industrial Training	Training Log Book/ Training Report	22 Weeks	100	-	100	22
	HM 404		Presentation		100	-	100	
	HM 406		Viva - Voce		-	100	100	
Total				22 weeks			300	22

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BHMCT Elective Table (CBCS)

Semester	Discipline Specific Electives (DSE)					
	Group X		Group Y		Group Z	
	Code	Name	Code	Name	Code	Name
III	1	Principles of Baking	1	Business Etiquettes	1	Basics of Food Science
	2	Introduction to Tourism Concepts	2	Hotel Safety & Security	2	Hotel Engineering
	3	Commodities	3	Supervisory Management	3	Customer Relationship Management
IV	1	Confectionary	1	F& B Management & Control	1	Eco Tourism & Sustainable Development
	2	HACCP & Food safety	2	Professional Housekeeping	2	Financial Management
	3	Advance Cookery	3	Flower Arrangement	3	Facility Planning in Hotels
VI	1	Chocolate, Icing & sugar	1	Hotel Interior Decoration	1	Retail Management
	2	Kitchen Management	2	Room Division	2	Strategic Management
	3	Larder	3	Hotel Economics	3	Entrepreneurship Development
VII Choose any three	I	Laundry Management				
	II	Food Service Management				
	III	Accommodation Management				
	IV	Culinary Management				
	V	Bakery Management				
	VI	Front Office Management				
	VII	Event Management				
	VIII	Foreign Cuisine (Chinese and Italian)				

The student has to opt two subjects from group X/Y/Z (Choosing one from each). The Group choice will remain the same through out the course.

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Details of Course under B Sc. (HCM)

Category	Course	Credits
Core	Discipline Specific Core (DSC)	
	i. 3 courses from 3 disciplines of choice	09X4= 36
	ii. Core Course Practical	
	3 courses from 1 discipline	03X2= 06
	6 courses from 2 discipline	06X1= 06
iii. Practice School for industrial exposure	22	
iv. Industrial Training	22	
Elective	Discipline Specific Elective (DSE)	
	i. 8 courses in different semesters	08X3= 24
	ii. 3 DSE Practicals in 5 th Semester	03X1= 03
iii. Project Report in 4 th Semester	05	
Ability Enhancement	i. Ability Enhancement Compulsory Course (AECC)	
	2 courses of 3 credits each	02X3= 06
	ii. Skill Enhancement Courses (SEC)	
	4 courses of 2 credits each	04X2= 08
Total Credits		138





BSc Elective Table (CBCS)

Discipline Specific Electives (DSE)						
Semester	Group X		Group Y		Group Z	
	Code	Name	Code	Name	Code	Name
IV*	1	Principles of Baking	1	Business Etiquettes	1	Basics of Food Science
	2	Introduction to Tourism Concept	2	Hotel Safety & Security	2	Hotel Engineering
	3	Commodities	3	Supervisory Management	3	Customer Relationship Management
V Choose any three	I	Laundry Management				
	II	Food Service Management				
	III	Accommodation Management				
	IV	Culinary Management				
	V	Bakery Management				
	VI	Front Office Management				
	VII	Event Management				
	8	Foreign Cuisine(Chinese and Italian)				

* The student has to opt two subjects from group X/Y/Z (Choosing one from each).

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FIRST SEMESTER								
	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
Discipline Specific Core (DSC)	HC 101	Food Production Foundation -I	4	-	40	60	100	4
	HC 103	Food & Beverage Service Foundation -I	4	-	40	60	100	4
	HC 105	Accommodation & Front Office Operations Foundations -I	4	-	40	60	100	4
Discipline Specific Core (DSC) Practical	HC 101 Pr	Food Production Foundation -I	-	4	60	40	100	2
	HC 103 Pr	Food & Beverage Service Foundation -I	-	2	60	40	100	1
	HC 105 Pr	Accommodation & Front Office Operations Foundations -I	-	2	60	40	100	1
AECC	ES 101	Environmental science	3	-	40	60	100	3
SEC	HC 109	Applications of Computers in Hospitality & Tourism	2	-	40	60	100	2
DSE	HC 111	Fundamentals of Management	3	-	40	60	100	3
Total			20	8			900	24

SECOND SEMESTER								
	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
Discipline Specific Core (DSC)	HC 102	Food Production Foundation -II	4	-	40	60	100	4
	HC 104	Food & Beverage Service Foundation -II	4	-	40	60	100	4
	HC 106	Accommodation & Front Office Operations Foundations -II	4	-	40	60	100	4
Discipline Specific Core (DSC) Practical	HC 102 Pr	Food Production Foundation -II	-	4	60	40	100	2
	HC 104 Pr	Food & Beverage Service Foundation -II	-	2	60	40	100	1
	HC 106 Pr	Accommodation & Front Office Operations Foundations -II	-	2	60	40	100	1
AECC	HC108	Communication	2	2	40	60	100	3
SEC	HC 110	Foreign Language Skill - I (French)	2	-	40	60	100	2
DSE	HC 112	Basics of Nutrition	3	-	40	60	100	3
Total			19	10			900	24



Course Structure: BSC HCM (CBCS) Applicable from Session 2016-17

THIRD SEMESTER									
	Course Code	Course Title	Evaluation Criteria	Contact Hours		Weight age		Total Marks	Credit
				Pr.		Internal	External		
Discipline Specific Core (DSC)	HC201	Practice School (Industrial Exposure)	Training Log Book/ Training Report	22 Weeks		100	-	100	22
	HC203		Presentation			100	-	100	
	HC205		Viva - Voce			-	100	100	
			Total	22 weeks				300	22

Mhand *Har* *Dr.*

FOURTH SEMESTER								
	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
Discipline Specific Core (DSC)	HC 202	Introduction to Indian Cookery	4	-	40	60	100	4
	HC 204	Food & Beverage Service Operations	4	-	40	60	100	4
	HC 206	Accommodation & Front Office Operations	4	-	40	60	100	4
Discipline Specific Core (DSC) Practical	HC 202 Pr	Introduction to Indian Cookery	-	4	60	40	100	2
	HC 204 Pr	Food & Beverage Service Operations	-	2	60	40	100	1
	HC 206 Pr	Accommodation & Front Office Operations	-	2	60	40	100	1
SEC	HC 208	Accounting Skills for Hospitality	2	-	40	60	100	2
DSE	HC 210	Project Report	-	10	-	100	100	5
DSE	HC 212	Choose any one	3		40	60	100	3
		Total	17	18			900	26

Mhand *Har* *Pranshu* *Dr.*

Course Structure: BSC HCM (CBCS) Applicable from Session 2016-17

FIFTH SEMESTER								
	Course Code	Course Title	Contact Hours		Weight age		Total Marks	Credit
			Th.	Pr.	Internal	External		
SEC	HC301	Communication & Soft Skills in Hospitality	2	-	40	60	100	2
DSE	HC303	Human Resource Management	3	-	40	60	100	3
DSE	HC305	Safety, Security & Travel Documentation	3	-	40	60	100	3
DSE	HC 307	Choose Any Three	3		40	60	100	3
	HC 309		3		40	60	100	3
	HC 311		3		40	60	100	3
DSE (Practical)	HC 307	Choose Any Three		2	60	40	100	1
	HC 309			2	60	40	100	1
	HC 311			2	60	40	100	1
Total			22	8			600	20

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SIXTH SEMESTER								
	Course Code	Course Title	Evaluation Criteria	Contact Hours	Weight age		Total Marks	Credit
				Pr.	Internal	External		
Discipline Specific Core (DSC)	HC 302	Industrial Training	Training Log Book/ Training Report	22 Weeks	100	-	100	22
	HC 304		Presentation		100	-	100	
	HC 306		Viva - Voce		-	100	100	
Total				22 weeks			300	22

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DEPARTMENT OF LAW

MM (Deemed to be University), Mullana – Ambala
Deemed University Established Under Sec. 3 of the UGC Act, 1956
Course of Study for B.A. LL.B. 5 Years Integrated Course
Under Choice Based Credit System (CBCS)
w.e.f. 2016-17

B.A.LL.B-First Year

Paper No	Semester-I Subjects	Credit			Total Credit	Paper No	Semester-II Subjects	Credit			Total Credit
		L	T	P				L	T	P	
ENG-101 (T)	English-I Communication Skills (Theory) w.e.f. 2017-18	3	0	0	3	ENG -201	English-II (English Literature)	4	1	0	5
ENG-101 (P)	English-I Communication Skills (Practical) w.e.f. 2017-18	0	0	2	2	BL-202	Political Science-II (Political-Theory II)	4	1	0	5
BL-102	Political Science-I (Political Theory-I)	4	1	0	5	ECO-203	Economics-II (Macro-Economics)	4	1	0	5
ECO-103	Economics-I (Micro-Economics)	4	1	0	5	COM -204	Application of Computers	3	1	1	5
COM-104	Computer Fundamentals	3	1	1	5	LAW-205	Law of Contract-II (Special)	4	1	0	5
LAW-105	Tort and Consumer Protection Laws	4	1	0	5	LAW-206	Legal Language	3	1	1	5
LAW-106	Law of Contract-I (General)	4	1	0	5	EVS 101	Environmental Studies	2	0	0	2
	Total	22	5	3	30			24	6	2	32

B.A.LL.B. Second Year w.e.f 2017-18

Paper No	Semester-III Subjects	Credit			Total Credit	Paper No	Semester-IV Subjects	Credit			Total Credit
		L	T	P				L	T	P	
ENG -301	English-III (Communication Skills in English)	3	1	1	5	BL-401	Political Science – IV (Indian Political Thought)	4	1	0	5
BL-302	Political Science-III (Major Constitutions of World)	4	1	0	5	C&L-402(i) LAN-402(ii)	Citizen & the Law(w.e.f. 2018-19) Indian language*-Hindi-II	4	1	0	5
BIS-303(i) LAN-303(i)	History of India(w.e.f 2018-19) Indian Language*-Hindi-I	4	1	0	5	ECO-403	Economics -III (Indian Economics)	4	1	0	5
LAW-304	Constitutional Law-I	4	1	0	5	LAW-404	Constitutional Law-II	4	1	0	5
LAW-305	Law of Crimes-I(Penal Code)	4	1	0	5	LAW-405	Law of Crimes-II(Criminal Procedure Code)	4	1	0	5
LAW-306	Constitutional and Legal History (w.e.f. 2018-19)	4	1	0	5	LAW-406	Family Law	4	1	0	5
	Total	23	6	1	30		Total	24	6	0	30

B.A.LL.B. Third Year w.e.f 2018-19

Paper No	Semester-V Subjects	Credit			Total Credit	Paper No	Semester-VI Subjects	Credit		
		L	T	P				L	T	P
BL-501	Political Science-V (Political Thought)	4	1	0	5	BL-601	Political Science-VI (Public Administration in India)	4	1	0
HFM-502(i)	History of Freedom Movement in India (W.e.f. 2019-20)	4	1	0	5	BL-602	Sociology-I (w.e.f. 2018-19)	4	1	0
LAN-502(ii)	Hindi-III									
LAW-503	Jurisprudence	4	1	0	5	LAW-603	Administrative Law	4	1	0
LAW-504	Law of Evidence	4	1	0	5	LAW-604	Public International Law	4	1	0
LAW-505	Civil Procedure Code-I	4	1	0	5	LAW-605	Civil Procedure Code-II and Limitation Law	4	1	0
LAW-506	Legal Research Methodology	3	1	1	5	LAW-606	Property Law	4	1	0
	Total	23	6	1	30		Total	24	6	0

B.A.LL.B-Fourth Year w.e.f 2019-20

Paper No	Semester-VII Subjects	Credit			Total Credit	Paper No	Semester-VIII Subjects	Credit		
		L	T	P				L	T	P
BL-701	Sociology- II (w.e.f. 2019-20)	4	1	0	5	BL-801	Sociology- III (w.e.f. 2019-20)	4	1	0
LAW-702	Right to Information Law	4	1	0	5	LAW-802	International Organization	4	1	0
LAW-703	Bio Diversity Protection Law	4	1	0	5	LAW-803	Company Law	4	1	0
LAW-704(i)	Optional Paper-I Principles of Interpretation Media and Law	4	1	0	5	LAW-804(i)	Optional Paper-III Women and Law	4	1	0
LAW-704(ii)						LAW-804(ii)	Prison Administration			
LAW-705(i)	Optional Paper-II Competition Law Right to Education	4	1	0	5	LAW-805(i)	Optional Paper-IV Criminology and Penology	4	1	0
LAW-705(ii)						LAW-805(ii)	Human Rights Law and Practice			
LAW-706	Conveyancing and Drafting (Practical/Clinical Course-I)	1	0	4	5	LAW-806	Moot Court Exercises and Internship (Practical/Clinical Course-II)	0	0	5
	Total	21	5	4	30		Total	20	5	5

*The students are required to opt Hindi Language papers or other optional paper. The Language paper once selected will continue to be the same till 5th semester.

Internal Assessment- 40 marks

- (i) Written Class Tests - 20 marks
- (ii) Assignments - 15 marks (written with oral presentation)
- (iii) Attendance - 05 marks (75% - one mark and one mark for every 5% increase)

B.A.LL.B.-Fifth Year-w.e.f. 2016-17

Paper No	Semester-IX Subjects	Paper No	Semester-X Subjects
L-XXV	Labour and Industrial Laws	L-XXXI	Principles of Taxation Law
L-XXVI	Alternative Dispute Resolution	L-XXXII	Land Laws including Tenure and Tenancy
L-XXVII	Legal Research Methodology (Optional Paper-I)	L-XXXIII	Banking Law (Optional Paper-IV)
L-XXVIII	Criminology and Penology (Optional Paper-II)	L-XXXIV	Human Rights Law and Practice (Optional Paper-V)
L-XXIX	Information Technology Law(Optional Paper-III)	L-XXXV	Intellectual Property Rights (General) (Optional Paper-VI)
L-XXX	Moot Court Exercises (Practical/Clinical Course-V)	L-XXXVI	Moot Court Exercises and Internship (Practical/Clinical Course-VI)

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List of Optional Subjects/Groups- The selection of optional papers 1 to 6 from the following one or more groups shall be decided by the Head of the Department keeping in view the position of the Faculty.

Group-A	Constitutional Law	Group-D	International Law
i	Legal Theory	i	International Organizations
ii	Legal & Constitutional History	ii	International Human Rights
iii	Law & Social Transformation	iii	Private International Law
iv	Comparative Federalism	iv	Uncitral Model Codes
v	Media and Law	v	International Labour Organization & Laws
vi	Principles of Legislation	vi	Maritime Law
vii	Service Law	vii	International Trade Laws
viii	Election Law	viii	Air & Space Law
Group-B	Business Law	Group-E	Intellectual Property Law
i	Insurance Law	i	Law Relating to Patent
ii	Banking Law ✓	ii	Copyright Law
iii	Legal Regulation of Economic Enterprises	iii	Trademark & Design Law
iv	Bankruptcy & Insolvency	iv	Bio Diversity Protection Law
v	Competition Law	v	Information Technology Law ✓
vi	Information Technology Law ✓	vi	Intellectual Property Rights (General) ✓
vii	Regulatory Authorities	vii	Farmers & Breeders Right IPR & Human Rights
viii	Anti-Corruption Laws	viii	
Group-C	Crime & Criminology	Group-F	Local & Personal Laws
i	Criminal Psychology ✓	i	Human Right Law & Practice ✓
ii	Forensic Science	ii	Local Self Government
iii	Prison Administration	iii	Customary Laws
iv	Penology & Victimology	iv	Rent Control Laws
v	Offences Against Women & Child	v	Co-operative Law
vi	Cyber Crimes	vi	Christian & Parsi Laws
vii	White Color Crimes	vii	Muslim Law
viii	Medical Jurisprudence	viii	Equity & Trust ✓

DEPARTMENT OF LAW

MM (Deemed to be University), Mullana – Ambala

Deemed University Established Under Sec. 3 of the UGC Act, 1956

Course of Study for B.Com. LL.B (Hons.) 5 Years Integrated Course

Under Choice Based Credit System (CBCS)

B.Com. LL.B.(H.)-First Year w.e.f. 2017-18

Paper No	Semester-I Subjects	Credit			Total Credit	Paper No	Semester-II Subjects	Credit			Total Credit
		L	T	P				L	T	P	
ENG-101 (T)	English-I Communication Skills (Theory)	3	0	0	3	ENG-201	English-II (English Literature) *	4	1	0	5
ENG-101 (P)	English-I Communication Skills (Practical)	0	0	2	2	FA-202	Financial Accounting-I	4	1	0	5
PM-102	Principles of Management	4	1	0	5	BM-203	Business Mathematics *	4	1	0	5
ECC-103	Economics-I (Micro- Economics) *	4	1	0	5	HIS-204(i) LAN-204(ii)	History of India(w.e.f 2018-19)/ Indian Language*-Hindi-I	4	1	0	5
COM-104	Computer Fundamentals *	3	1	1	5	LAW-205	Law of Contract-II (Special)	4	1	0	5
LAW-105	Tort and Consumer Protection Laws	4	1	0	5	LAW-206	Legal Language	3	1	1	5
LAW-106	Law of Contract-I (General)	4	1	0	5	EVS 101	Environmental Studies	2	0	0	2
	Total	22	5	3	30		Total	25	6	1	32

B.Com.LL.B.(H.) -Second Year

Paper No	Semester-III Subjects	Credit			Total Credit	Paper No	Semester-IV Subjects	Credit			Total Credit
		L	T	P				L	T	P	
FA-301	Financial Accounting-II	4	1	0	5	BST-401	Business Statistics *	4	1	0	5
ECC-302	Economics-II (Macro- Economics) *	4	1	0	5	HFM-402(i) LAN-402(ii)	History of Freedom Movement in India (W.e.f. 2019-20) Indian language*-Hindi-III	4	1	0	5
C&L-303(i) LAN-303(ii)	Citizen & the Law(w.e.f. 2018- 19) Indian language*-Hindi-II *	4	1	0	5	ENG-403	English-III (Communications Skills in English) *	4	1	0	5
LAW-304	Constitutional Law-I	4	1	0	5	LAW-404	Constitutional Law-II	4	1	0	5
LAW-305	Law of Crimes-I(Penal Code)	4	1	0	5	LAW-405	Law of Crimes-II(Criminal Procedure Code)	4	1	0	5
LAW-306	Constitutional and Legal History	4	1	0	5	LAW-406	Family Law	4	1	0	5
	Total	24	6	0	30		Total	24	6	0	30

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Head

Department of Law

B.Com. LL.B.(H.) Third Year

Paper No	Semester-V Subjects	Credit			Total Credit	Paper No	Semester-VI Subjects	Credit	
		L	T	P				L	T
BECSR-501	Business Ethics and Corporate Social Responsibility	4	1	0	5	MKM-601	Marketing Management	4	1
AUD-502	Auditing	4	1	0	5	HRM-602	Human Resource Management	4	1
LAW-503	Jurisprudence	4	1	0	5	LAW-603	Administrative Law	4	1
LAW-504	Law of Evidence	4	1	0	5	LAW-604	Public International Law	4	1
LAW-505	Civil Procedure Code-I	4	1	0	5	LAW-605	Civil Procedure Code-II and Limitation Law	4	1
LAW-506	Legal Research Methodology	3	1	1	5	LAW-606	Property Law	4	1
	Total	23	6	1	30		Total	24	6

*The students are required to opt Hindi Language papers or other optional paper. The Language paper selected will continue to be the same till 4th semester.

Internal Assessment- 40 marks

- | | |
|-------------------------|---|
| (i) Written Class Tests | - 20 marks |
| (ii) Assignments | - 15 marks (written with oral presentation) |
| (iii) Attendance | - 05 marks (75%- one mark and one mark for every 5% increase) |

w.e.f. June 2019

Bachelor of Technology (B.Tech) in Computer Science & Engineering: 3rd Semester Scheme

Sr. No.	Category	Course	Course Title	Teaching Schedule			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1	Humanities and Social Sciences including Management Course	BHUM-004	Economics for Engineers	3	-	-	3	40	60	-	100
2	Basic Science Course	BMAT-003	Mathematics-III (Probability & Statistics)	3	1	-	4	40	60	-	100
3	Professional Core Course	BCSE-502	Computer Organization & Architecture	3	1	-	4	40	60	-	100
4	Professional Core Course	BCSE-503	Data Structure & Algorithms	3	-	-	3	40	60	-	100
6	Professional Core Course	BCSE-504	Operating System	3	-	-	3	40	60	-	100
5	Professional Core Course	BCSE-505	Data Structure & Algorithms Lab	-	-	2	1	60	-	40	100
7	Professional Core Course	BCSE-506	Operating System Lab	-	-	2	1	60	-	40	100
8	Professional Core Course	BCSE-507	Python Programming Lab	-	-	4	2	60	-	40	100
9	Mandatory Course (non-credit)		Essence of Indian Traditional Knowledge	2	-	-	0	40	60	-	100
TOTAL				17	2	8	21	420	360	120	900

w.e.f. June 2019

Bachelor of Technology (B.Tech) in Computer Science & Engineering: 4th Semester Scheme

Sr. No.	Category	Course	Course Title	Teaching Schedule			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1	Humanities and Social Sciences including Management Course	BHUM-005	Principle of Management	3	-	-	3	40	60	-	100
2	Professional Core Course	BCSE-508	Discrete Mathematics	3	1	-	4	40	60	-	100
3	Engineering Science Course	BECE-001	Analog & Digital Electronics	2	1	-	3	40	60	-	100
4	Professional Core Course	BCSE-509	Object Oriented Programming Using Java	3	-	-	3	40	60	-	100
6	Professional Core Course	BCSE-510	Database Management System	3	-	-	3	40	60	-	100
5	Engineering Science Course	BECE-002	Analog & Digital Electronics Lab	-	-	2	1	60	-	40	100
7	Professional Core Course	BCSE-511	Object Oriented Programming Using Java Lab	-	-	2	1	60	-	40	100
8	Professional Core Course	BCSE-512	Database Management System Lab	-	-	2	1	60	-	40	100
9	Project	BCSE-513	Project-I	-	-	4	2	60	-	40	100
TOTAL				17	2	8	14	2	10	21	440

S. G. (HOD, CSE)

Deptt. of Computer Engg.
M.M. Engineering College
Mullana (Ambala)-133203 Haryana

Bachelor of Technology (B.Tech) in Computer Science & Engineering: 5th Semester Scheme

Sr. No.	Course No.	Course Category	Course Title	Teaching Schedule			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	MA-05 / HUM-11 / HUM-12	General	Multivariate Analysis, Linear Algebra and Special Functions / Economics for Engineers / Law for Engineers / *Swayam	3	1	-	4.0	40	60	-	100
2.	MA-08 / SAP-02/ HUM-13	General	Probability and Statistics / SAP ABAP / Marketing Management /* Swayam	2	1	-	3.0	40	60	-	100
3.	CS-22	Specialization	Web Technologies	3	-	-	3.0	40	60	-	100
4.	CS-23	Specialization	Analysis and Design of Algorithms	3	1	-	4.0	40	60	-	100
5.	CS-24	Specialization	Unix & Linux Shell Programming	3	-	-	3.0	40	60	-	100
6.	CS-25	Specialization	Business Intelligence & its Applications	3	-	-	3.0	40	60	-	100
7.	CS-26	Specialization	Analysis and Design of Algorithms Lab	-	-	2	2.0	60	-	40	100
8.	CS-27	Specialization	Unix & Linux Shell Programming Lab	-	-	2	2.0	60	-	40	100
9.	CS-28	Specialization	Web Technologies Lab	-	-	2	2.0	60	-	40	100
10.	CS-29	Core	Project-I	-	-	4	4.0	60	-	40	100
Total				17	3	10	30	480	360	160	1000

Bachelor of Technology (B.Tech) in Computer Science & Engineering: 6th Semester Scheme

Sr. No.	Course No.	Course Category	Course Title	Teaching Schedule			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	MA-10 / SAP-02/ HUM-14/ HUM-15/ HUM-16	General	Fuzzy Maths / SAP ABAP / Finance Management / HR Management / Research Methodology / *Swayam	2	1	-	3	40	60	-	100
2.	CS-30	Specialization	Cloud Computing	3	1	-	4	40	60	-	100
3.	CS-31	General	Big Data & Analytics	3	1	-	4	40	60	-	100
4.	CS-32	Specialization	Elective-I	3	-	-	3	40	60	-	100
5.	CS-33	Specialization	Elective-II	3	-	-	3	40	60	-	100
6.	CS-34	Specialization	Elective-III	3	-	-	3	40	60	-	100
7.	CS-35	General	Big Data & Analytics Lab	-	-	2	2	60	-	40	100
8.	CS-36	Specialization	Elective-I Lab	-	-	2	2	60	-	40	100
9.	CS-37	Specialization	Elective-III Lab	-	-	2	2	60	-	40	100
10.	CS-38	Core	Project-II	-	-	4	4	60	-	40	100
Total				17	3	10	30	480	360	160	1000

***One Course -3 credit through Swayam**

*Swayam means subject that cover under self study/learning mode via online study material

Elective-I, II, III

Course No.	Course Title
Elective-I	
CS-32 (a)	Mobile Application Development
CS-32 (b)	Advanced Java Programming

CS-32 (c)	Computer Graphics
CS-32 (d)	Internetworking Technologies
Elective-II	
CS-33 (a)	Cryptography & Network Security
CS-33 (b)	Wireless & Mobile Communication
CS-33 (c)	Adhoc Networks
CS-33 (d)	Robotic Process Automation Design & Development
Elective-III	
CS-34 (a)	Microprocessor & Interfacing
CS-34 (b)	Software Testing
CS-34 (c)	Advanced Python Programming
CS-34 (d)	Advanced Web Technology

Course No.	Course Title
Elective-I Lab	
CS-36 (a)	Mobile Application Development Lab
CS-36 (b)	Advanced Java Programming Lab
CS-36 (c)	Computer Graphics Lab
CS-36 (d)	Internetworking Technologies Lab
Elective-III Lab	
CS-37 (a)	Microprocessor & Interfacing Lab
CS-37 (b)	Software Testing Lab
CS-37 (c)	Advanced Python Programming Lab
CS-37 (d)	Advanced Web Technology Lab

w.e.f. June 2019 (For Batch 2016-2020 Only)
Bachelor of Technology (B.Tech) in Computer Science & Engineering: Scheme

7th SEMESTER

Sr. No.	Course No.	Course Category	Course Title	Teaching Schedule			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	CS-37	Core	Genetic Algorithms	3	-	-	3	40	60	-	100
2.	CS-38	Core	Distributed Operating System	3	-	-	3	40	60	-	100
3.	CS-39	Specialization	Elective-IV	3	-	-	3	40	60	-	100
4.	CS-40	Specialization	Elective-V	3	-	-	3	40	60	-	100
5.		General	Open Elective-I	3	1	-	4	40	60	-	100
6.		General	Open Elective-II	3	1	-	4	40	60	-	100
7.	CS-41	Core	Genetic Algorithms Lab	-	-	2	2	60	-	40	100
8.	CS-42	Core	Project-III	-	-	8	8	60	-	40	100
Total				18	2	10	30	360	360	80	800

One Course -3 credit Swayam

*Swayam means subject that cover under self study/learning mode via online study material

Elective-IV & V

Course No.	Course Title	Course No.	Course Title
Elective-IV		Elective-V	
CS-39 (a)	Software Project Management	CS-40 (a)	Neural Networks
CS-39 (b)	Formal Languages & Automata Theory	CS-40 (b)	Dataware Housing & Data Mining
CS-39 (c)	Statistical Modeling and Queuing Theory	CS-40 (c)	AI & Machine Learning
CS-39 (d)	Robotic Process Automation Design & Development		

List of Open Elective Courses

Course Code	Course Name	Course Code	Course Name
OE-CSE-01 / BCSE-510	Database Management Systems	OE-CE-11	General Principles of Building Construction
OE-CSE-02 / BCSE-503	Data Structure & Algorithm	OE-CE-12	Planning for sustainable development
OE-CSE-03 / CS- 32 (c)	Python Programming	OE-ECE-13 / EC-11	Principles of Communication
OE-CSE-04 / BCSE-509	Object Oriented Programming in JAVA	OE-ECE-14 / EC-10	Digital Electronics
OE-ME-05	Project & Production Management	OE-ECE-15 / EC-47	Internet of Things
OE-ME-06	Quality Assurance & Reliability	OE-ECE-16 / EC-38	Embedded System
OE-ME-07	Entrepreneurship & Family Business (Open Elective-II)	OE-EE-17 / EE-04	Analog Electronics
OE-ME-08	Supply Chain Management	OE-EE-18 / EE-05	Network Analysis & Synthesis
OE-CE-09	Disaster Management (Open Elective- I)	OE-EE-19 / EE-18	Control Systems
OE-CE-10	Project Management	OE-EE-20 / EE-12	Measurements & Instrumentation

S. G. (HOD, CSE)
Dept. of Computer Engg.
N.M. Engineering College
Mullana (Ambalal-133203 Har)

CHOICE BASED CREDIT SYSTEM

B. Sc. HONOURS WITH CHEMISTRY

(2019 onwards)



Department of Chemistry
Maharishi Markandeshwar
(Deemed To Be University)
Mullana (Ambala) Haryana
INDIA-133207



Dr Bhawna Pareek



Dr D P Singh



Mr Keemat Jain



Dr R K Rawal



Dr P K Gupta

Dr V. Prakash



Dr J. Sharma



Dr Nadeem



Dr P. Sethi

SCHEME FOR B.Sc. [2019 onwards]

(Honours with Chemistry)

(12+3 SYSTEM OF EDUCATION)

Under

(Choice Based Credit System)



Department of Chemistry

Maharishi Markandeshwar (Deemed to be University) Mullana, Ambala, Haryana

INDIA-133207

Dr Bhawna Pareek

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Dr V. Prakash

Dr J. Sharma

Dr Nadeem

Dr P. Sethi

SCHEME FOR B.Sc.HONOURS WITH CHEMISTRY

Batch- 2019onwards(CBCS)

SUMMARY

(SEMESTER SYSTEM)

B.Sc.I,II & III
1. Chemistry
2. Mathematics(Ist & IInd Semester)
3. English (Ist Semester)
4. Environmental Science(IInd Semester)
5. Computer Science(IIIrd & IVth Semester)

SUBJECT CODES

SUBJECT	CODE USED
1. Chemistry	BCHE
2. Mathematics	BMAT
3.English Communication	BHUM
4. Environmental Science	BEVS
5. Computer Science	BCAP


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Dr P. Sethi

B. Sc. Honours with Chemistry
SCHEME FOR CHOICE BASED CREDIT SYSTEM(2019 onwards)

Sem.	Core Course (14)	Ability Enhancement Compulsory Course (AECC) (2)	Ability Enhancement Elective Course (AEEC) (2) (Skilled Based)	Elective Discipline Specific (DSE) (4)	Elective Generic (GE)(4)
I	Inorganic Chemistry-I(4L+4P=8) (8hrs)	English Communication (2L)(2 hrs)			GE-1 (5/4L+1T/4P=6/8 (6/8hrs)
	Physical Chemistry-I (4L+4P=8) (8hrs)				
Honours= Total Credits = 20		Teaching hours= 24/26			
II	Organic Chemistry-I(4L+4P=8) (8hrs)	EVS(2L)(2hrs)			GE-2 (5/4L+1T/4P=6/8 (6/8hrs)
	Physical Chemistry-II (4L+4P=8) (8hrs)				
Honours= Total Credits = 20		Teaching hours= 24/26			
III	Inorganic Chemistry-II(4L+4P=8) (8hrs)		SEC- 1 (2L)(2 hrs) (Fuel Chemistry)		GE-3 (5/4L+1T/4P=6/8 (6/8 hrs)
	Organic Chemistry-II (4L+4P=8) (8hrs)				
	Physical Chemistry-III(4L+4P=8)(8hrs)				
Honours= Total Credits = 26		Teaching hours= 32/34			
IV	Inorganic Chemistry-III(4L+4P=8) (8hrs)		SEC-2(2L)(2 hrs) (Chemistry of cosmetics and perfumes)		GE-4 (5/4L+1T/4P=6/8 (6/8 hrs)
	Organic Chemistry-III (4L+4P=8) (8hrs)				
	Physical Chemistry-IV(4L+4P=8)(8hrs)				
Honours= Total Credits = 26		Teaching hours= 32/34			
V	Organic Chemistry-IV(4L+4P=8) (8hrs)			DSE-1(4L+4P=8) (8hrs)(Analytical methods in chemistry)	


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 Dr J. Sharma


 Dr Nadeem


 Dr P. Sethi

	Physical Chemistry- V(4L+4P=8) (8hrs)			DSE- 2(4L+4P=8) (8hrs)(Industrial chemicals and environment)	
Honours= Total Credits = 24			Teaching hours= 32		
VI	Inorganic Chemistry- IV(4L+4P=8) (8hrs)			DSE- 3(5L+1T=6) (6hrs)(Research Methodology for Chemistry)	
	Organic Chemistry - V(4L+4P=8)(8hrs)			DSE- 4(4L+4P=8) (8hrs) (Polymer Chemistry)	
Honours= Total Credits = 24			Teaching hours= 32		

Total Credits = 140 Total teaching hours=176/ 184


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 Dr J. Sharma


 Dr Nadeem


 Dr P. Sethi

B.Sc. (Honours with Chemistry)
CHOICE BASED CREDIT SYSTEM- 2019 onwards

I. FIRST SEMESTER

S.No.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
			Lecture	Practical	Tutorial		
1	BCHE-502	Inorganic Chemistry-I(CC)	4	-	-	4	100(60+40)
2	BCHE-503	Inorganic Chemistry Practical-I(CC)	-	4	-	2	50(20+30)
3	BCHE-504	Physical Chemistry-I(CC)	4	-	-	4	100(60+40)
4	BCHE-505	Physical Chemistry Practical-I(CC)	-	4	-	2	50(20+30)
5	BHUM-101	English Communication(AECC)	2	-	-	2	50(30+20)
6	Biology/ Computer Science/ Mathematics/ Physics	GE-1*	5 or 4	- or 4	1 or -	6	150(90+60) Or 100(60+40) 50(20+30)
	Total		15/14	08/12	01/-	20	500

II. SECOND SEMESTER

S.No.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
			Lecture	Practical	Tutorial		
1	BCHE-506	Organic Chemistry-I(CC)	4	-	-	4	100(60+40)
2	BCHE-507	Organic Chemistry Practical-I(CC)	-	4	-	2	50(20+30)
3	BCHE-508	Physical Chemistry-II(CC)	4	-	-	4	100(60+40)
4	BCHE-509	Physical Chemistry Practical-II(CC)	-	4	-	2	50(20+30)
5	BEVS-001	Environmental Science(AECC)	2	-	-	2	50(30+20)
6	Biology/ Computer Science/ Mathematics/ Physics	GE-2*	5 or 4	- or 4	1 or -	6	150(90+60) Or 100(60+40) 50(20+30)
	Total		15/14	08/12	01/-	20	500


 Dr Bhawna Pareek


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 Dr R K Rawal


 Dr P K Gupta

Dr V. Prakash


 Dr J. Sharma


 Dr Nadeem


 Dr P. Sethi

III. THIRD SEMESTER

S.No.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
			Lecture	Practical	Tutorial		
1	BCHE-601	Inorganic Chemistry-II(CC)	4	-	-	4	100(60+40)
2	BCHE-602	Inorganic Chemistry Practical-II(CC)	-	4	-	2	50(20+30)
3	BCHE-603	Organic Chemistry-II(CC)	4	-	-	4	100(60+40)
4	BCHE-604	Organic Chemistry Practical-II(CC)	-	4	-	2	50(20+30)
5	BCHE-605	Physical Chemistry-III(CC)	4	-	-	4	100(60+40)
6	BCHE-606	Physical Chemistry Practical-III(CC)	-	4	-	2	50(20+30)
7	BCHE-607	Fuel Chemistry(SEC-1)	2	-	-	2	50(30+20)
8	Biology/ Computer Science/ Mathematics/ Physics	GE-3*	5 or 4	-or 4	1 or -	6	150(90+60) Or 100(60+40) 50(20+30)
Total			19/18	12/16	01/-	26	650

IV. FOURTH SEMESTER

S.No.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
			Lecture	Practical	Tutorial		
1	BCHE-608	Inorganic Chemistry-III(CC)	4	-	-	4	100(60+40)
2	BCHE-609	Inorganic Chemistry Practical-III(CC)	-	4	-	2	50(20+30)
3	BCHE-610	Organic Chemistry-III(CC)	4	-	-	4	100(60+40)
4	BCHE-611	Organic Chemistry Practical-III(CC)	-	4	-	2	50(20+30)
5	BCHE-612	Physical Chemistry-IV(CC)	4	-	-	4	100(60+40)
6	BCHE-613	Physical Chemistry Practical-IV(CC)	-	4	-	2	50(20+30)
7	BCHE-614	Chemistry of Cosmetics and Perfumes(SEC-2)	2	-	-	2	50(30+20)
8	Biology/ Computer Science/ Mathematics/ Physics	GE-4*	5 or 4	- or 4	1 or -	6	150(90+60) Or 100(60+40) 50(20+30)
Total			19/18	12/16	01/-	26	650


 Dr Bhawna Pareek


 Dr D P Singh


 Mr Keemat Jain


 Dr R K Rawal


 Dr P K Gupta

Dr V. Prakash


 Dr J. Sharma


 Dr Nadeem


 Dr P. Sethi

V. FIFTH SEMESTER

S. No.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
			Lecture	Practical	Tutorial		
1	BCHE-701	Organic Chemistry-IV(CC)	4	-	-	4	100(60+40)
2	BCHE-702	Organic Chemistry Practical-IV(CC)	-	4	-	2	50(20+30)
3	BCHE-703	Physical Chemistry-V(CC)	4	-	-	4	100(60+40)
4	BCHE-704	Physical Chemistry Practical-V(CC)	-	4	-	2	50(20+30)
5	BCHE-705	Analytical Methods in Chemistry(DSE-1)	4	-	-	4	100(60+40)
6	BCHE-706	Analytical Methods in Chemistry Practical(DSE-1a)	-	4	-	2	50(20+30)
7	BCHE-707	Industrial Chemicals and Environment(DSE-2)	4	-	-	4	100(60+40)
8	BCHE-708	Industrial Chemicals and Environment practical(DSE-2a)	-	4	-	2	50(20+30)
	Total		16	16	-	24	600

VI. SIXTH SEMESTER

S. No.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
			Lecture	Practical	Tutorial		
1	BCHE-709	Inorganic Chemistry-IV(CC)	4	-	-	4	100(60+40)
2	BCHE-710	Inorganic Chemistry Practical-IV(CC)	-	4	-	2	50(20+30)
3	BCHE-711	Organic Chemistry-V(CC)	4	-	-	4	100(60+40)
4	BCHE-712	Organic Chemistry Practical-V(CC)	-	4	-	2	50(20+30)
5	BCHE-713	Research Methodology for Chemistry(DSE-3)	5	-	1	6	150(90+60)
6	BCHE-714	Polymer Chemistry(DSE-4)	4	-	-	4	100(60+40)
7	BCHE-715	Polymer Chemistry Practical (DSE-4a)	-	4	-	2	50(20+30)
	Total		17	12	01	24	600


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***GENERIC ELECTIVE PAPERS (GE)-1-4 (Four papers from any one discipline)**

Any set of four papers offered by other departments / disciplines to the students of B.Sc.
 Hon's with chemistry

SET-I (BIOLOGY)

S. No.	Sem.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	I	BBIO-001	Biochemistry and Metabolism	5	-	1	6	150(90+60)
2	II	BBIO-002	Biotechnology and Human Welfare	5	-	1	6	150(90+60)
3	III	BBIO-003	Biodiversity(Microbes, Algae, Fungi and Archegoniates)	5	-	1	6	150(90+60)
4	IV	BBIO-004	Biodiversity-Animal	5	-	1	6	150(90+60)

SET-II (Computer Science)

S.No.	Sem.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	I	BCAP - 001	Web Designing using HTML	4	-	-	4	100(60+40)
2		BCAP - 002	Web Designing using HTML Lab	-	4	-	2	50(20+30)
3	II	BCAP - 003	Database Management Systems	4	-	-	4	100(60+40)
4		BCAP - 004	Database Management Systems Lab	-	4	-	2	50(20+30)
5	III	BCAP - 005	Object Oriented Programming using C++	4	-	-	4	100(60+40)
6		BCAP - 006	Object Oriented Programming using C++ Lab	-	4	-	2	50(20+30)
7	IV	BCAP - 007	Programming in java	4	-	-	4	100(60+40)
8		BCAP - 008	Programming in java Lab	-	4	-	2	50(20+30)


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SET-III (Mathematics)

S.No.	Sem.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	I	BMAT-101	Mathematics-I(Differential Calculus)	5	-	1	6	150(90+60)
2	II	BMAT-102	Mathematics-II(Differential Equation)	5	-	1	6	150(90+60)
3	III	BMAT-103	Mathematics-III(Real Analysis)	5	-	1	6	150(90+60)
4	IV	BMAT-104	Mathematics-IV(Algebra)	5	-	1	6	150(90+60)

SET-IV (Physics)

S.No.	Sem.	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	I	BPHY-127	Electricity and magnetism	4	-	-	4	100(60+40)
2		BPHY-128	Electricity and magnetism lab	-	4	-	2	50(20+30)
3	II	BPHY-129	Elements of Modern Physics	4	-	-	4	100(60+40)
4		BPHY-130	Elements of Modern Physics lab	-	4	-	2	50(20+30)
5	III	BPHY-131	Waves and Optics	4	-	-	4	100(60+40)
6		BPHY-132	Waves and Optics lab	-	4	-	2	50(20+30)
7	IV	BPHY-133	Quantum Mechanics	5	-	1	4	150(90+60)


 Dr Bhawna Pareek


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 Dr P. Sethi

Semester III [Second year]

Branch/Course: Electrical Engineering

Sr. No.	Category	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credit
				Lecture	Tutorial	Practical		
1	Program Core Course	BELE-502	Analog Electronics Circuits	3	0	0	3	3
2	Program Core Course	BELE-503	Electrical Circuit Analysis	3	1	0	4	4
3	Program Core Course	BELE-504	Electrical Machines - I	3	0	0	3	3
4	Basic Science Course (General)	BMAT-003	Mathematics - III (Probability and Statistics)	3	1	0	4	4
5	Mandatory Course	MAN-001 BMAT-004	Indian Constitution	2	-	-	2	-
6	Program Core Course	BELE-505	Analog Electronics Circuits Lab	0	0	2	2	1
7	Program Core Course	BELE-506	Electrical Machines Lab - I	0	0	2	2	1
8	Program Core Course	BELE-507	Virtual Instrumentation Lab	0	0	2	2	1
9	ESC	BELE-508	MATLab Programming Lab	0	0	4	4	2
				14	02	10	26	19

One Swayam Course: 3 Credits

(Credits will be added in the final semester marksheet)





Professor & Head
Department of Electrical Engineering
M. M. Engineering College
Mullana (Ambala) 133203

Semester IV [Second year]
Branch/Course: Electrical Engineering

Sr. No.	Category	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	Program Core Course	BELE-509	Digital Electronics	3	1	0	4	4
2	Program Core Course	BELE-510	Signals and Systems	3	1	0	4	4
3	Program Core Course	BELE-511	Electrical Machines - II	3	0	0	3	3
4	Program Core Course	BELE-512	Power Electronics	3	0	0	3	3
5	Mandatory Course	MAN-002 (S)-U.M.-117	Essence of Indian Traditional Knowledge	2	0	0	2	0
6	Program Core Course	BELE-513	Digital Electronics Lab	0	0	2	2	1
7	Program Core Course	BELE-514	Electrical Machines Lab - II	0	0	2	2	1
9	Program Core Course	BELE-515	Power Electronics Lab	0	0	2	2	1
10	Program Core Course	BELE-516	Project-I	0	0	4	4	2
				14	01	10	25	19

One Swayam Course: 3 Credits

(Credits will be added in the final semester marksheet)




Professor & Head
Department of Electrical Engg
M. M. Engineering College
Mullana (Ambala) 133201



Semester V [Third year]
Branch/Course: Electrical Engineering

Sl. No.	Category	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	Program Core Course	BELE-517	Electromagnetic Field Theory	3	1	0	4	4
2	Program Core Course	BELE-518	Microprocessors and Microcontrollers	3	0	0	3	3
3	Program Core Course	BELE-519	Power Systems – I (Apparatus and Modelling)	3	0	0	3	3
	Specialization		Program Elective - 1	3	1	0	4	4
5	Interdisciplinary		OE-1	3	1	0	4	4
6		BHUM-004	Economics for Engineers	3	0	0	3	3
7	Program Core Course	BELE-523	Microprocessors and Microcontrollers Lab	0	0	2	2	1
8	Program Core Course	BELE-524	Power Systems Lab	0	0	2	2	1
9		BELE-525	Project-II	0	0	4	4	2
				18	03	08	29	25

One Swayam Course: 3 Credits

(Credits will be added in the final semester marksheet)

Program Elective – 1

1. BELE-520 Line Commutated and Active rectifiers
2. BELE-521 Electrical Energy Conservation & Auditing
3. BELE-522 Digital Signal Processing

Open Elective-I

1. BCSE-503 Data Structure & Algorithm
2. BCSE-511 Computer Organization and Architecture
3. BECE-504 Analog and Digital Communication

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M. M. Engineering College
Mullana (Ambala) 133201

Semester VI [Third year]
Branch/Course: Electrical Engineering

Sl. No	Category	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	Program Core Course	BELE-526	Control Systems	3	1	0	4	4
2	Program Core Course	BELE-527	Power Systems - II (Operation and Control)	3	0	0	3	3
3	Specialization		Program Elective - 2	3	1	0	4	4
4	Specialization		Program Elective - 3	3	1	0	4	4
5	Interdisciplinary		OE-2	3	1	0	4	4
6		BHUM-005	Principle of Management	3	0	0	3	3
7	Program Core Course	BELE-534	Control Systems Lab	0	0	2	2	1
8	Program Core Course	BELE-535	Measurements and Instrumentation Lab	0	0	2	2	1
9		BELE-536	Project-III	0	0	4	4	2
				18	04	08	30	26

One Swayam Course: 3 Credits

(Credits will be added in the final semester marksheet)

Program Elective - 2

1. BELE-528 Electrical Machine Design
2. BELE-529 Measurements and Instrumentation
3. BELE-530 Electrical and Hybrid Vehicles

Program Elective - 3

1. BELE-531 Power System protection
2. BELE-532 Computational Electromagnetics
3. BELE-533 Electric Drives

Open Elective- 2

1. BCSE-517 Computer Network
2. BCSE-524 Business Intelligence
3. Essentials of IT

(Signature)
 Professor & Head
 Department of Electrical Engg
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 Mullana (Ambala) 131203

Semester VII [Fourth year]
Branch/Course: Electrical Engineering

Sl. No.	Category	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
				Lecture	Tutorial	Practical		
1	Specialization		Program Elective-4	3	0	0	3	3
2	Specialization		Program Elective-5	3	0	0	3	3
	Interdisciplinary		OE-3	3	0	0	3	3
	Interdisciplinary		OE-4	3	0	0	3	3
		BELE-543	Project -IV	0	0	8	8	4
4		BELE-544	Simulation Lab	0	0	4	4	2
				12	0	12	24	18

One Swayam Course: 3 Credits
(Credits will be added in the final semester mark sheet)

Program Elective - 4

1. BELE-537 Wind and Solar Energy Systems
2. BELE-538 Power System Dynamics and Control
3. BELE-539 Industrial Electrical Systems

Program Elective - 5

4. BELE-540 HVDC Transmission Systems
5. BELE-541 Power Quality and FACTS
6. BELE-542 Control Systems Design

Open Elective- 3

4. BECE-535 Digital Image and Video Processing
5. BECE-536 Biomedical Electronics
6. BECE-545 Speech and Audio Processing

Open Elective- 4

1. BECE-531 Embedded System
2. BECE-538 Wireless Sensor networks
3. BECE-540 Antenna and Wave Propagation

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Prof. & Head
Department of Electrical Engg.
M. M. Engineering College,
Mullana (Ambala) 133201

Semester VIII [Fourth year]
Branch/Course: Electrical Engineering

Sl. No.	Course Code	Course Title	Hours Per Week			Total Contact Hours	Credits
			Lecture	Tutorial	Practical		
1	BELE-545	Internship	0	0	08	08 weeks	08

OR (Two subjects)

Sl. No	Course Code	Category	Course Title	Hours Per Week			Total Contact Hours	Credit
				Lecture	Tutorial	Practical		
1	Specialization	BELE-546	Internet of Things (IOT)	3	1	0	4	4
2	Specialization	BELE-547	Installation, Testing, Commissioning and maintenance of Electrical equipments	3	1	0	4	4
3	Specialization	BELE-548	High Voltage Engineering	3	1	0	4	4
4	Specialization	BELE-549	Computer Methods in Power System	3	1	0	4	4
5	Specialization	BELE-550	System Engineering and Reliability	3	1	0	4	4
				15	05	0	20	20

TOTAL CREDITS

Sem	Credits
1 st	45
2 nd	
3 rd	19
4 th	19
5 th	25
6 th	26
7 th	18
8 th	08
Total Credits	160

TOTAL CREDITS (For Honors)

Sem	Credits
1 st	45
2 nd	
3 rd	19
4 th	19
5 th	25
6 th	26
7 th	18
8 th	08
Internship after 2 nd , 4 th and 6 th sem / Swayam Courses/ 3 additional subjects in 8 th sem	20 (Minimum requirement)
Total Credits	180

Professor & Head
Department of Electrical E. 24
M. M. Engineering College
Mullana (Ambala) 133203

(Signature)


(Signature)

6

SCHEME FOR CHOICE BASED CREDIT SYSTEM IN

B.Sc. (Non-Medical) B.Sc. Honors (PHYSICS)

SEM	COURSE OPTED	COURSE NAME	Paper Code	L	T	P	Credits	
							Gen	Hons
I	Core course-I	Mechanics	BP-111*	4	0	0	4	4
	Core Course-I Practical	Mechanics Lab	BP-112*	0	0	4	2	2
	Core course-II	Mathematical Physics-I	BP-H-113	5	1	0	--	6
	Core course-I	Differential Calculus	BM-111*	5	1	0	6	6
	AECC-I	English/ Environmental Science	BE-111/ES-101*	2	0	0	2	2
	Generic Elective -1	Chemistry -I	BC-111*	4	0	0	4	4
	Generic Elective -1 Practical	Chemistry -I Lab	BC-112*	0	0	4	2	2
				20	2	8	20	26
II	Core course-IV	Electricity, Magnetism and Electromagnetic Theory	BP-121*	4	0	0	4	4
	Core Course-IV Practical	Electricity, Magnetism and EMT Lab	BP-122*	0	0	4	2	2
	Core course-V	Analog Systems & Applications	BP-H-123	5	1	0	--	6
	Core Course-VI	Differential Equations	BM-121*	5	1	0	6	6
	AECC-2	English/ Environmental Science	BE-111/ES-101*	2	0	0	2	2
	Generic Elective -2	Chemistry-II	BC-121*	4	0	0	4	4
	Generic Elective -2	Chemistry-II Lab	BC-122*	0	0	4	2	2
				20	2	8	20	26
III	Core course-VII	Thermal Physics and Statistical Mechanics	BP-231*	4	0	0	4	4
	Core Course-VII Practical	Thermal Physics and Statistical Mechanics Lab	BP-232*	0	0	4	2	2
	Core course-VIII	Digital Systems & Application (BP-H-232)	BP-H-233	5	1	0	--	6
	Core Course-IX	Real Analysis	BM-231*	5	1	0	6	6


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	AEEC -1	Renewable Energy Sources	AEEC-1* (BP-H-234)	2	0	0	2	2
	Generic Elective -3	Chemistry-III	BC-231*	4	0	0	4	4
	Generic Elective -3 Lab	Chemistry-III Lab	BC-232*	0	0	4	2	2
				20	02	08	20	26
IV	Core course-X	Waves and Optics	BP-241*	4	0	0	4	4
	Course-X Practical	Waves and Optics Lab	BP-242*	0	0	4	2	2
	Core course-XI	Atomic Spectroscopy	BP-H-244	5	1	0	--	6
	Core course-XII	Algebra	BM-241*	5	1	0	6	6
	AEEC -2	Computational Physics	AEEC -2* BP-243*	2	0	0	2	2
	Generic Elective -4	Chemistry-IV	BC-241*	4	0	0	4	4
	Generic Elective -4 Lab	Chemistry-IV Lab	BC-242*	0	0	0	2	2
				20	02	08	20	26
V	DSE-1	Elements of Modern Physics	BP-351*	4	0	0	4	4
	DSE-1 Practical	Elements of Modern Physics Lab	BP-352*	0	0	4	2	2
	Core course-XI	Quantum Mechanics & Applications	BP-H-354	5	1	0		6
	Core course-XII	Mathematical Physics-II	BP-H-355	5	1	0		6
	DSE-2	Mathematics	BM-351*	5	1	0	6	6
					19	3	4	
VI	Core course-XIII	Electro-magnetic Theory	BP-H-364	5	1	0	--	6
	Core course-XIV	Nuclear & Particle Physics	BP-H-365	5	1	0	--	6
	DSE-3	Solid State Physics and Electronics	BP-361*	4	0	0	4	4
	DSE-3 Lab	Solid State Physics and Electronics Lab	BP-362*	0	0	4	2	2
	DSE-4	MATHEMATICS	BM-361*	5	1	0	6	6
					19	3	4	
								152

*Common with B.Sc. (Non Medical)

**MAHARISHI MARKANDESHWAR (Deemed to be University)**

Mullana- Ambala, 133207

(Established under Section 3 of the UGC Act. 1956)

(NAAC Accredited Grade 'A' University)

Department of Mathematics & Humanities

Scheme of B.Sc. (Honours) Mathematics**(For the Batch 2019-22)**

w.e.f. 2019-20

I. FIRST SEMESTER

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)	
				Lecture	Practical	Tutorial			
1	Core	BMAT-511	Calculus	4	-	-	4	100(60+40)	
2		BMAT-512	Calculus (LAB)		4	-	2	50(20+30)	
3	Core	BMAT-513	Algebra	5		1	6	150(90+60)	
4	AECC	BHUM-111	English Communication	2	-	-	2	50(30+20)	
5	GE	Option I	BCAP-001	Web Designing using HTML	4	-	-	4	100(60+40)
6			BCAP-002	Web Designing using HTML Lab	-	4	-	2	50(20+30)
OR									
7		Option II	BMAT-514	Finite Element Methods	5	-	1	6	150(90+60)
Total				15	8	1	20	500	

II. SECOND SEMESTER

S.No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)	
				Lecture	Practical	Tutorial			
1	Core	BMAT-521	Real Analysis	5	-	1	6	150(90+60)	
2	Core	BMAT-522	Differential Equation	4	-	-	4	100(60+40)	
3		BMAT-523	Differential Equation(LAB)	-	4	-	2	50(20+30)	
4	AECC	BEVS-001	Environmental Science	2	-	-	2	50(30+20)	
5	GE	Option I	BCAP003	Database Management Systems	4	-	-	4	100(60+40)
			BCAP 004	Database Management System Lab	-	4	-	2	50(20+30)
OR									
7		Option II	BMAT-525	Econometrics	5	-	1	6	150(90+60)
Total				16	4	2	20	500	

*Signature**Date 12/8/22*


MAHARISHI MARKANDESHWAR (Deemed to be University)

Mullana- Ambala, 133207

(Established under Section 3 of the UGC Act. 1956)

(NAAC Accredited Grade 'A' University)

Department of Mathematics & Humanities

Scheme of **B. SC. Honours (Mathematics) CBCS**

(For the Batch 2018-21)

W.e.f. 2019-20

THIRD SEMESTER

Sl. No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
	Core	BC-231	Chemistry -III	4	-	-	4	100(60+40)
	Core	BC-232	Chemistry Practical-III	-	4	-	2	50(20+30)
	Core	BP-231	Physics -III	4	-	-	4	100(60+40)
	Core	BP-232	Physics Practical-III	-	4	-	2	50(20+30)
	Core	BM-231	Mathematics-III (Real Analysis)	6	-	2	7	150(90+60)
	SEC	BM 234	Advance Excel Lab	-	2	-	1	50(30+20)
	GE	BM-232	Mathematics- IIIA (Partial differential equation)	4	-	-	4	100(60+40)
	GE	BM-233	Mathematics -IIIB (Mechanics)	3	-	-	3	100(60+40)
		Total		21	10	2	27	700

FOURTH SEMESTER

Sl. No.	Course	Paper Code	Paper	Hrs/Week			Cr.	Marks T (Ex.+In.)
				Lecture	Practical	Tutorial		
1	Core	BC-241	Chemistry -IV	4	-	-	4	100(60+40)
2	Core	BC-242	Chemistry Practical-IV	-	4	-	2	50(20+30)
3	Core	BP-241	Physics -IV	4	-	-	4	100(60+40)
4	Core	BP-242	Physics Practical-IV	-	4	-	2	50(20+30)
5	Core	BM-241	Mathematics-IV (Modern Algebra)	6	-	2	7	150(90+60)
6	SEC	BM 244	MATLAB	-	2	-	1	50(30+20)
7	GE	BM-242	Mathematics- IVA (Riemann Integration and Metric Space)	4	-	-	4	100(60+40)
8	GE	BM-243	Mathematics -IVB (Numerical method)	3	-	-	3	100(60+40)
		Total		21	10	2	27	700

Subish - *Uyoli*
Nishi

Date
 17/5/19

Choice-Based Credit System Based Proposed Scheme for **MMIM's B.Com Program**

Program Duration: 3 Years comprising of 6 semesters

Degree to be awarded at 160 credits with 119 credits for the core and foundation courses which are mandatory and the remaining can be gained by the rest of the courses.

There will be no cap on the upper limit of the credits earned by the student, so one can earn a minimum of 160 and a maximum of 217 credits to earn an B.Com degree under CBCS.

Completed

Semester-I (New)

Course Code	Course Title	Course Type	Credits
BCGM-01	Environmental Studies	Core (Swayam)	2
BCFI-01	Financial Accounting	Core	5
BCGM-02	Business Organisation and Management	Core	5
BCGM-03	Principles of Micro Economics	Foundation	5
BCMS-01	Business Mathematics	Core	5
BCGM-04	Communication Skills-I (New)	Foundation	5
BCHR-01	Organization Behaviour	Core	5
			Total Credits 32

Semester-II

Course Code	Course Title	Course Type	Credits
BCGM-05	Communication Skills- II ✓	Foundation	5
BCLA-01	Business Law ✓	Core	5
BCMS-02	Business Statistics ✓	Foundation	5
BCGM-06	Research Methodology ✓	Core	5
BCGM-07	Indian Economy ✓	Interdisciplinary	5
BCGM-08	Environmental Science -II	Swayam (Core)	2
BCSS-01	Business Process ✓	Core	5

*M. S. ...
14/5/17*

			Total Credits 32
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Semester-III

Course Code	Course Title	Course Type	Credits
BCLA-02	Company Law	Core	5
BCFI-02	Income Tax Law and Practice	Core	5
BCHE01	New Subject HRM	Core	5
BCIT-01	Computer Applications in Business	Foundation	5
BCMM-01	Personal Selling and Salesmanship	Specialization	5
BCPP-01	Project-I	Core	5
			Total Credits 30

Semester-IV

Course Code	Course Title	Course Type	Credits
BCGM-09	Business Communication III	Core	5
a) BCFI-03 b) BCFI-04 c) BCGM-10 d) BCIT-02	Any one of the following a. Corporate Tax Planning b. Banking and Insurance c. Management Accounting d. Computerised Accounting System	Specialization	5
a) BCIB-01 b) BCGM-11 c) BCFI-05 d) BCLA-03	Any one of the following a. International Business b. Office Management and Secretarial Practice c. Fundamentals of Investment d. Consumer Protection	Specialization	5
BCFI-06	Corporate Accounting	Core	5
BCFI-07	Cost Accounting	Core	5
BCPP-02	Project-II	Core	5

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			Total Credits 30
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Semester-V

Course Code	Course Title	Course Type	Credits
a) BCHR-02 b) BCMM-02 c) BCGM-12	Any one the following a. Human Resource Management b. Principles of Marketing c. Auditing and Corporate Governance	Specialization	5
a) BCFI-08 b) BCFI-09	Any one of the following a. Fundamentals of Financial Management b. Indirect Tax Law	Specialization	5
BCGM-13	Entrepreneurship	Specialization	5
BCIT-03	E-Commerce	Foundation	5
BCPP-03	Project -III	Core	5
BCSI-01	Internship	Core	5
			Total Credits 30

Semester-VI

Course Code	Course Title	Course Type	Credits
BCGM-14	Principles of Macro Economics	Specialization	5
BCLA-04	Business Regulatory Framework in India	Interdisciplinary	5
BCFI-10	Banking Laws & Practice	Specialization	5
BCGM-15	Corporate Social Responsibility & Business Ethics	Interdisciplinary	5
BCDD-01	Dissertation	Interdisciplinary	10
			Total Credits 30

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In the sixth semester, the student can choose Industry attachment program duly approved by the university with the same credits that is of regular sixth semester. The details of the same are as follows:

Industry Attachment/Industry Capstone Project

A full-fledged industry attachment is the defining feature of Industry Capstone Project (ICP) to be carried by students in their final semester. ICP thus provides students an opportunity to apply their knowledge and skills to solve real-world industry/corporate problems. A student shall be formally attached to relevant industrial/corporate organisation for their VI semester during which they shall be exposed to 360° industry experience.

Basket of Courses Available

(These courses are available beyond normal working hours.)

Enrichment Courses

Paid basket of Courses

Sr. No.	Course Code	Course Name	Course Type	Credits
1	EC-01	Culinary Skills*	Inter-disciplinary	3
2	EC-02	T-Series-1**	Inter-disciplinary	3
3	EC-03	T-Series-2**	Inter-disciplinary	3
4	EC-04	T-Series-3**	Inter-disciplinary	3

On the payment of INR 8000/- or as prescribed from time to time.

**On the payment of INR on payment of INR 8850/- or as prescribed from time to time.

T-Series-1 - Vocals
T-Series-2 - Singing
T-Series-3 - Performing arts

Free basket of Courses

MMU SAP Program Kit for Students

Value-Added Courses (200 Hrs of Self Learning Program ;
Total Credits 12)

Sr. No.	Course Code	Course Name	Course Type	Credits
1	MBSS-02	SAP Functions	Foundation	12

MBSS-02
19-7-17

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Choice Based Functional Papers of SAP

- 1) Material Management
- 2) Sales & Distribution
- 3) HR
- 4) Finance

Out of these four functional papers, a student can choose any one functional paper, which is to be completed in 4 modules and the student earn 12 credits on completion of the course. Total learning hours = 200.

Swayam Courses

A student shall earn a maximum of 9 credits from this basket of courses.

UGC Credit Framework for Online Learning Courses through SWAYAM, Regulation, 2016.

Sr. No.	Course Code	Course Name	Credits
1	SW-01	Cognitive Science	TBA
2	SW-02	Quantitative Finance	TBA
3	SW-03	Technology Transfer through Joint Venture	TBA
4	SW-04	Legal Compliance for Incorporating Startup	TBA
5	SW-05	Public Finance and Policy in India	TBA
6	SW-06	Money and Banking	TBA
7	SW-07	International Economics	TBA
8	SW-08	Environmental Economics	TBA
9	SW-09	Educational Leadership	TBA
10	SW-10	Six Sigma	TBA
11	SW-11	Introduction to data Analytics	TBA
12	SW-12	Social Networks	TBA
13	SW-13	Introduction to R Software	TBA
14	SW-14	Experimental Stress Analysis	TBA
15	SW-15	Database Management System	TBA
16	SW-16	Probability and Stochastic of Finance	TBA
17	SW-17	Practical Englis: Learning & Teaching	TBA
18	SW-18	Probability and Statistics	TBA
19	SW-19	Emotional Intelligence	TBA
20	SW-20	Innovation and IT Management	TBA
21	SW-21	Statistics for Business	TBA

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Credits Summary Sheet

Type of Course	No. Of Papers	Credits Earned
Foundation	6	30*
Core	18	89*
Specialization	8	40
Interdisciplinary	4	25
Free / Paid Basket of Courses		
Cullinary/T-Series	4	12
SAP	1	12
Swayam		9
	Total Credits	217

* Mandatory Credits

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B.Sc Optometry**First Semester**

Subject code	Core Subjects	Credits/Week			Hours/semester			IA*	UE*	Practical/Viva Voce	Total (IA+UE)
		L	P	C	L	T/P	Total				
BOPT-01 T	General Anatomy	2	-	2	30	-	30	10	60	-	70
BOPT-01 P	General Anatomy	-	1	1	-	30	30	10	-	20	30
BOPT-02 T	General Physiology	2	-	2	30	-	30	10	60	-	70
BOPT-02 P	General Physiology	-	1	1	-	30	30	10	-	20	30
BOPT-03 T	General Biochemistry	2	-	2	30	-	30	10	60	-	70
BOPT-03 P	General Biochemistry	-	1	1	-	30	30	10	-	20	30
BOPT-04 T	Geometrical Optics-I	3	-	3	45	-	45	10	60	-	70
BOPT-04 P	Geometrical Optics-I	-	1	1	-	30	30	10	-	20	30
Ability Enhancement Elective Course											
AEC-01T	English & Communication Skills	2	-	2	30	-	30	100	-	-	100
AEC-02T	Environment Sciences										
TOTAL		11	4	15	165	120	285	180	240	80	500

*IA – Internal Assessment Examinations (Theory)

** UE- University


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M.M. Institute of Medical Sciences
& Research, Mullana-Ambala

Second Semester

Subject code	Core Subjects	Credits /weeks			Hours per semester			IA*	UE**	Practical/ Viva Voce	Total I (IA+ UE)
		L	P	C	L	T/P	Total				
BOPT-05T	Ocular Anatomy	3	-	3	45	-	45	10	60	-	70
BOPT-05P	Ocular Anatomy	-	1	1	-	30	30	10	-	20	30
BOPT-06T	Ocular Physiology	3	-	3	45	-	45	10	60	-	70
BOPT-06P	Ocular Physiology	-	1	1	-	30	30	10	-	20	30
BOPT-07T	Ocular Biochemistry	3	-	3	45	-	45	10	60	-	70
BOPT-07P	Ocular Biochemistry	-	1	1	-	30	30	10	-	20	30
BOPT-08T	Physical Optics	3	-	3	45	-	45	10	60	-	70
BOPT-08P	Physical Optics	-	1	1	-	30	30	10	-	20	30
BOPT-09T	Geometrical Optics-II	3	-	3	45	-	45	10	60	-	70
BOPT-09P	Geometrical Optics-II	-	1	1	-	30	30	10	-	20	30
BOPT-010P	Clinical Optometry-I		1	1		30	30	20	0	80	100
Skill Enhancement Elective Course											
SEC-01T	Medical Bioethics & IPR	3	-	3	45	-	45	100	-	-	100
SEC-02T	Human rights & Professional Values										
TOTAL		18	6	24	270	180	450	220	300	180	700

*IA - Internal Assessment Examinations (Theory)

** UE- University



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 M.M. Institute of Medical Sciences
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Third Semester

Subject code	Core subjects	Credits /weeks			Hours per semester			IA*	UE**	Practical/Viva Voce	Total (IA+ UE)
		L	P	C	L	T/P	Total				
BOPT-11 T	Ocular Microbiology	1		1	15		15	10	60	-	70
BOPT-11 P	Ocular Microbiology		1	1		30	30	10	-	20	30
BOPT-12 T	Visual optics -I	1		1	15		15	10	60	-	70
BOPT-12 P	Visual optics -I		1	1		30	30	10	-	20	30
BOPT-13 T	Optometric optics-I	3		3	45		45	10	60	-	70
BOPT-13 P	Optometric optics-I		1	1		30	30	10	-	20	30
BOPT-14 T	Optometric Instruments	2		2	30		30	10	60	-	70
BOPT-14 P	Optometric Instruments		1	1		30	30	10	-	20	30
BOPT-15 T	Ocular Disease -I	3		3	45		45	10	60	-	70
BOPT-15 P	Ocular Disease -I		1	1		30	30	10	-	20	30
BOPT-16 T	Clinical examination of visual system	2		2	30		30	10	60	-	70
BOPT-16 P	Clinical examination of visual system		1	1		30	30	10	-	20	30
BOPT-17 P	Clinical Optometry-II	2	2	2	60		60	20	-	80	100
Generic Elective Course											
GEC-01 T	Pursuit of Inner Self Excellence (POIS)	3		3	45		45	100			100
GEC-02 T	Organizational behaviour										
TOTAL		15	8	23	225	240	465	240	420	140	800

*IA - Internal Assessment Examinations (Theory)

** UE- University

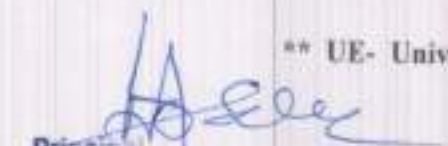

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 M.S. Institute of Medical Sciences
 & Research, Muliana-Ambala

Fourth Semester

Subject code	Core Subjects	Credits /weeks			Hours per Semester			IA*	UE**	Practical Viva Voce	Total (IA+ UE)
		L	P	C	L	T/P	Total				
BOPT-18 T	Optometric optics – II & Dispensing Optics	3		3	45		45	10	60	-	70
BOPT-18 P	Optometric optics – II & Dispensing Optics		1	1		30	30	10	-	20	30
BOPT-19 T	Visual Optics- II	3		3	45		45	10	60	-	70
BOPT-19 P	Visual Optics- II		1	1		30	30	10	-	20	30
BOPT-20 T	Ocular Disease –II and glaucoma	3		3	45		45	10	60	-	70
BOPT-20 P	Ocular Disease –II and glaucoma		1	1		30	30	10	-	20	30
BOPT-21 T	Basic and Ocular Pharmacology & Pathology	3		3	45		45	10	60	-	70
BOPT-21 P	Basic and Ocular Pharmacology & Pathology		2	2		60	60	10	-	20	30
BOPT-22 P	Clinical optometry-III		2	2		60	60	20	-	80	100
Ability Enhancement Elective Course											
AEC-03T	Computer Applications &										
AEC-04T	Biostatistics research methodology	&3		3	45		45	100			100
TOTAL		15	7	22	225	210	435	200	240	160	600

*IA – Internal Assessment Examinations (Theory)

** UE- University


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 & Research, Itilana-Ambala

Fifth Semester

Subject code	Core Subjects	Credits			Hours per Semester			IA*	UE**	Practical/ Viva Voce	Total (IA+ UE)
		/weeks			L	T/P	Total				
		L	P	C							
BOPT-23T	Contact lens -I	3		3	45		45	10	60	-	70
BOPT-23P	Contact lens -I		1	1		30	30	10		20	30
BOPT-24T	Low Vision care	3		3	45		45	10	60	-	70
BOPT-24P	Low Vision care		1	1		30	30	10		20	30
BOPT-25T	Geriatric Optometry & Pediatric Optometry	3		3	45		45	10	60	-	70
BOPT-25P	Geriatric Optometry & Pediatric Optometry		1	1		30	30	10		20	30
BOPT-26T	Binocular Vision-I	3		3	45		45	10	60	-	70
BOPT-26P	Binocular Vision-I		1	1		30	30	10		20	30
BOPT-27T	Systemic Disease	3		3	45		45	10	60	-	70
BOPT-27P	Systemic Disease		1	1		30	30	10		20	30
BOPT-28P	Clinical optometry-IV		2	2		60	60	20	-	80	100
Core Elective Course											
CEC-01T	Basics of Clinical Skill learning	3		3	45		45	100			100
CEC-02T	Hospital Operation Management										
TOTAL		18	7	25	270	210	480	220	300	180	700

*IA – Internal Assessment
Examinations (Theory)

** UE- University


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M.P.A. Institute of Medical Sciences
& Research, Nallana-Ambala

Sixth Semester

Subject code	Core Subjects	Credits /weeks			Hours per semester			IA*	UE**	Practical/ Viva Voce	Total (IA+UE)
		L	P	C	L	T/P	Total				
BOPT-29 T	Contact Lens -II	3		3	45		45	10	60	-	70
BOPT-29 P	Contact Lens -II		2	2		60	60	10		20	30
BOPT-30 T	Binocular Vision -II			3	45		45	10	60	-	70
BOPT-30 P	Binocular Vision -II		2	2		60	60	10		20	30
BOPT-31 T	Public Health & Community Optometry	3		3	45		45	10	60	-	70
BOPT-31 P	Public Health & Community Optometry		1	1		30	30	10		20	30
BOPT-32 T	Occupational optometry	3		3	45		45	10	60	-	70
BOPT-32 P	Occupational optometry		1	1		30	30	10		20	30
BOPT-33 P	Clinical Optometry V		3	3		90	90	20		80	100
TOTAL		12	9	21	180	270	450	100	240	160	500

*IA - Internal Assessment Examinations (Theory)

** UE- University

Seventh and Eighth Semester

Subject code	Core Subjects	Credits /week	Hours per semester			Total
			L/T	Clinical posting	L/T C/P/ RP	
Semester 7 (Internship)	B Optom Internship		360		720	720
Semester 8 (Internship)	B Optom Internship		360		720	720
TOTAL			720		1440	1440

Principal
M.D. ... of Medical Sciences

M.M. (Deemed to be University) MULLANA - AMBALA

Program: **B.Sc in Radiography & Imaging Technology**

(Techniques) Semester/Term: I

S.No	Subjects	Credits/week			Hours/Semester			Written paper	IA	Viva-voce	Core/Elective Pre-Requisite/ Co Requisite	Total
		L	P	C	L	T/P	Total					
THEORY												
RIT-01T	HUMAN ANATOMY WITH CLINICAL ANATOMY-I	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RITT-02T	PHYSIOLOGY AND PATHOLOGY-I	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RITT-03T	RADIATION PHYSICS-I	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RITT-04T	RADIATION PROTECTION-I	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
PRACTICAL												
RIT-01P	HUMAN ANATOMY WITH CLINICAL ANATOMY -I (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-02P	PHYSIOLOGY AND PATHOLOGY -I (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-03P	RADIATION PHYSICS - I (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-04P	RADIATION PROTECTION - I (LAB)	-	3	3	-	90	90	-	10	20	Core	30
ABILITY ENHANCEMENT ELECTIVE COURSE												

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AEC-01T	English & Communication Skills	3		3	45	-	45		-	100		100
AEC-02T	Environmental Sciences											
	Total	15	12	27	225	360	585	240	120	260		620

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M.M.  of Medical Sciences
& Health, Wafang-Ambala

M.M. (Deemed to be University) MULLANA - AMBALA
Program: B.Sc in Radiography & Imaging Technology

Semester/Term.: 2

S.No	Subjects	Credits/week			Hours/Semester			Written paper	IA	Viva-voce	Core/Elective Pre-Requisite/Co Requisite	TOTAL
		L	P	C	L	T/P	Total					
THEORY												
RIT-05T	HUMAN ANATOMY WITH CLINICAL ANATOMY- II	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-06T	PHYSIOLOGY AND PATHOLOGY - II	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-07T	RADIATION PHYSICS - II	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-08T	RADIATION PROTECTION - II	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
PRACTICAL												
RIT-05P	HUMAN ANATOMY WITH CLINICAL ANATOMY -II (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-06P	PHYSIOLOGY AND PATHOLOGY - II (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-07P	RADIATION PHYSICS - II (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-08P	RADIATION PROTECTION - II (LAB)	-	3	3	-	90	90	-	10	20	Core	30

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& Research, Mullana - Ambala

Skill Enhancement Elective Course

SEC-01 T	Medical Bioethics												100
SEC-02T	Human rights & Professional Values	3	-	3	45	-	45			100	-		
	Total	15	12	27	225	360	585	240	220	160			620

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M.M. Institute of Medical Sciences
& Research, Muliana-Ambala

M.M. (Deemed to be University) MULLANA - AMBALA

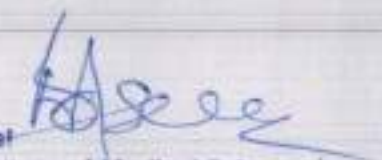
Program: **B.Sc in Radiography & Imaging Technology**

(Techniques) Semester/Term.: 3

S.No	Subjects	Credits/week			Hours/Semester			Written paper	LA	Viva-voce	Core/Elective Pre-Requisite/Co Requisite	TOTAL
		L	P	C	L	T/P	Total					
THEORY												
RIT-09T	CLINICAL RADIOGRAPHY- I	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-10T	X-RAY FILM / IMAGEPROCESSING TECHNIQUES- I	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-11T	CONTRAST SPECIAL RADIOGRAPHY-I	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-12T	ULTRASOUND	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
PRACTICAL												
RIT-09P	CLINICAL RADIOGRAPHY - I(LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-10P	X-RAY FILM / IMAGEPROCESSING TECHNIQUES- I (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-11P	CONTRAST SPECIAL RADIOGRAPHY -I (LAB)	-	3	3	-	90	90	-	10	20	Core	30

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 & Research, Mullana-Ambala

Generic Elective Course											
GEC-01 T	Pursuit of Inner Self Excellence (POIS)	1		1	45	-	45		100		100
GEC-02 T	Organizational behaviour										
Total		15	9	24	225	270	495	240	210	140	590

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 M.V. Institute of Medical Sciences
 & Research, Multana-Amritsar

M.M. (Deemed to be University) MULLANA - AMBALA
 Program: **B.Sc in Radiography & Imaging Technology (Techniques)**

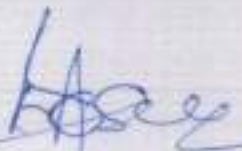
Semester/Term.: 4

S.No	Subjects	Credits/week			Hours/Semester			Written paper	LA	Viva-voce	Core/Elective Pre-Requisite/ Co Requisite	TOTAL
		L	P	C	L	T/P	Total					
RIT-13T	CLINICAL RADIOGRAPHY-II	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-14T	X-RAY FILM IMAGEPROCESSING TECHNIQUES - II	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-15T	CONTRAST SPECIAL RADIOGRAPHY -II	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-16T	DOPPLER ULTRASOUND AND MAMMOGRAPHY	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
PRACTICAL												
RIT-13P	CLINICAL RADIOGRAPHY - II (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-14P	X-RAY FILM IMAGEPROCESSING TECHNIQUES - II (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-15P	CONTRAST SPECIAL RADIOGRAPHY and	-	3	3	-	90	90	-	10	20	Core	30

MAMMOGRAPHY-II (I AB)

Ability Enhancement Elective Course

AEC-03T	Computer & Applications	3	-	3	45	-	45		100	-		100
AEC-04T	Biostatistics & research methodology											
Total		15	9	24	225	270	495	240	210	140		590


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FMU Institute of Medical Sciences
& Research, Mulana-Ambala

M.M. (Deemed to be University) MULLANA - AMBALA

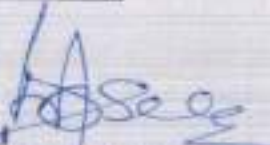
Program: B.Sc in Radiography & Imaging Technology

(Techniques) Semester/Term.: 5

S.No	Subjects	Credits/week			Hours/Semester			Written paper	LA	Viva-voce	Core/Elective Pre-Requisite/ Co Requisite	TOTAL
		L	P	C	L	T/P	Total					
THEORY												
RIT-17T	COMPUTED TOMOGRAPHY-BASIC PHYSICS	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-18T	MAGNETIC RESONANCE IMAGING- BASIC PHYSICS	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-19T	ANGIOGRAPHY & INTERVENTIONAL RADIOLOGY -I	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-20	NUCLEAR MEDICINE-- BASIC PHYSICS	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
PRACTICAL												
RIT-17P	COMPUTED TOMOGRAPHY - I (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-18P	MAGNETIC	-	3	3	-	90	90	-	10	20	Core	30

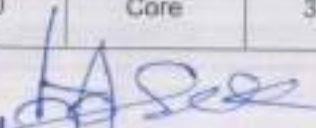
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	RESONANCE IMAGING - I (LAB)												
RIT-19P	ANGIOGRAPHY & INTERVENTIONAL RADIOLOGY - I (LAB)	-	3	3	-	90	90	-	10	20	Cor		30
Core Elective Course													
CEC-01T	Basics of Clinical Skill learning												
CEC-02T	Hospital Operation Management	3	-	3	45	-	45		100	-			100
Total		15	9	24	225	270	595	240	210	140			590


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M.M. (Deemed to be University) MULLANA - AMBALA
Program: B.Sc. in Radiography & Imaging Technology
(Techniques) Semester/Term.: 6

S.No	Subjects	Credits/week			Hours/Semester			Written paper	LA	Viva-voce	Core/Elective Pre-Requisite/Co Requisite	TOTAL
		L	P	C	L	T/P	Total					
THEORY												
RIT-20T	COMPUTED TOMOGRAPHY - TECHNIQUES	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-21T	MAGNETIC RESONANCE IMAGING - TECHNIQUES	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-22T	ANGIOGRAPHY & INTERVENTIONAL RADIOLOGY -II	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
RIT-23T	NUCLEAR MEDICINE-TECHNIQUES	3	-	3	45	-	45	Part A-30 Part B-30	20	20	Core	100
PRACTICAL												
RIT-20P	COMPUTED TOMOGRAPHY - II (LAB)	-	3	3	-	90	90	-	10	20	Core	30
RIT-21P	MAGNETIC RESONANCE	-	3	3	-	90	90	-	10	20	Core	30

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	IMAGING - II (LAB)												
RIT-22P	ANGIOGRAPHY & INTERVENTIONAL RADIOLOGY -II (LAB)	-	3	3	-	90	90	-	10	20	Core	30	
Total		12	9	21	225	270	495	240	110	140		490	

Grading:

The total of the internal evaluation marks and final University examination marks in each course will be converted to a letter grade on to confirm as per the following scheme as recommended by UGC:

Letter Grade	Grade Points	Mark Range
O(Outstanding)	10	91 – 100
A+(Excellent)	9	81 – 90
A(Very good)	8	71 – 80
B+(Good)	7	61 – 70
B(Above average)	6	56 – 60
C(Average)	5	50 – 55
F(Fail)/RA (Reappear)	0	< 50 Failure due to insufficient marks in the course
Ab (Absent)	0	Failure due to non-appearance in examination

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


Cumulative Grades and GradePoints


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M.M. (Deemed to be University) MULLANA – AMBALA
 Program: **B.Sc. (DTT) Dialysis Therapy Technology Course**

Semester/ Term: I

S.No	Subjects	Credit/week			Hrs/semesters				marks			
		Theory	practical	Total	Theory	practical	Lab posting	Total	Viva-voce	LA	Semester exam	TOTAL
THEORY												
DTT-01T	HUMAN ANATOMY-I	3		3	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT -02T	HUMAN PHYSIOLOGY-I	3		3	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT-03T	BIOCHEMISTRY	4		4	50	-	-	50	20	20	Part A – 30 Part B – 30	100
PRACTICAL												
DTT -01P	HUMAN ANATOMY-I (LAB)		4	4	-	75	75	150	-	20	80	100
DTT -02P	HUMAN PHYSIOLOGY-I (LAB)		4	4	-	75	75	150	-	20	80	100
DTT-03P	BIOCHEMISTRY(LAB)		4	4	-	75	75	150	-	20	80	100
ABILITY ENHANCEMENT ELECTICECOURSE												
AEC-01L	Environmental studies	3	-	3	80	-	-	80	-	40 (of Theory & Practical)	60	100
AEC-02 L	Data entry/ processing				10	10	-	20	-	-	-	-


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M.M. (Deemed to be University) MULLANA – AMBALA
 Program: **B.Sc. (DTT) Dialysis Therapy Technology Course**

Semester/Term.:II

S.No	Subjects	Credit/week			Hrs/semesters				marks			
		Theory	practical	Total	Theory	practical	Lab posting	Total	Viva-voce	I.A	Semester exam	TOTAL
THEORY												
DTT-04T	HUMAN ANATOMY-II	2	-	2	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT -05T	HUMAN PHYSIOLOGY-II	2	-	2	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT-06T	PATHOLOGY	4	-	4	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT-07T	MICROBIOLOGY	3	-	3	50	-	-	50	20	20	Part A – 30 Part B – 30	100
PRACTICAL												
DTT -04P	HUMAN ANATOMY-II (LAB)	-	4	4	-	75	75	150	-	20	80	100
DTT -05P	HUMAN PHYSIOLOGY-II (LAB)	-	2	2	-	75	75	150	-	20	80	100
DTT-06P	PATHOLOGY (LAB)	-	4	4	-	75	75	150	-	20	80	100
DTT -07P	MICROBIOLOGY (LAB)	-	4	4	-	75	75	150	-	20	80	100
SKILL ENHANCEMENT ELECTICECOURSE												
SEC-01 L	Instrument maintenance	3	-	3	10	10	-	20	-	-	-	-
SEC-02 L	Chemical Hazards				10	10	-	20				

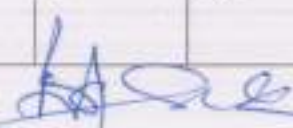
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M.M. (Deemed to be University) MULLANA – AMBALA

Program: **B.Sc. (DTT) Dialysis Therapy Technology Course**

Semester/Term: III

S.No	Subjects	Credit/week				Hrs/semesters				marks			
		Theor y	pract ical	Lab postin g	Total	Theo ry	practical	Lab posting	Total	Viva- voce	IA	Semester exam	TOTAL
THEORY													
DTT-01T	Applied Pathology & Microbiology related to Dialysis Therapy Technology-I	3	-	-	3	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT -02T	General Pharmacology-I	3	-	-	3	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT-03T	Pharmacology related to dialysis technology-I	3	-	-	3	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT-04T	Concept of renal Disease, dialysis & nutrition-I	3	-	-	3	60	-	-	60	20	20	Part A – 30 Part B – 30	100
PRACTICAL													
DTT -01P	Applied Pathology & Microbiology related to Dialysis Therapy Technology-I	-	4	-	4	-	100	100	200	-	20	80	100
DTT -02P	General Pharmacology-I	-	4	-	4	-	100	100	200	-	20	80	100
DTT-03P	Pharmacology related to dialysis technology-I	-	4	-	4	-	80	100	180	-	20	80	100
DTT -04P	Concept of renal Disease, dialysis & nutrition-I	-	4	-	4	-	-	90	90	-	20	80	100
DTT -05P	B.Sc. DTT Directed Clinical Education – Part-I (Practical)	-	-	24	8	-	-	150	150	-	20	80	100

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M.M. (Deemed to be University) MULLANA – AMBALA

Program **B.Sc. (DTT) Dialysis Therapy Technology Course**

Semester/ Term: IV

S.No	Subjects	Credit/week				Hrs/semesters				marks			
		Theor y	pract ical	Lab postin g	Total	Theo ry	practical	Lab posting	Total	Viva- voce	LA	Semester exam	TOTAL
THEORY													
DTT-01T	Applied Pathology & Microbiology related to Dialysis Therapy Technology-II	3	-	-	3	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT -02T	General Pharmacology-II	3	-	-	3	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT-03T	Pharmacology related to dialysis technology-II	3	-	-	3	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT-04T	Concept of renal Disease, dialysis & nutrition-II	3	-	-	3	60	-	-	60	20	20	Part A – 30 Part B – 30	100
PRACTICAL													
DTT -01P	Applied Pathology & Microbiology related to Dialysis Therapy Technology-II	-	4	-	4	-	100	100	200	-	20	80	100
DTT -02P	General Pharmacology-II	-	4	-	4	-	100	100	200	-	20	80	100
DTT-03P	Pharmacology related to dialysis technology-II	-	4	-	4	-	80	100	180	-	20	80	100
DTT -04P	Concept of renal Disease, dialysis & nutrition-II	-	4	-	4	-	-	90	90	-	20	80	100
DTT -05P	B.Sc. DTT Directed Clinical Education – Part-II (Practical)	-	-	30	10	-	-	150	150	-	20	80	100

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Program: **B.Sc. (DTT) Dialysis Therapy Technology Course**

Semester/Term: V

S.No	Subjects	Credit/week				Hrs/semesters				marks			
		Theory	practical	Lab posting	Total	Theory	practical	Lab posting	Total	Viva-voce	LA	Semester exam	TOTAL
THEORY													
DTT-01T	Applied Dialysis Therapy Technology-Part-I	4	-	-	4	50	-	-	50	20	20	Part A – 30 Part B – 30	100
DTT -02T	Applied Dialysis Therapy Technology-Part-II	4	-	-	4	50	-	-	50	20	20	Part A – 30 Part B – 30	100
PRACTICAL													
DTT -01P	Applied Dialysis Therapy Technology-Part-I	-	4	-	4	-	100	100	200	-	20	80	100
DTT -02P	Applied Dialysis Therapy Technology-Part-II	-	4	-	4	-	100	100	200	-	20	80	100
DTT-03P	B.Sc. DTT Directed Clinical Education – Part-III (Practical)	-	-	24	8	-	-	100	100	-	20	80	100


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M.M. (Deemed to be University) MULLANA – AMBALA
 Program: **B.Sc. (DTT) Dialysis Therapy Technology Course**

Semester/Term: VI

S.No	Subjects	Credit/week			Hrs/semesters				Marks				
		Theory	practical	Lab posting	Total	Theory	practical	Lab posting	Total	Viva-voce	LA	Semester exam	TOTAL
THEORY													
DTT-01T	Applied Dialysis Therapy Technology-Part-III	4	-	-	4	50	-	-	50	20	20	Part A – 30 Part B – 30	100
PRACTICAL													
DTT -01P	Applied Dialysis Therapy Technology-Part- III	-	4	-	4	-	100	100	200	-	20	80	100
DTT -02P	B.Sc. DTT Directed Clinical Education – Part-IV (Practical)	-	4	-	4	-	100	100	200	-	20	80	100
DTT-03P	B.Sc. DTT Directed Clinical Education – Part-V (Practical)	-	-	30	10	-	100	100	200	-	20	80	100


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M.M. (Deemed to be University) MULLANA – AMBALA
Program: B.Sc. (DTT) Dialysis Therapy Technology Course
Semester/Term.: VII & VIII

OUTLINE OF COURSE CURRICULUM

B.Sc. Medical Dialysis Technology

Semester VII & Semester VIII

Code No.	Core Subjects	Credits/Week					Hrs/Semester					Marks		
		Lecture (L)	Tutorial (T)	Practical (P)	Clinical Posting/Rotation	Total Credits (C)	Lecture (L)	Tutorial (T)	Practical (P)	Clinical Posting/Rotation	Total hrs.	Internal Assessment	Examine Exam	Total
	Sem VII (Internship)	-	-	-	120	14	-	-	-	120	720			
	Sem VIII (Internship)				120	14				720				
	Total	0	0	0	1440	32	0	0	0	1440	1440	0	0	0

Grading:

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Letter Grade	Grade Points	Mark Range
O(Outstanding)	10	91 – 100
A+(Excellent)	9	81 – 90
A(Very good)	8	71 – 80
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