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Criterion Details: Choice Based Credit System

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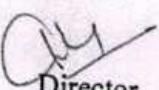
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Annexure No. 01


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Uttarakhand Technical University, Dehradun
Scheme of Examination as per AICTE Flexible Curricula
Evaluation Schemes for B. Tech 2nd to 4th Year

W.E.F. Academic Session 2020-21

III to VIII SEMESTER



Bachelor of Technology (B. Tech.)
[Computer Science and Engineering]

Uttarakhand Technical University, Dehradun
New Scheme of Examination as per AICTE Flexible Curricula
Bachelor of Technology (B. Tech.) III Year


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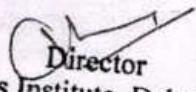
[Computer Science and Engineering]
W.E.F. Academic Session 2020-21

III Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Total Credit	
				Theory			Practical			L	T	P		
				End Sem	Mid Sem	Quiz / Assignment	End Sem	Term Work /Lab Work & Sessional						
1.	BCET301	BSC-5	Energy & Environmental Engineering	100	30	20	--	--	150	3	1	0	4	
2.	BCST-302	DC-1	Discrete Structure	100	30	20	-	-	150	3	1	0	4	
3.	BCST-303 BCSP 303	DC-2	Data Structure	100	30	20	30	20	200	3	1	2	5	
4.	BEET 304 BEEP 304	DC-3	Digital Electronics	100	30	20	30	20	200	3	1	2	5	
5.	BEET 305 BEEP 305	DC-4	Object Oriented Programming & Methodology	100	30	20	30	20	200	3	1	2	5	
6.	BCSP-306	DLC-3	Computer Workshop (Using Python)	-	-	-	30	20	50	-	-	2	1	
7.	BASP 107	DLC-1	Evaluation of Internship-I completed at 1 year level /Seminar for Lateral Entry students				-	50	50	0	0	2	1	
8.	BASP 307	DLC-4	90 hrs Internship based on using various software's -Internship -II	To be completed anytime during Third/ fourth semester. Its evaluation/credit to be added in fifth semester.										
Total				500	150	100	120	130	1000	15	5	10	25	
NSS/NCC														

IV Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Total Credit	
				Theory			Practical			L	T	P		
				End Sem	Mid Sem	Quiz / Assignment	End Sem	Term Work /Lab Work & Sessional						
1.	BAST 401	ESC	Mathematics- III	100	30	20	-	-	150	3	1	-	4	
2.	BEET 402 BEEP 402	DC	Database Management Systems	100	30	20	30	20	200	3	1	2	5	
3.	BEET 403 BEEP 403	DC	Software Engineering	100	30	20	30	20	200	3	-	2	4	
4.	BEET 404 BEEP 404	DC	Computer Org. & Architecture	100	30	20	30	20	200	3	1	2	5	
5.	BEET 404 BEEP 404	DC	Theory of Automata and Formal Languages	100	30	20	-	-	150	3	1	0	4	
6.	BHUT401	HV	Universal Human Values-2	50	30	20	-	-	100	2	1	0	3	
7.	BCST 408	MC	Cyber Security and software tools											
	BECP 407	DLC	90 hrs Internship based on using various software's -Internship -II	To be completed anytime during Third/ fourth semester. Its evaluation/credit to be added in fifth semester.										
Total				550	180	120	90	60	1000	17	5	6	25	
NSS/NCC														

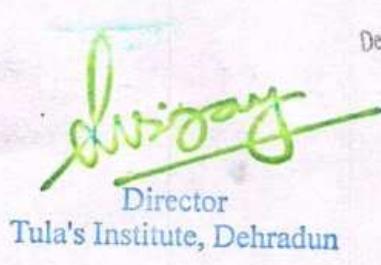

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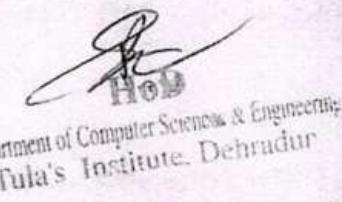

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V Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Total Credit	
				Theory			Practical			L	T	P		
				End Sem	Mid Sem	Quiz / Assignment	End Sem	Term Work /Lab Work & Sessional						
1.	BCST 501 BCSP- 501	DC	Operating System	100	30	20	30	20	200	3	1	2	5	
2.	BCST -502 BCSP- 502	DC	Computer Networks	100	30	20	30	20	200	3	1	2	5	
3.	BCST -503 BCSP-503	DC	Design and Analysis of Algorithms	100	30	20	30	20	200	3	1	2	5	
4.	BCST -504	DE	Departmental Elective-I	100	30	20	-	-	150	3	1	0	4	
5.	BOCS -505	OE	Open Elective-I	100	30	20	-	-	150	3	1	0	4	
6.	BCST -506	D	Virtual Lab (Unix/ Lab Linux/python/JAVA etc)	-	-	-	-	50	50	0	0	2	1	
8	BCST -508	IN	Evaluation of Internship-II completed at II year level	-	-	-	-	50	50			2	1	
9		IN	Internship -III	To be completed any time during Fifth/ Sixth semester. Its evaluation/credit to be added in Seventh semester.										
Total				500	150	100	120	130	1000	15	5	10	25	
NSS/NCC														

Departmental Electives		Open Electives	
BCST 504 (A)	Network Architecture	BOCS -505 (A)	Principles of Programming Language
BCST 504 (B)	Pattern Recognition	BOCS -505 (B)	Modeling and Simulation
BCST 504 (C)	Internet and Web Technology	BOCS -505 (C)	Cyber Security
BCST 504 (D)	Java Programming	BOET-504(D)	Innovation and Entrepreneurship


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VI Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Total Credit	
				Theory			Practical			L	T	P		
				End Sem	Mid Sem	Quiz / Assign ment	End Sem	Team Work / Lab Work & Sessional						
1.	BCST-601 BCSP-601	DC	Microprocessors and Applications	100	30	20	30	20	200	3	1	2	5	
2.	BCST -602 BCSP-602	DC	Compiler Design	100	30	20	30	20	200	3	1	2	5	
	BCST -603 BCSP-603	DC	Data Analytics	100	30	20	30	20	200	3	1	2	5	
3.	BCST -604	DE	Departmental Elective	100	30	20		-	150	3	1	0	4	
4.	BOCS -605	OE	Open Elective	100	30	20	-	-	150	3	1	0	4	
5.	BCSP-606	P	Open Source Lab/ Matlab Programming	-	-	-	30	20	50	0	0	2	1	
6.	BCSP -607	P	Minor Project -I					50	50	0	2	1		
8		IN	Internship – III	To be completed anytime during Fifth/Sixth semester. Its evaluation/credit to be added in Seventh Semester.										
Total				500	150	100	120	130	1000	15	5	10	25	

Departmental Electives		Open Electives		
BCST 604(A)	Graph Theory	BOCS -605(A)		Digital Signal Processing
BCST 604(B)	Data Mining	BOCS -605(B)		Machine Learning
BCST 604(C)	Computer Graphics and Visualisation	BOCS -605(C)		Software Testing
BCST 604 (D)	Software Quality Management	BOCS 605 (D)		Distributed Systems and Cloud Computing

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VII Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Total Credit	
				Theory			Practical			End Sem	Mid Sem	Quiz / Assignment	Term Work /Lab Work & Sessional	
				End Sem	Mid Sem	Quiz / Assignment								
1.	BCST 701 BCSP 701	DC	.NET Framework and Programming	100	30	20	30	20	200	3	1	2	5	
2.	BCST -702 BCSP-702	DC	Ad hoc and Wireless Networks	100	30	20	30	20	200	3	1	2	5	
3.	BCST -703	DE	Departmental Elective	100	30	20	-	-	150	3	1	0	4	
4.	BCST -704	OE	Open Elective	100	30	20	-	-	150	3	1	0	4	
5.	BCSP -705	D Lab	Virtual Lab	-	-	-	30	20	50	0	0	2	1	
6.	BCSP -706	DLC-1	Evaluation of Internship-III completed at III year level	-	-	-	-	50	50			2	1	
7	BCSP -707	P	Minor Project-II	-	-	-	50	50	100	0	0	4	2	
Total				400	120	80	110	190	900	12	5	12	22	
NSS/NCC														

Departmental Electives		Open Electives		
BCST 703(A)	Human Computer Interfacing	BOCS -704(A)		Big Data Processing
BCST 703(B)	Advanced Computer Architecture	BOCS -704(B)		Digital Image Processing
BCST 703(C)	Soft Computing	BOCS -704(C)		Ethical Hacking
BCST 703 (D)	Internet-of-Things Systems	BOCS 704 (D)		Subject using SWAYAM etc

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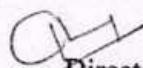
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M. Tech. (Computer Science & Engineering)

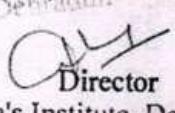
Semester I

Course Number	Subject
MCST 101	Program Core I- Mathematical foundations of Computer Science
MCST 102	Program Core II-Advanced Data Structures
MCST 11X	Program Elective I –
MCST 12X	Program Elective II –
MOET 191	Research Methodology and IPR
MAUT 19X	Audit Course
MCSP 102	Laboratory 1 (Advanced Data Structures)
MCSP 1XX	Laboratory 2 (Based on Electives)

Semester II

Course Number	Subject
MCST 201	Program Core III - Advance Algorithms
MCST 202	Program Core IV - Soft Computing
MCST 23X	Program Elective III –
MCST 24X	Program Elective IV –
MAUT 29X	Audit Course
MCSP 201	Laboratory 3 (Advance Algorithm)
MCSP 2XX	Laboratory 4 (Based on Electives)
MCSP 202	Mini Project with Seminar


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SemesterIII

Course No.	Subject
MCST 35X	Program Elective 5 –
1. MOET 391 2. MOET 392 3. MOET 393 4. MOET 394 5. MOET 395 6. MOET 396	Open Elective – 1. Business Analytics 2. Industrial Safety 3. Operations Research 4. Cost Management of Engineering Projects 5. Composite Materials 6. Waste to Energy
MCSP 301/ MCSP 302	Dissertation-I /Industrial Project

SemesterIV

	Subject
MCSP 401	Dissertation II

SEMESTER-I

PROGRAM ELECTIVE-I

S.NO.	COURSE NO.	SUBJECT
1.	MCST 111	Machine Learning
2.	MCST 112	Wireless Sensor Networks
3.	MCST 113	Introduction to Intelligent Systems

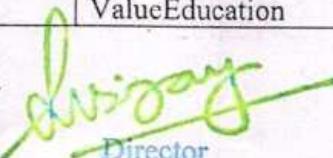
PROGRAM ELECTIVE-II

S.NO.	COURSE NO.	SUBJECT
1.	MCST 121	Data Science
2.	MCST 122	Distributed Systems
3.	MCST 123	Advanced Wireless and Mobile Networks

Audit course 1:

S.NO.	COURSE NO.	SUBJECT
1.	MAUT 191	English for Research Paper Writing
2.	MAUT 192	Disaster Management
3.	MAUT 193	Sanskrit for Technical Knowledge
4.	MAUT 194	Value Education


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SEMESTER-II

PROGRAM ELECTIVE-III

S.NO.	COURSE NO.	SUBJECT
1.	MCST 231	Data Preparation and Analysis
2.	MCST 232	Secure Software Design & Enterprise Computing
3.	MCST 233	Computer Vision

PROGRAM ELECTIVE-IV

S.NO.	COURSE NO.	SUBJECT
1.	MCST 241	Human and Computer Interaction
2.	MCST 242	GPU Computing
3.	MCST 243	Digital Forensics

Audit course 2

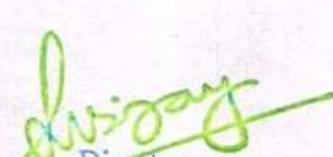
S.NO.	COURSE NO.	SUBJECT
1.	MAUT 291	Constitution of India
2.	MAUT 292	Pedagogy Studies
3.	MAUT 293	Stress Management by Yoga
4.	MAUT 292	Personality Development through Life Enlightenment Skills

SEMESTER-III

PROGRAM ELECTIVE-V

S.NO.	COURSE NO.	SUBJECT
1.	MCST 351	Mobile Applications and Services
2.	MCST 352	Compiler for HPC
3.	MCST 353	Optimization Techniques


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Course Scheme for M.Tech. Computer Science and Engineering

M.Tech Sem-I

Course Number	Subject	Scheme Of Studies Per Week			Credits
		L	T	P	
MCST 101	Program Core I - Mathematical foundations of Computer Science	3	0	0	3
MCST 102	Program Core II - Advanced Data Structures	3	0	0	3
MCST 11X	Program Elective I - Machine Learning/ Wireless Sensor Networks/ Introduction to Intelligent Systems	3	0	0	3
MCST 12X	Program Elective II - Data Science/ Distributed Systems/ Advanced Wireless and Mobile Networks	3	0	0	3
MOET 191	Research Methodology and IPR	2	0	0	2
MAUT 19X	Audit Course	2	0	0	0
MCSP 102	Laboratory 1 (Advanced Data Structures)	0	0	4	2
MCSP 1XX	Laboratory 2 (Based on Electives)	0	0	4	2
Total Credits:		18			

M.Tech Sem-II

Course Number	Subject	Scheme Of Studies Per Week			Credits
		L	T	P	
MCST 201	Program Core III - Advance Algorithms	3	0	0	3
MCST 202	Program Core IV - Soft Computing	3	0	0	3
MCST 23X	Program Elective III - Data Preparation and Analysis/ Secure Software Design & Enterprise Computing/ Computer Vision	3	0	0	3
MCST 24X	Program Elective IV - Human and Computer Interaction/ GPU Computing/ Digital Forensics	3	0	0	3
MAUT 29X	Audit Course	2	0	0	0
MCSP 20X	Laboratory 3 (Based on cores)	0	0	4	2
MCSP 2XX	Laboratory 4 (Based on Electives)	0	0	4	2
MCSP 202	Mini Project with Seminar	2	0	0	2
Total Credits:		18			

*Students be encouraged to go to Industrial Training/Internship for at least 2-3 months during

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M.Tech III Sem*

Course No.	Subject	Scheme of Studies Periods Per Week			Credits
		L	T	P	
MCST 35X	Program Elective 5 – Mobile Applications and Services/ Compiler for HPC/ Optimization Techniques	3	0	0	03
MOET 39X	Open Elective– 1. Business Analytics 2. Industrial Safety 3. Operations Research 4. Cost Management of Engineering Projects 5. Composite Materials 6. Waste to Energy	3	0	0	03
MCSP 301/MCSP 302	Dissertation-I /Industrial Project	0	0	20	10
Total Credits		16			

*Students going for Industrial Project/Thesis will complete these courses through MOOCs.

M.TechSem-IV

	Subject	Scheme of Studies Per Week			Credits
		L	T	P	
MCSP 401	Dissertation II	0	0	32	16
Total Credits: 16					

The program offers several elective courses, focusing on different aspects of Computer Science and Engineering. A student can choose to do any course from given program elective set.

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Evaluation Scheme & Syllabus

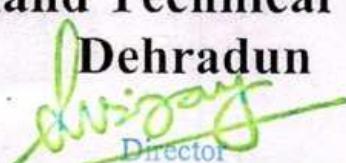
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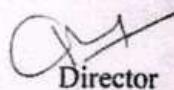
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**Master of Computer Applications (MCA)
(02 Year Programme)**

W.E.F. Academic Session 2020-21

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MCA Bridge Course (Qualifying Papers)
(Bridge Course must be completed before commencement of MCA I Semester)

S. No.	Sub. Code	Subject Name	Maximum Marks Allotted				Total Marks	Contact Hours Per			Total Credits
			End Sem.	Mid Sem.	Theory	Practical		L	T	P	
1	MBCT 101	Introduction of Information Technology	30	20			50		20		
2	MBCT 102	Programming Fundamentals with 'C'	30	20			50		20		
3	MBCT 103	Fundamental Web Technology	30	20			50		20		

MCA 1st Semester

S. No.	Sub. Code	Subject Name	Maximum Marks Allotted				Total Marks	Contact Hours Per Week			Total Credits
			End Sem.	Mid Sem.	Theory	Practical		L	T	P	
1	MCAT 101	Discrete Structure	100	30	20		150	3	1	4	
2	MCAT 102 MCAP 102	Database Management System	100	30	20	30	200	3	1	2	5
3	MCAT 103 MCAP 103	Operating System	100	30	20	30	200	3	1	2	5
5	MCAT 104 MCAP 104	Computer Organization	100	30	20	30	200	3	1	2	5
6	MCAT 105	Technical Communication Skills	100	30	20	30	200	3	1	2	5
7	MCAP 106	Python Programming / Unix and Shell Programming				30	20	50		2	1
					Total		1000				25

MCA 2nd Semester

S.No.	Sub. Code	Subject Name	Maximum Marks Allotted				Total Marks	Contact Hours Per Week			Total Credits
			End Sem.	Mid Sem.	Teachers Assessments	Practical		End Sem.	Lab Work & Sessional	L	
1	MCAT 201	Computer Based Statistical and Numerical Techniques	100	30	20		150	3	1	4	
2	MCAT 202 MCAP 202	Data Structure and Analysis of Algorithms	100	30	20	30	200	3	1	2	5
3	MCAT 203 MCAP 203	Object Oriented Programming with Java	100	30	20	30	200	3	1	2	5
4	MCAT 204 MCAP 204	Computer Networks	100	30	20	30	200	3	1	2	5
5	MCAT 205	Microprocessor and Interface	100	30	20	30	200	3	1		5
6	MCAT 206 (Non Credit)	Accounting and Financial Management (Non Credit)		30	20		50	3	1		
					Total		1000				24

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MCA 3rd Semester

S. No.	Sub. Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours/Week			Total Credits		
			Theory		Practical									
			End Sem.	Mid Sem.	Teachers Assessments	End Sem.	Lab Work & Sessional		L	T	P			
1	MCAT 301	Theory of Automata and Formal Language	100	30	20			150	3	1		4		
2	MCAT 302 MCAP 302	Software Engineering	100	30	20	30	20	200	3	1	2	5		
3	MCAT 303 MCAP 303	Big Data Analysis	100	30	20	30	20	200	3	1	2	5		
4	MCAT 304	Artificial Intelligence & Applications	100	30	20			150	3	1		4		
5	MCAT 305	Combinatorics and Graph Theory	100	30	20			150	3	1		4		
6	MCAT 306	Universal Human Values	70	20	10			100	2			2		
7	MCAT 307	Any Online Course specified by AICTE on latest technology Not Credit Course – must be completed (in 2 nd Year) to award the MCA Degree						Total	1000			25		

MCA 4th Semester

S. No.	Sub. Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits		
			Theory		Practical									
			End Sem.	Mid Sem.	Teachers Assessments	End Sem.	Lab Work & Sessional		L	T	P			
1	MCAT 401 MCAP 401	.Net Technology	100	30	20	30	20	200	3	1	2	5		
2	MCAT 402 MCAP 402	Network & Cyber Security	100	30	20	30	20	200	3	1	2	5		
3	MCAT 41X	Elective 1	100	30	20			150	3	1		4		
4	MCAT 42X	Elective 2	100	30	20			150	3	1		4		
5	MCAT 43X	Elective 3	100	30	20			150	3	1		4		
6	MCAP 403	Major Project				100	50	150			4	2		
								Total	1000			24		

List of Electives:**Elective 1:**

MCAT 411 Soft Computing
 MCAT 412 Distributed System
 MCAT 413 Data Science
 MCAT 414 Machine Learning
 MCAT 415 Simulation & Modeling

Elective 2:

MCAT 421 Web Technology and Cloud Computing
 MCAT 422 Digital Image Processing
 MCAT 423 Computer Graphics & Multimedia
 MCAT 424 Software Testing & Quality Assurance
 MCAT 425 Compiler Design

Elective 3:

MCAT 431 Neural Networks
 MCAT 432 Internet of Things
 MCAT 433 Blockchain Architecture
 MCAT 434 Natural Language Processing
 MCAT 435 Advanced Java



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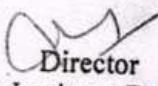
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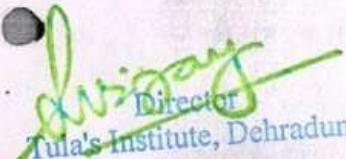
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Uttarakhand Technical University, Dehradun
New Scheme of Examination as per AICTE Flexible Curricula
Bachelor of Technology (B. Tech.) I Year
W.E.F. Academic Session - 2020-21

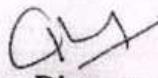
I Semester - GROUP A: (Branches for Group "A" to be decided by the Institutes)

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits									
				Theory			Practical			L	T	P										
				End Sem.	Mid Sem.	Quiz/ Assignment	End Sem.	Lab work & Sessional														
Mandatory Induction Program (First three weeks)				Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations																		
Fourth week onwards classes will start																						
1. BAST 101 BASP 101	BSC-1	Engineering Chemistry		100	30	20	30	20	200	3	1	2	5									
2. BAST 102	BSC-2	Mathematics-I		100	30	20	-	-	150	3	1	-	4									
3. BAST 103 BASP 103	HSMC-1	English for Communications		100	30	20	30	20	200	3	1	2	4									
4. BEET 101 BEEP 101	ESC-1	Basic Electrical Engineering		100	30	20	30	20	200	3	-	2	4									
5. BCST 101 BCSP 101	ESC-6	Fundamentals of Computers & Programming in C		100	30	20	30	20	200	3	1	2	5									
6. BMEP 101	ESC-3	Manufacturing Practices / Workshop		-	-	-	30	20	50	1	-	2	2									
7. BASP 102	DLC-1	Internship-I (60 Hrs Duration) at the Institute level		To be completed during or at the end of the second semester. Its evaluation/credit to be added in third semester.																		
8. BASP 105	DLC-2	Swachh Bharat Summer Internship Unnat Bharat Abhiyan (100Hrs)/ Rural Outreach					15	10	25*	-	-	4	-									
Total				500	150	100	150	100	1000	16	4	10	25									

*It is non credit course. Student must clear it to be promoted in II Year; Marks will not be added to the total
Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)


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1 Credit	1 Credit	1 Credit

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Bachelor of Technology (B. Tech.) I Year
W.E.F. Academic Session - 2020-21

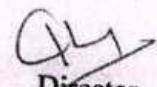
I Semester - GROUP B: (Branches for Group "B" to be decided by the Institutes)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits		
				Theory Slot		Practical Slot				L	T	P			
				End Sem.	Mid Sem Exam.	Quiz/Assignment	End Sem.	Lab work & Sessional							
1.	BAST 104 BASP 104	BSC-3	Engineering Physics	100	30	20	30	20	200	3	1	2	5		
2.	BAST 102	BSC-2	Mathematics-I	100	30	20	-	-	150	3	1	-	4		
3.	BMET 102 BMEP 102	ESC-4	Basic Mechanical Engineering	100	30	20	30	20	200	3	1	2	5		
4.	BEET 101 BECP 101	ESC-5	Basic Electronics Engineering	100	30	20	30	20	200	3	1	2	5		
5.	BMEP 103	ESC-2	Engineering Graphics	-	-	-	50	25	75	1	-	2	2		
6.	BASP 106	HSMC-2	Language Lab & Seminars	-	-	-	50	25	75	1	-	2	2		
7.	BEST 101	BSC	Environmental Studies	70	Not Credit Course. Student must clear it to complete the degree.			30 (Field & Project Work)	100	3	-	-	-		
8.	BASP 102	DLC-1	Internship-I - (60 Hrs Duration) at the Institute level	To be completed during first/second semester. Its evaluation/credit to be added in third semester.											
			Total	470	120	80	190	140	1000	17	4	10	23		

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)


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1 Credit	1 Credit	1 Credit

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II Semester - GROUP A: (Branches for Group "A" to be decided by the Institutes)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits		
				Theory Slot			Practical Slot			L	T	P			
				End Sem.	Mid Sem Exam.	Quiz/Assignment	End Sem.	Lab work & Sessional							
1.	BAST 104 BASP 104	BSC-3	Engineering Physics	100	30	20	30	20	200	3	1	2	5		
2.	BAST 105	BSC-4	Mathematics-II	100	30	20	-	-	150	3	1	-	4		
3.	BMET 102 BMEP 102	ESC-4	Basic Mechanical Engineering	100	30	20	30	20	200	3	1	2	5		
4.	BECT 101 BECP 101	ESC-5	Basic Electronics Engineering	100	30	20	30	20	200	3	1	2	5		
5.	BMEP 103	ESC-2	Engineering Graphics	-	-	-	50	25	75	1	-	2	2		
6.	BASP 106	HSMC-2	Language Lab & Seminars	-	-	-	50	25	75	1	-	2	2		
7.	BEST 101	BSC	Environmental Studies	70	Not Credit Course. Student must clear it to complete the degree.			30 (Field & Project Work)	100	3	-	-	-		
8.	BASP 102	DLC-1	Internship-I - (60 Hrs Duration) at the Institute level	To be completed during first/second semester. Its evaluation/credit to be added in third semester.											
			Total	470	120	80	190	140	1000	17	4	10	23		

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)

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1 Credit	1 Credit	1 Credit

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Bachelor of Technology (B. Tech.) I Year
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II Semester - GROUP B: (Branches for Group "B" to be decided by the Institutes)

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits										
				Theory		Practical				End Sem.	Mid Sem.	Quiz/ Assignment	Lab work & Sessional										
				End Sem.	Mid Sem.	Quiz/ Assignment	Lab work & Sessional	End Sem.															
Mandatory Induction Program (First three weeks)				Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations																			
Fourth week onwards classes will start																							
1.	BAST 101 BASP 101	BSC-1	Engineering Chemistry	100	30	20	30	20	200	3	1	2	5										
2.	BAST 105	BSC-4	Mathematics-II	100	30	20	-	-	150	3	1	-	4										
3.	BAST 103 BASP 103	HSMC-1	English for Communication	100	30	20	30	20	200	3	-	2	4										
4.	BEET 101 BEEP 101	ESC-1	Basic Electrical Engineering	100	30	20	30	20	200	3	1	2	5										
5.	BCST 101 BCSP 101	ESC-6	Fundamentals of Computers & Programming in C	100	30	20	30	20	200	3	1	2	5										
6.	BMEP 101	ESC-3	Manufacturing Practices / Workshop	-	-	-	30	20	100	1	-	2	2										
7.	BASP 102	DLC-1	Internship-I (60 Hrs Duration) at the Institute level	To be completed during or at the end of the second semester. Its evaluation/credit to be added in third semester.																			
8.	BASP 105	DLC-2	Swachh Bharat Summer Internship Unnat Bharat Abhiyan (100Hrs)/ Rural Outreach				15	10	25*	-	-	4	-										
			Total	500	150	100	150	100	1000	16	4	10	25										

*It is non credit course. Student must clear it to be promoted in II Year; Marks will not be added to the total

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)

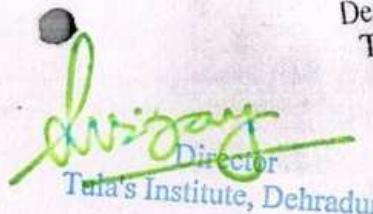
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1 Credit	1 Credit	1 Credit


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Scheme of Examination as per AICTE Flexible Curricula
Evaluation Scheme & Syllabus for B. Tech Second Year
W.E.F. Academic Session 2019-20
II Year (III SEMESTER) – Civil Engineering

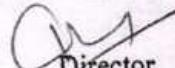
S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours / week			Total Credits		
				Theory			Practical			L	T	P			
				End Sem Exam.	Mid Sem	Quiz/ Assignment	End Sem	Lab Work & Term work							
1.	BAST 301	BSC-5	Mathematics-III	100	30	20	-	-	150	3	1	-	4		
2.	BCET 302	DC-I	Construction Materials	100	30	20	-	-	150	4	-	-	4		
3.	BCET 303 BCEP 303	DC-2	Surveying	100	30	20	30	20	200	3	1	2	5		
4.	BCET 304 BCEP 304	DC-3	Building Planning & Architecture	100	30	20	30	20	200	3	-	2	4		
5.	BCET 305 BCEP 305	DC-4	Strength of Materials	100	30	20	30	20	200	3	1	2	5		
6.	BCEP 306	DLC-3	Study of Historical & Ancient Civil Engineering Practices	-	-	-	30	20	50	-	-	4	2		
7.	BASP 107	DLC-1	Evaluation of Internship - I - completed at I year level	-	-	-	-	50	50			4	2		
8.	BASP 307	DLC-4	90 hrs Internship based on using various softwares –Internship-II	completed anytime during Third / Fourth semester. Its evaluation/credit to be added in fifth semester.											
			Total	500	150	100	120	130	1000	16	3	14	25		
			NSS/NCC												


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1 Hr Lecture 1 Credit	1 Hr Tutorial 1 Credit	2 Hr Practical 1 Credit
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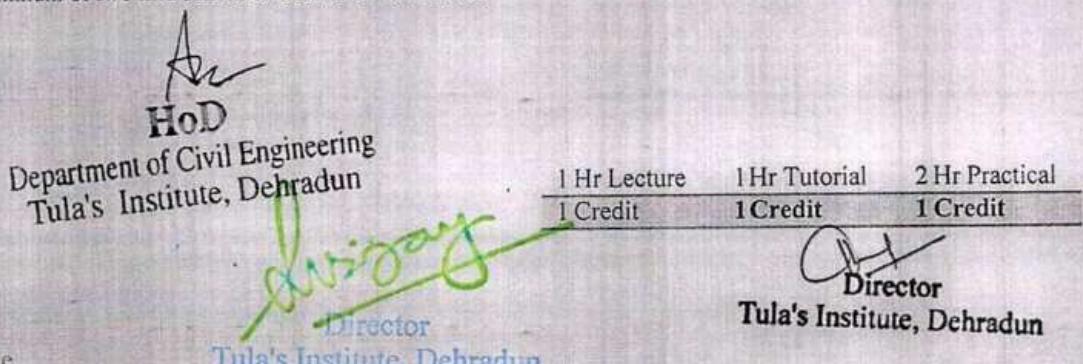
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Scheme of Examination as per AICTE Flexible Curricula
Evaluation Scheme & Syllabus for B. Tech Second Year
W.E.F. Academic Session 2019-20
II Year (III SEMESTER) – Civil Engineering

S. No	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			ed.15	
				Theory			Practical			L	T	P		
				End Sem.	Mid Sem	Quiz/Assig nment	End Sem.	Term work		Lab Work & Sessional				
1.	BCET 401	ESC	Energy & Environmental Engineering	100	30	20	-	-	150	3	1	-	4	
2.	BCET 402 BCEP 402	DC	Concrete Technology	100	30	20	30	20	200	3	1	2	5	
3.	BCET 403 BCEP 403	DC	Structural Analysis-I	100	30	20	30	20	200	3	1	2	5	
4.	BCET 404 BCEP 404	DC	Transportation Engineering-I	100	30	20	30	20	200	3	1	2	5	
5.	BCET 405 BCEP 405	DC	Engineering Geology & Remote Sensing	100	30	20	30	20	200	3	0	2	4	
6.	BCEP 406	DLC*	Software Lab	-	-	-	30	20	50	-	-	4	2	
7.	BCEP 407	DLC	90 hrs Internship based on using various software's – Internship-II	To be completed anytime during fourth semester. Its evaluation/credit to be added in fifth semester.									3	
			Total	500	150	100	150	100	1000	14	4	12	25	
8.	BCST 408	MC	Cyber Security	Non-credit course										
			NSS/NCC											

*A minimum of 2 hours per week should be allotted for the Virtual Lab along with the slot fixed for the conventional lab classes.

MST: Minimum of two mid semester tests to be conducted.



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Scheme of Examination as per AICTE Flexible Curricula
W.E.F. Academic Session 2020-21
Bachelor of Technology (B.Tech.) [Civil Engineering]

V Semester

S. N o.	Subject code	category	Subject name	Maximum marks allotted					Total marks	Contact hours per week			Total credit	
				Theory			Practical			L	T	P		
				End sem	Mid sem	Quiz/ Assignm ent	End sem	Term work / lab work & sessional						
1.	BCET 501 BCEP 501	DC	Design of RC Elements	100	30	20	30	20	200	3	1	2	5	
2.	BCET 502 BCEP 502	DC	Geotechnical Engineering I	100	30	20	30	20	200	3	1	2	5	
3.	BCET 503 BCEP 503	DC	Fluid Mechanics	100	30	20	30	20	200	3	1	2	5	
4.	BCET 504 (A/B/C)D)	DE	Departmental Electives	100	30	20	-	-	150	3	1	0	4	
5.	BOEC 505 (A/B/C)D)	OE	Open Electives	100	30	20	-	-	150	3	1	0	4	
6.	BCEP 506	O/E Lab	Material Testing Lab	-	-	-	30	20	50	0	0	2	1	
7.	BCEP 507	DLC -I	Evaluation of Internship-II completed at II year level	-	-	-	-	50	50	-	-	2	1	
8.		IN	Internship -III	To be completed any time during Fifth/ Sixth semester. Its evaluation/credit to be added in Seventh semester.										
TOTAL				500	150	100	120	130	1000	15	5	10	25	

DEPARTMENTAL ELECTIVES		OPEN ELECTIVES	
✓ BCET 504(A)	Structural Analysis II	BOEC 505 (A)	Renewable Energy Resources
✓ BCET 504(B)	Quantity Surveying and Costing	✓ BOEC 505 (B)	Transportation Engineering II
✓ BCET 504(C)	Environmental Impact Assessment	BOEC 505 (C)	Operations Research
✓ BCET 504(D)	Disaster Preparedness and Planning	BOEC 505 (D)	Subject from SWAYAM

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Scheme of Examination as per AICTE Flexible Curricula
W.E.F. Academic Session 2020-21
Bachelor of Technology (B.Tech.) [Civil Engineering]

VI Semester

S. N o.	Subject code	Category	Subject name	Maximum marks allotted					Total marks	Contact hours per week			Total credit	
				Theory			Practical			L	T	P		
				End sem	Mid sem	Quiz/ Assignm ent	End sem	Term work / lab work & sessional						
1.	BCET 601 BCEP 601	DC	Design of RC Structures	100	30	20	30	20	200	3	1	2	5	
2.	BCET 602 BCEP 602	DC	Environmental Engineering I	100	30	20	30	20	200	3	1	2	5	
3.	BCET 603 BCEP 603	DC	Open Channel Flow	100	30	20	30	20	200	3	1	2	5	
4.	BCET 604 (A/B/C/D)	DE	Departmental Electives	100	30	20	-	-	150	3	1	0	4	
5.	BOEC 605 (A/B/C/D)	OE	Open Electives	100	30	20	-	-	150	3	1	0	4	
6.	BCEP 606	O/E Lab	OE Lab/ Advance Surveying Lab	-	-	-	30	20	50	0	0	2	1	
7.	BCEP 507	P	Minor Project I	-	-	-	-	50	50	-	-	2	1	
8.		IN	Internship –III	During semester 5/6										
TOTAL				500	150	100	60	90	1000	15	5	10	25	

DEPARTMENTAL ELECTIVES		OPEN ELECTIVES	
✓ BCET 604(A)	Geotechnical Engineering II	✓ BOEC 605 (A)	Principles of Management
BCET 604(B)	Precast and Modular Construction	BOEC 605 (B)	Environmental Management & Sustainable Development
BCET 604(C)	Cost Effective and Eco Friendly Structures	BOEC 605 (C)	Advance Pavement Design
BCET 604(D)	Urban and Town Planning	BOEC 605 (D)	Subject from SWAYAM

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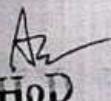
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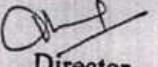
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Scheme of Examination as per AICTE Flexible Curricula
W.E.F. Academic Session 2020-21
Bachelor of Technology (B.Tech.) [Civil Engineering]

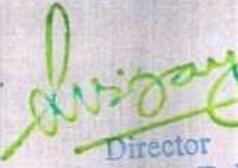
VII Semester

S. N O.	Subject code	Category	Subject name	Maximum marks allotted					Total marks	Contact hours per week			Total credit	
				Theory			Practical			L	T	P		
				End sem	Mid sem	Quiz/ Assignm ent	End sem	Term work / lab work & sessional						
1.	BCET 701 BCEP70 1	DC	Environmental Engineering II	100	30	20	30	20	200	3	1	2	5	
2.	BCET 702 BCEP70 2	DC	Design of Steel Structures	100	30	20	30	20	200	3	1	2	5	
3.	BCET 703 (A/B/C)	DE	Departmental Elective	100	30	20	-	-	150	3	1	0	4	
4.	BOEC 704 (A/B/C)	OE	Open Elective	100	30	20	-	-	150	3	1	0	4	
5.	BCEP 705	D Lab	Departmental Lab	-	-	-	30	20	50	0	0	2	1	
6.	BCEP 706	DL C- I	Evaluation of Internship-III completed at III year level	-	-	-	-	50	50			2	1	
7.	BCEP 707	P	Minor Project II	-	-	-	50	50	100	0	0	4	2	
TOTAL				400	120	80	140	160	900	12	4	12	22	

DEPARTMENTAL ELECTIVES		OPEN ELECTIVES	
BCET 703(A)	Railway & Airport Engineering	BOEC 704 (A)	Hydrology
BCET 703(B)	Bridge Engineering	BOEC 704 (B)	Infrastructure Planning and Management
✓ BCET 703(C)	Ground Water Engineering	BOEC 704 (C)	Subject from SWAYAM


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W.E.F. Academic Session 2020-21
Bachelor of Technology (B.Tech.) [Civil Engineering]

VIII Semester

S. N. O.	Subject code	Category	Subject name	Maximum marks allotted					Total marks	Contact hours per week			Total credit	
				Theory			Practical			L	T	P		
				End sem	Mid sem	Quiz/ Assignment	End sem	Term work / lab work & sessional						
1.	BCET 801	DC	Construction Planning and Management	100	30	20	-	-	150	3	1	0	4	
2.	BCET 802	DC	Seismology and Earthquake Resistance Design of Buildings	100	30	20	-	-	150	3	1	0	4	
3.	BCET 803 (A/B/C)	DE	Departmental Elective	100	30	20	-	-	150	3	1	0	4	
4.	BOEC 804 (A/B/C)	OE	Open Elective	100	30	20	-	-	150	3	1	0	4	
5.	BCEP 805	P	Major Project	-	-	-	100	100	200	0	0	4	4	
6.	BCEP 806	P	Seminar	-	-	-	-	50	50	0	0	2	2	
7.		GP	General Proficiency	-	-	-	-	50	50	0	0	0	0	
TOTAL				400	120	80	100	200	900	12	4	4	22	

DEPARTMENTAL ELECTIVES		OPEN ELECTIVES	
BCET 803(A)	Irrigation Engineering	BOEC 804 (A)	Hydropower Engineering
BCET 803(B)	River Engineering	BOEC 804 (B)	Prestressed Concrete
BCET 803(C)	Repair & Rehabilitation of Structures	BOEC 804 (C)	Subject using SWAYAM

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Annexure No. 05

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Scheme of Examination as per AICTE Flexible Curricula

Evaluation Schemes for B. Tech 2nd to 4th Year

W.E.F. Academic Session 2020-21

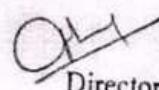
III to VIII SEMESTER



Bachelor of Technology (B. Tech.)
in
[Electronics and Communication Engineering]

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New Scheme of Examination as per AICTE Flexible Curricula

Bachelor of Technology (B. Tech.) I Year

W.E.F. Academic Session - 2020-21

I Semester - GROUP A: (Branches for Group "A" to be decided by the Institutes)

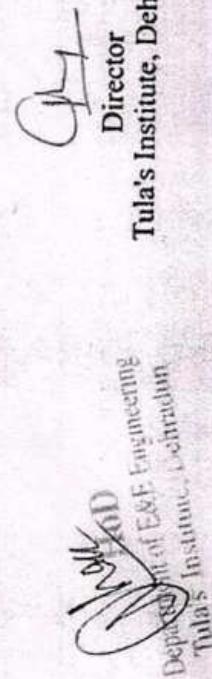
S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Contact Hours per week			Total Credits
				End Sem.	Mid Sem.	Quiz/ Assignment	Practical	L	T	P	
Mandatory Induction Program (First three weeks)											

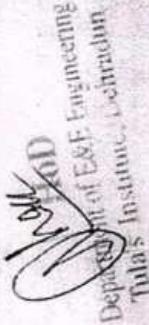
Fourth week onwards classes will start

1.	BAST 101 BASP 101	BSC-1	Engineering Chemistry	100	30	20	30	20	200	3	1	2	5
2.	BAST 102	BSC-2	Mathematics-I	100	30	20*	-	-	150	3	1	-	4
3.	BAST 103	HSMC-1	English for Communications	* 100	30	20	30	20	200	3	-	2	4
4.	BASP 103	ESC-1	Basic Electrical Engineering	100	30	20	30	20	200	3	1	2	5
5.	BEEF 101 BEFP 101	ESC-4	Fundamentals of Computers & Programming in C	100	30	20	30	20	200	3	1	2	5
6.	BCST 101 BCSP 101	ESC-6	Manufacturing Practices / Workshop	-	-	-	30	20	50	1	-	2	2
7.	BASP 102	DLC-1	Internship-I (60 Hrs Duration) at the Institute level	To be completed during or at the end of the second semester. Its evaluation/credit to be added in third semester.									
8.	BASP 105	DLC-2	Swachh Bharat Summer Internship Unnat Bharat Abhiyan (100Hrs)/ Rural Outreach	-	-	-	15	10	25*	-	-	4	-
			Total	500	150	100	150	100	1000	16	4	10	25

*It is non credit course. Student must clear it to be promoted in II Year; Marks will not be added to the total

Note: The Meaning of last Character of Subject Code (T - Theory and P - Practical)


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 Department of E&E Engineering
 Tula's Institute, Dehradun


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 Department of E&E Engineering
 Tula's Institute, Dehradun

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

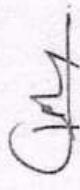

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W.E.F. Academic Session - 2020-21

I Semester - GROUP B: (Branches for Group "B" to be decided by the Institutes)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Total Marks	Contact Hours per week			Total Credits	
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	Practical Slot		L	T	P		
1.	BAST 104 BASP 104	BSC-3	Engineering Physics	100	30	20	30	20	200	3	1	2	
2.	BAST 102 BASP 102	BSC-2	Mathematics-I	100	30	20	-	-	150	3	1	-	
3.	BMET 102 BMEP 102	ESC-4	Basic Mechanical Engineering	100	30	20	30	20	200	3	1	2	
4.	BECT 101 BECF 101	ESC-5	Basic Electronics Engineering	100	30	20	30	20	200	3	1	2	
5.	BMEP 103	ESC-2	Engineering Graphics	-	-	-	50	25	75	1	-	2	
6.	BASP 106	HSMC-2	Language Lab & Seminars	-	-	-	50	25	75	1	-	2	
7.	BEST 101	BSC	Environmental Studies	70	Not Credit Course, Student must clear it to complete the degree.			30 (Field & Project Work)	100	3	-	-	
8.	BASP 102	DLC-1	Internship-I - (60 Hrs Duration) at the Institute level	To be completed during first/second semester. Its evaluation/credit to be added in third semester.									
		Total		470	120	80	190	140	1000	17	4	10	23

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)


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1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit


Tula's Institute, Dehradun

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Bachelor of Technology (B. Tech.) I Year
W.E.F. Academic Session -2020-21

II Semester - GROUP A: (Branches for Group "A" to be decided by the Institutes)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Total Marks	Contact Hours per week			Total Credits		
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	Practical Slot		L	T	P			
1.	BAST 104 BASP 104	BSC-3	Engineering Physics	100	30	20	30	20	200	3	1	2	5	
2.	BAST 105	BSC-4	Mathematics-II	100	30	20	-	-	150	3	1	-	4	
3.	BMET 102 BMEP 102	ESC-4	Basic Mechanical Engineering	100	30	20	30	20	200	3	1	2	5	
4.	BECT 101 BECP 101	ESC-5	Basic Electronics Engineering	100	30	20	30	20	200	3	1	2	5	
5.	BMEP 103	ESC-2	Engineering Graphics	-	-	-	50	25	75	1	-	2	2	
6.	BASP 106	HSMC-2	Language Lab & Seminars	-	-	-	50	25	75	1	-	2	2	
7.	BFST 101	BSC	Environmental Studies	70	Not Credit Course. Student must clear it to complete the degree.			30 (Field & Project Work)	100	3	-	-	-	
8.	BASP 102	DLC-I	Internship-I - (60 Hrs level) at the Institute	Total	470	120	80	190	140	1000	17	4	10	23

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)



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Dr. K. K. Singh
Head of Deptt.
Department of Civil Engineering
Tula's Institute, Dehradun

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

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I Semester - GROUP B: (Branches for Group "B" to be decided by the Institutes)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Contact Hours per week			Total Credits
				End Sem.	Mid Sem.	Quiz/Assignment	Practical Slot	Lab work & Sessional	Total Marks	L	
1.	BAST 104 BASP 104	BSC-3	Engineering Physics	100	30	20	30	20	200	3	1
2.	BAST 102	BSC-2	Mathematics-I	100	30	20	-	-	150	3	1
3.	BMET 102 BMEP 102	ESC-4	Basic Mechanical Engineering	100	30	20	30	20	200	3	1
4.	BECT 101 BECP 101	ESC-5	Basic Electronics Engineering	100	30	20	30	20	200	3	1
5.	BMEP 103	ESC-2	Engineering Graphics	-	-	-	50	25	75	1	-
6.	BASP 106	HSMC-2	Language Lab & Seminars	-	-	-	50	25	75	1	-
7.	BEST 101	BSC	Environmental Studies	70	Not Credit Course. Student must clear it to complete the degree.				30 (Field & Project Work)	100	3
8.	BASP 102	DLC-V	Internship-I - (60 Hrs Duration) at the Institute level	To be completed during first/second semester. Its evaluation/credit to be added in third semester.							
			Total	470	120	80	190	140	1000	17	4
										10	23

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)
HOD

Shivam
 Deptt. of Engg. & Technology
 Institute, Dehradun

Tula's Institute, Dehradun

Director
 Tula's Institute, Dehradun

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

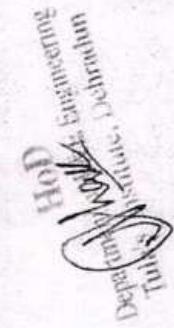
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W.E.F. Academic Session - 2020-21**

II Semester - GROUP A: (Branches for Group "A" to be decided by the Institutes)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits	
				End Sem.	Mid Sem.	Quiz/ Assignment	Practical Slot	End Sem.		L	T	P		
1.	BAST 104 BASP 104	BSC-3	Engineering Physics	100	30	20	30	20	200	3	1	2	5	
2.	BAST 105	BSC-4	Mathematics-II	100	30	20	-	-	150	3	1	-	4	
3.	BMET 102 BMEP 102	ESC-4	Basic Mechanical Engineering	100	30	20	30	20	200	3	1	2	5	
4.	BECT 101 BECP 101	ESC-5	Basic Electronics Engineering	100	30	20	30	20	200	3	1	2	5	
5.	BMEP 103	ESC-2	Engineering Graphics	-	-	-	50	25	75	1	-	2	2	
6.	BASP 106	HSMC-2	Language Lab & Seminars	-	-	-	50	25	75	1	-	2	2	
7.	BEST 101	BSC	Environmental Studies	70	Not Credit Course. Student must clear it to complete the degree.			30 (Field & Project Work)	100	3	-	-	-	
8.	BASP 102	DLC-1	Internship-I - (60 Hrs Duration) at the Institute level	Total	470	120	80	190	140	1000	17	4	10	23

Note: The Meaning of last Character of Subject Code (T - Theory and P - Practical)

1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit


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W.E.F. Academic Session - 2020-21

II Semester - GROUP B: (Branches for Group "B" to be decided by the Institutes)

S. No.	Subject Code	Category	Subject Name*	Maximum Marks Allotted				Total Marks	Contact Hours per week			Total Credits					
				End Sem.	Mid Sem.	Quiz/ Assignment	Practical End Sem. & Sessional		L	T	P						
Mandatory Induction Program (First three weeks)																	
Fourth week onwards classes will start																	
1. BAST 101 BASP 101	BSC-1	Engineering Chemistry	100	30	20	30	20	200	3	1	2	5					
2. BAST 105	BSC-4	Mathematics-II	100	30	20	-	-	150	3	1	-	4					
3. BAST 103 BASP 103	HSMC-1	English for Communication	100	30	20	30	20	200	3	-	2	4					
4. BEET 101 BEEP 101	ESC-1	Basic Electrical Engineering	100	30	20	30	20	200	3	1	2	5					
5. BCST 101 BCSP 101	ESC-6	Fundamentals of Computers & Programming in C	100	30	20	30	20	200	3	1	2	5					
6. BMEP 101	ESC-3	Manufacturing Practices / Workshop	-	-	-	30	20	100	1	-	2	2					
7. BASP 102	DLC-1	Internship-I (60 Hrs Duration) at the Institute level							To be completed during or at the end of the second semester. Its evaluation/credit to be added in third semester.								
8. BASP 105	DLC-2	Swachh Bharat Summer Internship Unnat Bharat Abhiyan (100 Hrs) Rural Outreach						15	10	25*	-	4					
		Total	500	150	100	150	100	1000	16	4	10	25					

*It is non credit course. Student must clear it to be promoted in II Year. Marks will not be added to the total!

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)

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Signature
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1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

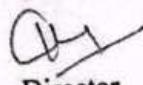


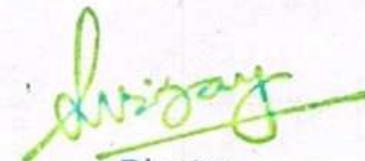
V Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Total Credit	
				Theory			Practical			L	T	P		
				End Sem	Mid Sem	Quiz / Assignment	End Sem	Term Work /Lab Work & Sessional						
1.	BECT 501 BEC P-501	DC	Microprocessors & Interfacing	100	30	20	30	20	200	3	1	2	5	
2.	BECT -502 BEC P-502	DC	Electromagnetic Theory	100	30	20	30	20	200	3	1	2	5	
3.	BECT -503 BEC P-503	DC	VLSI Technology and Design	100	30	20	30	20	200	3	1	2	5	
4.	BECT -504	DE	Departmental Elective	100	30	20	-	-	150	3	1	0	4	
5.	BOEC-505	OE	Open Elective	100	30	20	-	-	150	3	1	0	4	
6.	BEC P 506	O/E Lab	Simulation Software Lab (Mat Lab, Multisim etc) / PCB design and Fabrication Lab	-	-	-	30	20	50	0	0	2	1	
	BEC P -507	D.I.C-1	Evaluation of Internship-II completed at II year level	-	-	-	-	50	50			2	1	
8		IN	Internship -III	To be completed any time during Fifth/ Sixth semester. Its evaluation/credit to be added in Seventh semester.										
Total				500	150	100	120	130	1000	15	5	14	25	
NSS/NCC														

Departmental Electives		Open Electives	
BECT 504(A)	CNTL	BOEC -505(A)	Data Structure using C++
BECT 504(B)	Data Communication and Networks	BOEC -505(B)	Computer System Organisation
BECT 504(C)	Advanced Control System	BOEC -505(C)	Process Control Instrumentation
BECT 504 (D)	IC Technology	BOET -504 (D)	Innovation and Entrepreneurship


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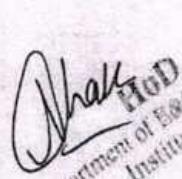

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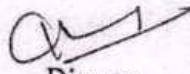
VI Semester

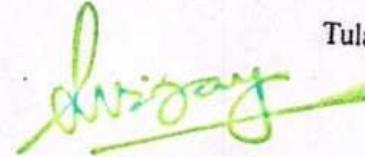
S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Total Credit	
				Theory			Practical			L	T	P		
				End Sem	Mid Sem	Quiz / Assignment	End Sem	/ Team Work Lab Work & Sessional						
1.	BECT 601 BECP-601	DC	Digital Signal Processing	100	30	20	30	20	200	3	1	2	5	
2.	BECT -602 BECP-602	DC	Antenna and Wave Propagation	100	30	20	30	20	200	3	1	2	5	
3.	BECT -603 BECP-603	DC	Digital Communication	100	30	20	30	20	200	3	1	2	5	
4.	BECT -604	DE	Departmental Elective	100	30	20		-	150	3	1	0	4	
5.	BOEC -605	OE	Open Elective	100	30	20	-	-	150	3	1	0	4	
6.	BECP -606	O/E	Open Source S/w Lab Lab	-	-	-	30	20	50	0	0	2	1	
7	BECT -607	P	Minor Project -I						50			2	1	
8		IN	Internship - III											
Total				500	150	100	120	130	1000	15	5	10	25	
Non Credit Course														

Note: Meaning of Last Character of Subject Code (T – Theory; P – Practical)

Departmental Electives		Open Electives (Using SWAYAM etc may be allowed)			
BECT 604 (A)	Cellular and Mobile Communication	BOEC -605 (A)	Microcontroller and Embedded Systems		
BECT 604 (B)	CMOS Design	BOEC -605 (B)	Bio Medical Electronics		
BECT 604 (C)	Satellite Communication	BOEC -605 (C)	Power Electronics		
BECT 604 (D)	High Speed Electronics	BOEC 605 (D)	IOT and Applications		


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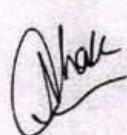

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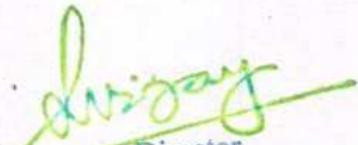

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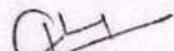
VII Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Total Credit	
				Theory			Practical			L	T	P		
				End Sem	Mid Sem	Quiz / Assignment	End Sem	Term Work /Lab Work & Sessional						
1.	BECT 701 BECp-701	DC	Microwave Engineering	100	30	20	30	20	200	3	1	2	5	
2.	BECT -702 BECp-702	DC	Optical Fibre Communication	100	30	20	30	20	200	3	1	2	5	
3.	BECT -703	DE	Departmental Elective	100	30	20	-	-	150	3	1	0	4	
4.	BOEC -704	OE	Open Elective	100	30	20	-	-	150	3	1	0	4	
5.	BECT -705	D Lab	Virtual Lab	-	-	-	30	20	50	0	0	2	1	
7	BECp -706	DLC-I	Evaluation of Internship-III completed at III year level	-	-	-	-	50	50			2	1	
8	EC-707	P	Minor Project-II	-	-	-	50	50	100	0	0	4	2	
Total				400	120	80	140	160	900	12	4	12	22	
NSS/NCC														

Departmental Electives			Open Electives		
BECT 703(A)	Mixed Circuit Design	BOEC -704(A)	Mobile Ad Hoc Networks		
BECT 703(B)	Digital Image Processing	BOEC -704(B)	Artificial Intelligence		
BECT 703(C)	Advanced Communication Systems	BOEC -704(C)	Artificial Neural Networks		
BECT 703 (D)	Wireless Sensor Networks	BOEC 704 (D)	Subject from SWAYAM		


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VIII Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Total Credit	
				Theory			Practical			L	T	P		
				End Sem	Mid Sem	Quiz/ Assignment	End Sem	Term Work /Lab Work & Sessional						
1.	BECT 801	DC	Television and Radar Engineering	100	30	20	30	20	200	3	1	2	5	
2.	BECT -802	DC	Wireless Communications	100	30	20	30	20	200	3	1	2	5	
3.	BECT -803	DE	Departmental Elective	100	30	20	-	-	150	3	1	0	4	
4.	BOEC -804	OE	Open Elective	100	30	20	-	-	150	3	1	0	4	
5.	BECP -805	P	Major Project	-	-	-	100	100	200	0	0	8	4	
Total				400	120	80	120	130	900	11	5	12	22	
NSS/NCC														

Departmental Electives			Open Electives		
EC 803 (A)	Digital System Design using VHDL	BOEC -804(A)	Industrial Automation Technology		
EC 803 (B)	Adaptive Signal Processing	BOEC -804 (B)	Machine Learning		
EC 803 (C)	Telecommunication Switching Systems	BOEC 804 (C)	Under Water Communication		
EC 803 (D)	SDN and Cognitive Radio Networks	BOEC 804 (D)	Subject using SWAYAM etc		

NOTE: Open elective in all the semesters can be taken from SWAYAM or any other International University after getting permission from authorities


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Annexure No. 06

Director

Tula's Institute, Dehradun

Uttarakhand Technical University, Dehradun
Scheme of Examination as per AICTE Flexible Curricula

Evaluation Scheme & Syllabus for B. Tech Third Year

W.E.F. Academic Session 2020-21
III to VIII SEMESTER

**Bachelor of Technology (B. Tech.) [Electrical &
Electronics Engineering]**



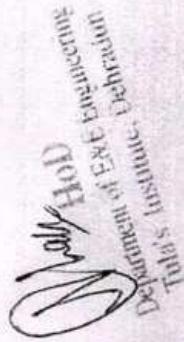
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Bachelor of Technology (B. Tech.) I Year

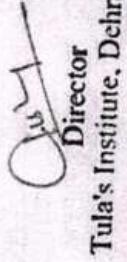
W.E.F. Academic Session - 2020-21

I Semester - GROUP A: (Branches for Group "A" to be decided by the Institutes)

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Contact Hours per week			Total Credits				
				End Sem.	Mid Sem.	Quiz/ Assignment	Practical	Total Marks	L	T					
Mandatory Induction Program (First three weeks)															
Fourth week onwards classes will start															
1.	EAST 101 BASP 101	BSC-1	Engineering Chemistry	100	30	20	30	200	3	1	2				
2.	BAST 102 BASP 102	BSC-2	Mathematics-I	100	30	20	-	150	3	1	-				
3.	BAST 103 BASP 103	HSMC-1	English for Communications	100	30	20	30	200	3	-	4				
4.	BEET 101 BEEP 101	ESC-1	Basic Electrical Engineering	100	30	20	30	200	3	-	4				
5.	BCST 101 BCSP 101	ESC-6	Fundamentals of Computers & Programming in C	100	30	20	30	200	3	1	2				
6.	BMEP 101	ESC-3	Manufacturing Practices / Workshop	-	-	-	30	20	50	1	-	2			
7.	BASP 102	DLC-1	Internship-I (60 Hrs Duration) at the Institute level												
			To be completed during or at the end of the second semester. Its evaluation/credit to be added in third semester.												
8.	BASP 105	DLC-2	Swachh Bharat Summer Internship Unnat Bharat Abhiyan (100Hrs)/Rural Outreach				15	10	25*	-	-				
			Total	500	150	100	150	100	1000	16	4				
										10	25				

*It is non credit course. Student must clear it to be promoted in II Year; Marks will not be added to the total
Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)


Dr. N. K. Joshi
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1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit

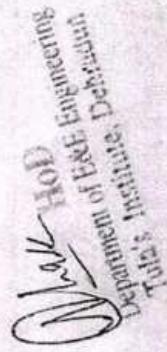

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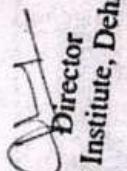
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W.E.F. Academic Session - 2020-21

I Semester - GROUP B: (Branches for Group "B" to be decided by the Institutes)

S.No.	Subject Code	Subject Name	Maximum Marks Allotted				Total Marks	Contact Hours per week			Total Credits
			End Sem.	Mid Sem. Exam.	Quiz/ Assignment	Practical Slot		L	T	P	
1.	BAST 104 BASP 104	BSC-3 Engineering Physics	100	30	20	30	20	200	3	1	2
2.	BAST 102	BSC-2 Mathematics-I	100	30	20	-	-	150	3	1	5
3.	BMET 102 BMEP 102	Basic Mechanical Engineering	100	30	20	30	20	200	3	1	4
4.	BECT 101 BECP 101	Basic Electronics Engineering	100	30	20	30	20	200	3	1	5
5.	BMEP 103	Engineering Graphics	-	-	-	50	25	75	1	-	2
6.	BASP 106	HSMC-2 Language Lab & Seminars	-	-	-	50	25	75	1	-	2
7.	BEST 101	BSC Environmental Studies	70	Not Credit Course. Student must clear it to complete the degree.			30 (Field & Project Work)	100	3	-	2
8.	BASP 102	DLC-1 Internship-I - (60 Hrs Duration) at the Institute level	To be completed during first/second semester. Its evaluation/credit to be added in third semester.								
		Total	470	120	80	190	140	1000	17	4	10
									23		

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)


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HOD
Department of E&E Engineering
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Tula's Institute, Dehradun

1 Hr Lecture 1 Credit	1 Hr Tutorial 1 Credit	2 Hr Practical 1 Credit
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New Scheme of Examination as per AICTE Flexible Curricula
Bachelor of Technology (B. Tech.) I Year
W.E.F. Academic Session - 2020-21

II Semester - GROUP A: (Branches for Group "A" to be decided by the Institutes)

S.No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Contact Hours per week				Total Credits	
				End Sem.	Mid Sem. Exam.	Quiz/ Assignment	Practical Slot	Total Marks	L	T	P		
1.	BAST 104 BASP 104	BSC-3	Engineering Physics	100	30	20	30	20	200	3	1	2	5
2.	BAST 105	BSC-4	Mathematics-II	100	30	20	-	-	150	3	1	-	4
3.	BMET 102 BMEP 102	ESC-4	Basic Mechanical Engineering	100	30	20	30	20	200	3	1	2	5
4.	BECT 101	ESC-5	Basic Electronics Engineering	100	30	20	30	20	200	3	1	2	5
5.	BMEP 103	ESC-2	Engineering Graphics	-	-	-	50	25	75	1	-	2	2
6.	BASP 106	HSMC-2	Language Lab & Seminars	-	-	-	50	25	75	1	-	2	2
7.	BEST 101	BSC	Environmental Studies	70	Not Credit Course. Student must clear it to complete the degree.			30 (Field & Project Work)	100	3	-	-	-
8.	BASP 102	DLC-1	Internship-I - (60 Hrs Duration) at the Institute level	To be completed during first/second semester. Its evaluation/credit to be added in third semester.									
			Total	470	120	80	190	140	1000	17	4	10	23

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)


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Tula's Institute, Dehradun


Head of Department
Department of E&E Engineering
Tula's Institute, Dehradun

1 Hr Lecture 1 Credit	1 Hr Tutorial 1 Credit	2 Hr Practical 1 Credit
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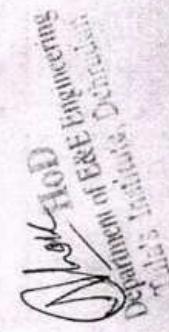
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W.E.F. Academic Session - 2020-21

II Semester - GROUP B: (Branches for Group "B" to be decided by the Institutes)

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Total Marks	Contact Hours per week			Total Credits					
				End Sem.	Mid Sem.	Quiz/ Assignment	Practical		L	T	P						
Mandatory Induction Program (First three weeks)																	
Fourth week onwards classes will start																	
1. BAST 101	BASP 101	BSC-1	Engineering Chemistry	100	30	20	30	200	3	1	2	5					
2. BAST 105	BSC-4	Mathematics-II		100	30	20	-	150	3	1	-	4					
3. BAST 103	HSMC-1	English for Communication		100	30	20	30	200	3	-	2	4					
4. BEET 101	BEEP 101	Basic Electrical Engineering		100	30	20	30	200	3	1	2	5					
5. BCST 101	BCSP 101	ESC-6	Fundamentals of Computers & Programming in C	100	30	20	30	200	3	1	2	5					
6. BMEP 101		ESC-3	Manufacturing Practices / Workshop	-	-	-	30	20	100	1	-	2					
7. BASP 102	DLC-1	(60 Hrs Duration) at the Institute level		To be completed during or at the end of the second semester. Its evaluation/credit to be added in third semester.													
8. BASP 105	DLC-2	Swachh Bharat Summer Internship Uttar Bharat Abhiyan (100 Hrs) Rural Outreach					15	10	25*	-	4	-					
		Total		500	150	100	150	100	1000	16	4	10	25				

*It is non credit course. Student must clear it to be promoted in II Year. Marks will not be added to the total

Note: The Meaning of last Character of Subject Code (T – Theory and P – Practical)


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1 Hr Lecture	1 Hr Tutorial	2 Hr Practical
1 Credit	1 Credit	1 Credit


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V Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Total Mark s	Contact Hours per Week				
				Theory			Practical						
				End Sem	Mid Sem	Quiz / Assignm ent	End Sem	Term Work /Lab Work & Sessional	L	T	P		
1.	BEET-501 BEEP-501	DC	Electrical Machine-II	100	30	20	30	20	200	3	1	2	5
2.	BEET -502 &BEEP 501	DC	Power System-II	100	30	20	30	20	200	3	1	2	5
3.	BEET-503 (A or B or C)	DE	Departmental Elective-I	100	30	20	-	-	150	3	0	0	3
4.	BOET-504 (A / B / C / D)	OE	Open Elective-I	100	30	20	-	-	150	3	0	0	3
5.	BEET-505	DC	Electromagnetic Field theory	100	30	20	-	-	150	3	1	0	4
6.	BENP-506	IN	Evaluation of Internship-II completed at II year level	-	-	-	-	100	100	0	0	4	2
7.	BENP-507		Open Source Lab					50	50				
8.	BASP-507/607	IN	Internship -III	To be completed any time during Fifth/ Sixth semester. Its evaluation/credit to be added in Seventh semester.									
Total				500	150	100	60	190	1000	11	5	19	22
NSS/NCC													

Departmental Electives		Open Electives	
BEET 503(A)	CAD of Power Apparatus	BOET-504(A)	Digital Control System
BEET 503(B)	Applied Instrumentation	BOET-504(B)	Communication Engineering
BEET 503(C)	Electrical Engineering Material	BOET-504(C)	Industrial electronics
		BOET-504(D)	Innovation and Entrepreneurship

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VI Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week					
				Theory			Practical								
				End Sem	Mid Sem	Quiz / Assignm ent	End Sem	Team Work / Lab Work & Sessional		L	T	P			
1.	BEET-601 & BEEP-601	DC	Power Electronics	100	30	20	30	20	200	3	1	2	5		
2.	BECT-602 & BECP-602	DC	Microprocessor & Embedded systems	100	30	20	30	20	200	3	1	2	5		
	BECT-603	DC	Digital Signal Processing	100	30	20	30	20	200	3	1	2	5		
3.	BEET-604(A or B or C)	DE	Departmental Elective	100	30	20	-	-	150	3	0	0	3		
4.	BOET-605(A or B or C)	OE	Open Elective	100	30	20	-	-	150	3	0	0	3		
5.	BEEP-606	O/E Lab	Simulation lab/Virtual Lab	-	-	-	30	20	50	0	0	4	2		
6.	BEEP-607	P	Minor Project -I				-	50	50	0	0	4	2		
7	BASP- 507/607	IN	Internship - III	To be completed anytime during Fifth/Sixth semester. Its evaluation/credit to be added in Seventh Semester.											
Total				500	150	100	90	160	1000	14	4	14	25		

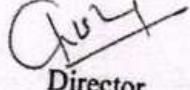
Departmental Electives

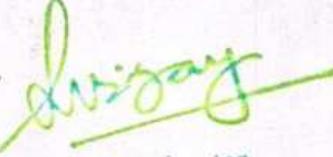
BEET 604(A)	FACTS	BOET-605(A)
BEET 604(B)	Energy Management and SCADA	BOET-605(B)
BEET 604(C)	NCER	BOET-605(C)

Open Electives

Introduction to smart grids
Power Plant Engineering
Special Electromechanical Systems


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VII Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			
				Theory			Practical			L	T	P	
				End Sem	Mid Sem	Quiz / Assignment	End Sem	Term Work /Lab Work & Sessional					
1.	BEET-701	DC	Switchgear and protection	100	30	20	30	20	200	3	1	2 5	
2.	BEET-702	DC	Utilization of Electrical Energy and traction	100	30	20	30	20	200	3	1	2 5	
3.	BEET-703(A or B or C)	DE	Departmental Elective	100	30	20	-	-	150	3	0	0 3	
4.	BOCT-704(A or B or C)	OE	Open Elective	100	30	20	-	-	150	3	0	0 3	
5.	BEEP-705	D Lab	Open Source S/w lab	-	-	-	30	20	50	0	0	2 1	
6.	BENP-706	DLC-I	Evaluation of Internship-II completed at II year level	-	-	-	-	100	100	0	0	2 1	
7.	BEEP-707	P	Minor Project-II	-	-	-	100	50	150	0	0	2 1	
Total				400	120	80	160	240	1000	12	5	18 19	
NSS/NCC													

Departmental Electives			Open Electives		
BEET-703(A)	Soft computing Techniques	BOCT-704(A)	Internet of things		
BEET-703(B)	Non Conventional Energy resources	BOCT-704(B)	Advances in Entrepreneurship Development		
BEET-703(C)	High Voltage Engineering	BOCT-704(C)	Probability theory and stochastic process		
		BOCT-704 (D)	Robotics and automation		

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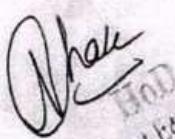
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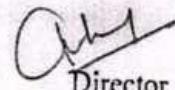
VIII Semester

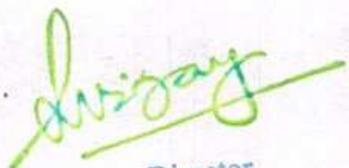
S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week					
				Theory			Practical			End Sem	Term Work /Lab Work & Sessional	L	T	P	
				End Sem	Mid Sem	Quiz / Assignment	End Sem								
1.	BEET-801	DC	Advance control systems	100	30	20	30	20	200	3	1	2	5		
2.	BEET - 802	DC	Electric Drives and its applications	100	30	20	30	50	200	3	1	2	5		
3.	BEET - 803(A or B or C)	DE	Departmental Elective	100	30	20	-	-	150	3	0	0	3		
4.	BOCT-804(A or B or C or D)	OE	Open Elective	100	30	20	-	-	150	3	0	0	3		
5	BEEP-805	P	Major Project	-	-	-	100	200	300	0	0	8	4		
Total				400	120	80	130	270	1000	12	2	10	20		
NSS/NCC															

Departmental Electives		Open Electives	
BEET 803 (A)	Digital Image processing	BOCT - 804(A)	Cyber Security
BEET 803 (B)	Bio Medical Instrumentation	BOCT-804 (B)	Machine Learning
BEET 803 (C)	Modelling and analysis of electric machines	BOCT-804 (D)	Cloud Computing

Note: 20% of subjects can be allowed to be taken online through SWAYAM or any other international Institute.


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Annexure No. 07

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[B.Tech. Model Curriculum Structure]

Semester-I

S. No.	Subject Codes	Category	Subject Name	Periods			Sessional Exam			ESE		Subject Total	Credit
				L	T	P	CT	TA	Total	TE	PE		
1		NC	First 3 Weeks Mandatory Induction Program for all B. Tech. I Year Students beyond class hours										
2	AHT-001/ AHT-002	BSC	Engineering Physics/ Engineering Chemistry	3	1	0	30	20	50	100		150	4
3	AHT-003	BSC	Introduction to Engineering Mathematics	3	1	0	30	20	50	100		150	4
4	EET-001/ ECT-001	ESC	Basic Electrical Engineering/ Basic Electronics Engineering	3	1	0	30	20	50	100		150	4
5	CST-001/ MET-001	ESC	Programming for Problem Solving/ Basic Mechanical Engineering	3	1	0	30	20	50	100		150	4
6	AHP-001/ AHP-002	LC	Engineering Physics Lab/ Engineering Chemistry Lab	0	0	2			25	25		25	50
7	EEP-001/ ECP-001	LC	Basic Electrical Engineering Lab/ Basic Electronics Engineering Lab	0	0	2			25	25		25	50
8	CSP-001/ MEP-001	LC	Programming for Problem Solving Lab/Basic Mechanical Engineering Lab	0	0	2			25	25		25	50
9	MEP-002/ MEP-003	LC	Engineering Graphics & Design Lab/ Workshop Practices Lab	0	1	2			50	50		50	100
10	AHP-003/ AHP-004	MC	Introduction to Digital Marketing/ Emerging Technologies in Engineering	0	0	2			25	25		25	50
11	AHP-005/ CSP-002	MC	Self Employment and Entrepreneurship Development/ Computer Applications and IOT	0	0	2			25	25		25	50
12	AHT-004/ AHP-006	NC	Environmental Studies / English Language Lab	2	0	0	15	10	25	50		75	
				0	0	2				50		25	75
13	GP-01	NC	General Proficiency							50			50
14			Internship-I /Mini Project - I	3-4 Weeks internship to be completed at the end of first or second semester during vacation period and its evaluation/ credit to be added in third semester of relevant branch.									
			Total									950	23

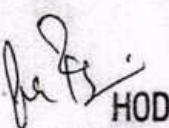
Abbreviations: L-No. of Lecture hours per week, T-No. of Tutorial hours per week, P-No. of Practical hours per week,

CT-Class Test Marks, TA-Marks of teacher's assessment including student's class performance and attendance,

PS-Practical Sessional Marks, ESE-End Semester Examination, TE- Theory Examination Marks,

PE- Practical External Examination Marks

1 Hr Lecture	1 Hr Tutorial	2 or 3 Hr Practical
1 Credit	1 Credit	1 Credit


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[B.Tech. Model Curriculum Structure]

Semester-II

S. No.	Subject Codes	Category	Subject Name	Periods			Sessional Exam			ESE		Subject Total	Credit
				L	T	P	CT	TA	Total	TE	PE		
1	AHT-002/ AHT-001	BSC	Engineering Chemistry/ Engineering Physics	3	1	0	30	20	50	100		150	4
2	AHT-005	BSC	Analytical Mathematics	3	1	0	30	20	50	100		150	4
3	ECT-001/ EET-001	ESC	Basic Electronics Engineering/ Basic Electrical Engineering	3	1	0	30	20	50	100		150	4
4	MET-001/ CST-001	ESC	Basic Mechanical Engineering/ Programming for Problem Solving	3	1	0	30	20	50	100		150	4
5	AHP-002/ AHP-001	LC	Engineering Chemistry Lab/ Engineering Physics Lab	0	0	2		25	25		25	50	1
6	ECP-001/ EEP-001	LC	Basic Electronics Engineering Lab/ Basic Electrical Engineering Lab	0	0	2		25	25		25	50	1
7	MEP-001/ CSP-001	LC	Basic Mechanical Engineering Lab/ Programming for Problem Solving Lab	0	0	2		25	25		25	50	1
8	MEP-003/ MEP-002	LC	Workshop Practices/ Engineering Graphics & Design Lab	0	1	2		50	50		50	100	2
9	AHP-004/ AHP-003	MC	Emerging Technologies in Engineering/ Introduction to Digital Marketing	0	0	2		25	25		25	50	1
10	CSP-002/ AHP-005	MC	Computer Applications and IOT/ Self Employment and Entrepreneurship Development	0	0	2		25	25		25	50	1
11	AHP-006/ AHT-004	NC	English Language Lab/ Environmental Studies	0	0	2		50		25	75		
12	GP-02	NC	General Proficiency	2	0	0	15	10	25	50		75	
13			Internship-I /Mini Project-I	3-4 Weeks internship to be completed at the end of first or second semester during vacation period and its evaluation/ credit to be added in third semester of relevant branch.									
			Total									950	23

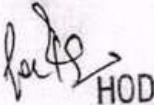
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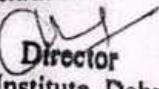
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PS-Practical Sessional Marks, ESE-End Semester Examination, TE- Theory Examination Marks,

PE- Practical External Examination Marks

1 Hr Lecture	1 Hr Tutorial	2 or 3 Hr Practical
1 Credit	1 Credit	1 Credit


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New Scheme of Examination as per AICTE Flexible Curricula
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[Mechanical Engineering]
W.E.F. Academic Session 2020-21

III Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Total Marks	Contact Hours per Week			Total Credit		
				Theory	Practical	End Sem	Mid Sem	Quiz / Assignment	End Sem	Term Work /Lab Work & Sessional	L	T	P	
1.	BAST 301	BSC-5	Mathematics-III	100	30	20	-	-	-	150	3	1	-	4
2.	BMET 302	DC-1	Basic Thermodynamics	100	30	20	-	-	-	150	3	1	-	4
3.	BMET 303	DC-2	Materials Science & Technology	100	30	20	30	20	200	3	-	2	4	
4.	BMET 304	DC-3	Strength of Material	100	30	20	30	20	200	3	1	2	5	
5.	BMLT 305	DC-4	Manufacturing Science & Technology-I	100	30	20	30	20	200	3	0	2	4	
6.	BCSP 307	DC	Programming Practices (Introduction to MATLAB)	-	-	-	-	-	50	50	-	-	2	
7.	BAST 107	DLC -1	Evaluation of Internship-I Completed at I Year Level /Seminar for Lateral Entry students	-	-	-	-	-	50	50	-	-	2	
Total				500	150	100	90	160	1000	15	3	14	24	
8	BCST 308	MC •	Cyber Security	Non Credit Course				NSS/NCC						

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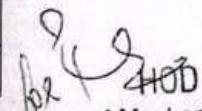
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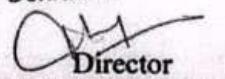
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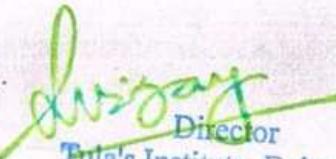
New Scheme of Examination as per AICTE Flexible Curricula
Bachelor of Technology (B.Tech.)II Year
[Mechanical Engineering]
W.E.F. Academic Session 2020-21

IV Semester

S. No.	Subject Code	Categ ory	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per Week			Tot al Cre dit		
				Theory			Practical			End Sem	Mid Sem	Quiz / Assignment	End Sem	Term Work /Lab Work & Sessional	
				End Sem	Mid Sem	Quiz / Assignment	End Sem	Term Work /Lab Work & Sessional							
1.	BMET 401 BMEP 401	DC	Applied Thermodynamics Engineering	100	30	20	30	20	200	3	1	2	5		
2.	BECT 402	ESC	Energy & Environmental Engineering	100	30	20	-	-	150	3	1	-	4		
3.	BMET 403 BMEP 403	DC	Theory Of Machine	100	30	20	30	20	200	3	1	2	5		
4.	BMET 404 BMEP 404	DC	Fluid Mechanics	100	30	20	30	20	200	3	1	2	5		
5.	BMET 405 BMEP 405	DC	Manufacturing Science & Technology-II	100	30	20			150	3	0	0	3		
6.	BECT 406	HV	Universal Human Values-2	50	30	20	-	-	100	2	1	0	3		
7.	BECP 407	DLC	90 hrs Internship based on using various software's - Internship -II	To be completed anytime during Third/fourth semester. Its evaluation/credit to be added in fifth semester.											
Total				550	180	120	90	60	1000	17	5	6	25		
NSS/NCC															


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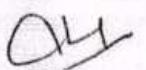

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New Scheme of Examination as per AICTE Flexible Curricula
Bachelor of Technology (B.Tech.) IV Year
[Mechanical Engineering]
W.E.F. Academic Session 2020-21

VIII Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted				Total marks	Contact Hours per Week			Total Credi	
				Theory			Practical		L	T	P		
				End Sem	Mid Sem	Quiz / Assi- gnm ent	End Sem	Term Work /Lab Work & Sessional					
1.	BMET 801	DC	Operation research	100	30	20			150	3	1	0	4
2	BMET 802	DC	Automobile	100	30	20	30	20	200	3	1	2	5
3	BMET-803	DE	Departmental Elective	100	30	20			150	3	0	0	3
4.	BMET-804	OE	Open Elective	100	30	20			150	3	0	0	3
5	BMEP-805	S	Open source Lab					50	50	0	0	2	1
6	BMEP-806	P	Major Project				100	100	200	0	0	8	4
Total				400	120	80	50	200	900	12	2	12	20

Departmental Electives		Open Electives	
BMET-802 (A)	Power Plant Engineering	BMET-803 (A)	Concepts of programming and OOPS
BMET-802 (B)	Solar Energy	BMET-803 (B)	Environment and Ecology
BMET-802 (C)	Experimental Stress Analysis	BMET-803 (C)	Programming in python


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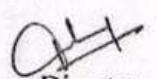

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New Scheme of Examination as per AICTE Flexible Curricula
Bachelor of Technology (B.Tech.)III Year
[Mechanical Engineering]

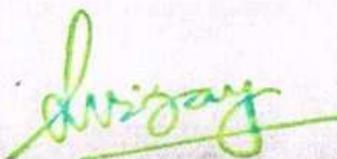
V Semester

S. No	Subject Code	Category	Subject Name	Maximum Marks Allotted				Total marks	Contact Hours per Week			Total Credi: t	
				Theory			Practical		L	T	P		
				End Sem	Mid Sem	Quiz / Assig- nmen t	End Sem	Term Work /Lab Work & Sessional					
1.	BMET 501 BMEP 501	DC	Industrial Engineering & Ergonomics	100	30	20	30	20	200	3	0	2	4
2.	BMET -502 BMEP 502	DC	Machine Component Design -I	100	30	20	30	20	200	2	1	2	4
3.	BMET -503 BMEP -503	DC	Heat & Mass Transfer	100	30	20	30	20	200	2	1	2	4
4.	BMET -504	DE	Departmental Elective	100	30	20	-	-	150	3	0	0	3
5.	BOME -505	OE	Open Elective	100	30	20	-	-	150	3	0	0	3
6.	BMEP -506	D Lab	Machine Drawing Lab With Autocad	-	-	-	30	20	50	0	0	2	1
7.	BMET -507	DLC	Evaluation of Internship-II completed at II year level	-	-	-	-	50	50	-	-	4	2
8.		IN	Internship -III	To be completed any time during Fifth/ Sixth semester. Its evaluation/credit to be added in Seventh semester									
Total				500	150	100	90	110	1000	13	2	1/2	21
NSS/NCC													

Departmental Electives		Open Electives	
BMET 504(A)	IC Engine	BOME 505(A)	Principle of Management
BMET 504(B)	Machine Tool Design	BOME 505(B)	TQM and SQC
BMET 504(C)	Alternate Automotive Fuels & Emissions	BOET 504(D)	Innovation and Entrepreneurship


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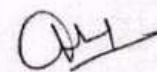
New Scheme of Examination as per AICTE Flexible Curricula
Bachelor of Technology (B.Tech.) III Year
[Mechanical Engineering]
W.E.F. Academic Session 2020-21

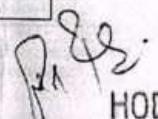
VI Semester

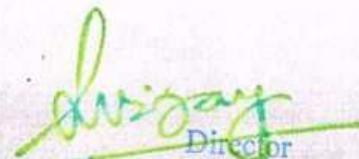
S. No	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total marks	Contact Hours per Week			Total Credit		
				Theory			Practical			Term Work /Lab Work & Sessional	L	T	P		
				End Sem	Mid Sem	Quiz / Assignment	End Sem								
1.	BMET 601 BMEP 601	DC	Turbo machinery	100	30	20	30	20	200	3	1	2	5		
2.	BMET 602 BMEP 602	DC	Machine Component Design -II	100	30	20	30	20	200	3	0	4	5		
3.	BMET -603 BMEP 603	DC	Refrigeration and Air-condition	100	30	20	30	20	200	3	1	2	5		
4.	BMET -604(A/B/C)	DE	Departmental Elective	100	30	20			150	3	0	0	3		
5.	BOME -605	OE	Open Elective	100	30	20			150	3	0	0	3		
6.	BMEP -607	P	Minor Project -I					50	50	0	0	4	2		
7.	BMEP -608	P	Open Source Lab	-	-	-	30	20	50	0	0	2	1		
		IN	Internship -III	To be completed any time during Fifth/ Sixth semester. Its evaluation/credit to be added in Seventh semester											
			Total	500	150	100	120	130	1000	15	2	12	24		

Departmental Electives			Open Electives		
BMET 604(A)	Mechatronics		BOME 605(A)	Robotics	
BMET 604 (B)	Finite Element Method		BOME 605 (B)	Optimization Techniques	
BMET 604 (C)	Product Design		BOME 605 (C)	Renewable Energy Technology	

*Students may also earn credits of open elective through NPTEL/Swayam.


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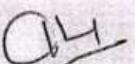
New Scheme /-of Examination as per AICTE Flexible Curricula
Bachelor of Technology (B.Tech.)IV Year
[Mechanical Engineering]
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VII Semester

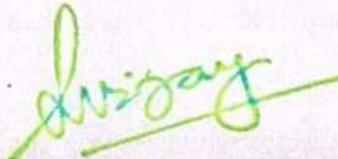
S. No	Subject Code	Category	Subject Name	Maximum Marks Allotted					Total marks	Contact Hours per Week	Total Credit			
				Theory			Practical							
				End Sem	Mid Sem	Quiz / Assig- men- t	End Sem	Term Work /Lab Work & Session al						
1.	BMET 701	DC	Maintenance and Safety	100	30	20			150	3 0 0 0	3			
2.	BMET-702 BMEP-702	DC	Computer Integrated Manufacturing	100	30	20	30	20	200	3 0 2 4				
3.	BMET-703	DE	Departmental Elective	100	30	20	-	-	150	3 0 0 0	3			
4.	BMET-704	OE	Open Elective	100	30	20	-	-	150	3 0 0 0	3			
5.	BMEP-705	D Lab	Simulation lab/Virtual Lab (Ansys/MATLAB)	-	-	-	30	20	50	0 1 2 2	2			
6.	BMEP-507	IN	Internship III	-	-	-	-	50	50	- - 2 1				
7.	BMEP-706	P	Minor Project-2	-	-	-	50	50	100	0 0 4 2				
Total				400	120	80	110	190	900	12 1 10 18				
NSS/NCC														

Departmental Electives		Open Electives	
BMET 703(A)	Nano Materials	BMET 704(A)	Energy Conservation
BMET 703(B)	Computational Fluid Dynamics	BMET 704(B)	Introduction to AI
BMET 703(C)	Mechanical Vibration	BMET 704(C)	MEMS & Microsystems Technology

*Students may also earn credits of open elective through NPTEL/Swayam.


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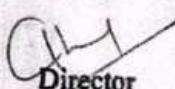
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Annexure No. 08


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M. Tech (Civil Engineering)
Model Curriculum Structure
Specialization: Structural Engineering

Program Outcomes (POs):

After completion of the program graduates will be able to

- A. Apply the knowledge of science, mathematics, and engineering principles for developing problem solving attitude

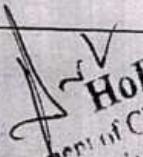
Identify, formulate and solve engineering problems in the domain of structural engineering field.

Use different software tools for Analysis and Design structural engineering domain.

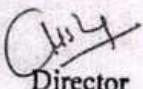
Design and conduct experiments, analyse and interpret data, for development of simulation experiments.

Function as a member of a multidisciplinary team with sense of ethics, integrity and social responsibility.

Model curriculum for ME (Civil) - specialization in Structural Engineering						
Sr. No.	Course Type/Code	Course Name	Teaching Scheme			Credits
			Th	Tuto	Lab	
1.	MSET-101	Advanced Structural Analysis	3	0	0	3
2.	MSET-102	Advanced Solid Mechanics	3	0	0	3
3.	MSET-103	Analytical and Numerical Methods for Structural Engineering	3	0	0	3
4.	Program Elective	Elective – I 1. MSET-111 Theory of Thin plates and Shells 2. MSET-112 Theory and application of Cement Composites 3. MSET-113 Theory of Structural Stability 4. MSET-114 Structural Health Monitoring	3	0	0	3
5.	MSEP-101	Structural Design Lab	0	0	2	2
6.	MSEP-102	Advanced Concrete Lab	0	0	2	2
7.	MLC	Research Methodology and IPR	2	0	0	2
8.	Audit 1	Audit Course	2	0	0	0
Total			16	0	4	18


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Semester II						
Sr. No.	Course Type/Code	Course Name	Teaching Scheme			Credits
			Th	Tuto	Lab	
1.	MSET-201	FEM in Structural Engineering	3	0	0	3
2.	MSET-202	Structural Dynamics	3	0	0	3
3.	Program Elective I	Elective – I 1. MSET-211 Advanced Steel Design 2. MSET-212 Design of Formwork 3. MSET-213 Design of High Rise Structures 4. MSET-214 Design of Masonry Structures	3	0	0	3
4.	Program Elective II	Elective – II 1. MSET-221 Design of Advanced Concrete Structures 2. MSET-222 Advanced Design of Foundations 3. MSET-223 Soil Structure Interaction 4. MSET-224 Design of Industrial Structure	3	0	0	3
5.	MSEP-201	Model Testing Lab	0	0	2	2
6.	MSEP-202	Numerical Analysis Lab	0	0	2	2
7.	MSEP-203	Mini Project	0	0	4	2
8.	Audit 2	Audit Course-2	2	0	0	0
Total			14	0	8	18

Semester III						
Sr. No.	Course Type/Code	Course Name	Teaching Scheme			Credits
			Th	Tuto	Lab	
1.	Program Elective-I	Elective – IV 1. MSET-311 Design of Prestressed Concrete Structures 2. MSET-312 Analysis of Laminated Composite Plates 3. MSET-313 Fracture Mechanics of Concrete Structures 4. MSET-314 Design of Plates and Shells	3	0	0	3
2.	Open Elective	1. MOET-391 Business Analytics 2. MOET-392 Industrial Safety 3. MOET-393 Operations Research 4. MOET-394 Cost Management of Engineering Projects 5. MOET-395 Composite Materials 6. MOET-396 Waste to Energy	3	0	0	3
3.	Dissertation MSEP-301	Dissertation Phase – I	0	0	20	10
			6	0	0	16

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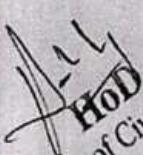
Semester-IV

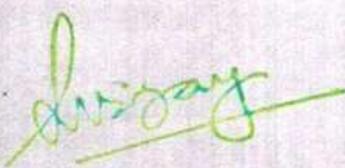
Sr. No.	Course Code	Course Name	Teaching Scheme			Credits
1.	Dissertation MSEP-401	Dissertation Phase – II	0	0	32	16
Total			--	--	--	16

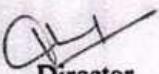
Total Credits for the programme = $18 + 18 + 16 + 16 = 68$

Audit course 1 & 2

- English for Research Paper Writing
- Disaster Management
- Sanskrit for Technical Knowledge
- Value Addition
- Constitution of India
- Pedagogy Studies
- Stress Management by Yoga
- Personality Development through Life Enlightenment Skills.


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Annexure No. 09

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**Courses Structure and Scheme of Examination for
M. Tech.- 2 Year Programme
Thermal Engineering**

Sr. No.	Course Type/Code	Course Name	Teaching Scheme			Credits	Internal Marks			External Marks	Total Marks			
			L	T	P		CT	TA	Total					
1	AHT-301	Advanced Mathematics	3	1	0	4	30	20	50	100	150			
2	TET-301	Advanced Thermodynamics	3	1	0	4	30	20	50	100	150			
3	TET-302	CFD and Heat Transfer	3	1	0	4	30	20	50	100	150			
4	TET-3XX	Professional Elective-I	3	0	0	3	30	20	50	100	150			
5	TET-3XX	Professional Elective-II	3	0	0	3	30	20	50	100	150			
6	TEP-301	Computational Lab	0	0	3	1		25	25	25	50			
7	TEP-302	Advanced Heat Transfer Lab	0	0	3	1		25	25	25	50			
8	AHT-302	Research Methodology and IPR	2	0	0	2		50	50	50	100			
9	AHT-303	Technical Writing and Presentation Skill	2	0	0	NC		50	50	0	NC			
		Total	22	3	8	22	150	250	400	600	950			
10	TET-3XX	Open Elective (Optional)	3	0	0	3	30	20	50	100	150			

Semester II (M. Tech.- 2 Year Programme)											
Sr. No.	Course Type/Code	Course Name	Teaching Scheme			Credits	Internal Marks			External Marks	Total Marks
			L	T	P		CT	TA	Total		
1	TET-303	Convective Heat Transfer	3	1	0	4	30	20	50	100	150
2	TET-304	Design of Thermal System	3	1	0	4	30	20	50	100	150
3	TET-3XX	Professional Elective-III	3	1	0	4	30	20	50	100	150
4	TET-3XX	Professional Elective-IV	3	0	0	3	30	20	50	100	150
5	TET-3XX	Open Elective	3	0	0	3	30	20	50	100	150
6	TEP-303	Computational Fluid Dynamics Lab	0	0	3	1		25	25	25	50
7	TEP-304	Thermal Engineering Lab	0	0	3	1		25	25	25	50
		Total	15	3	6	20			300	550	850



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9	TET-3XX	Open Elective (Optional)	3	0	0	3	30	20	50	100	150
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Semester III(M. Tech.- 2 Year Programme)											
Sr. No.	Course Type/Code	Course Name	Teaching Scheme			Credits	Internal Marks			External Marks	Total Marks
			L	T	P		CT	TA	Total		
1	TET-3XX	Open Elective	3	0	0	3	30	20	50	100	150
2	TEP-305	Seminar	0	0	4	2		100	100		100
3	TEP-306	Project	0	0	10	5		100	100	150	250
4	TEP-307	Dissertation	0	0	12	6		300	300		300
		Total	3	0	22	16		520	550	250	800

Semester IV(M. Tech.- 2 Year Programme)											
Sr. No.	Course Type/Code	Course Name	Teaching Scheme			Credits	Internal Marks			External Marks	Total Marks
			L	T	P		CT	TA	Total		
1	TEP-308	Dissertation	0	0	28	14		250	250	450	700
		Total	0	0	28	14		250	250	450	700

Abbreviations: L-No. of Lecture hours per week, T-No. of Tutorial hours per week, P-No. of Practical hours per week, CT-Class Test Marks, TA-Marks of teacher's assessment including student's class performance and attendance,

1 Hr Lecture	1 Hr Tutorial	2 or 3 Hr Practical
1 Credit	1 Credit	1 Credit

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Professionals Electives

Professional elective-I		Professional elective-II	
Course Title Advanced Fluid Mechanics	CourseCode TET-305	Course Title Design and Analysis of Solar Energy Systems	CourseCode TET-309
Gas Turbine and Jet Propulsion	TET-306	Engine Tribology	TET-310
Alternative Fuels in I.C. Engine	TET-307	Exergy Analysis of Thermal Systems	TET-311
Gas Dynamics	TET-308	Power Plant Engineering	TET-312
Professional elective-III		Professional elective-IV	
Wind Energy Utilization	TET-313	Design of Thermal Turbo machines	TET-317
Computational Methods in Thermal Engineering	TET-314	Modeling and Simulation	TET-318
Optimization Method in Thermal Engineering	TET-315	Bio-fluid Mechanics	TET-319
Refrigeration and air conditioning system design	TET-316	Internal Combustion Engines and Pollution	TET-320

Open Electives

Sr. No.	Course Code	Course Title
1.	TET-321	Environmental and Social Impact Assessment
2.	TET-322	Cryogenic system
3.	TET-323	Alternative Fuel Technology
4.	TET-324	Pollution Control Technologies
5.	TET-325	Electrical and Hybrid Vehicles
6.	TET-326	Energy Conversion Technologies

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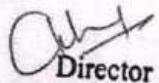
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Syllabus

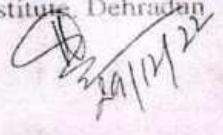
B.Sc. (Hons.) Agriculture (4 Years)

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Tehri Grahwal, Uttarakhand


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20/11/22

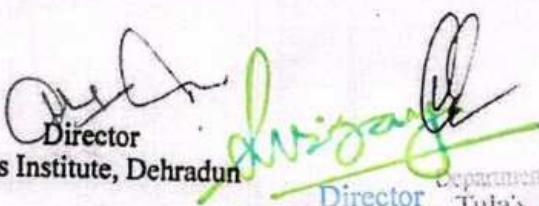
Semester wise Courses in B.Sc.(Hons.) Agriculture

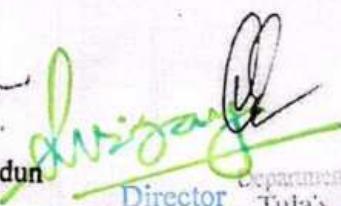
Semester I

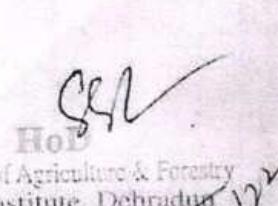
S.No	Course Code	Course Title	Credit Distribution			MM
			T	P	Total	
	BSAC-101	Fundamentals of Horticulture	1	1	2	100
1.	BSAC-102	Fundamentals of Plant Biochemistry and Biotechnology	2	1	3	100
2.	BSAC-103	Fundamentals of Soil Science	2	1	3	100
3.	BSAC-104	Introduction to Forestry	1	1	2	100
4.	BSAC-105	Comprehension & Communication Skills in English	1	1	2	100
5.	BSAC-106	Fundamentals of Agronomy	3	1	4	100
6.	BSAR-107	Introductory Biology*/Elementary Mathematics*	1/2	1/0	2/2	100
	BSAR-108					
7.	BSAR-109	Agricultural Heritage*	1	0	1	100
8.	BSAC-110	Rural Sociology & Educational Psychology	2	0	2	100
9.	BSAN-111	Human Values & Ethics (non gradial)	1	0	1	100
10.	BSAN-112/BSAN-113/BSAN-114	NSS/NCC/Physical Education & Yoga Practices**	0	2	2	100
Total Number of Courses C:Core Courses(07) *R:Remedial Course(02); **N:Non gradial course(02)			Course wise Total credits C:18, R:03, N:03=24			

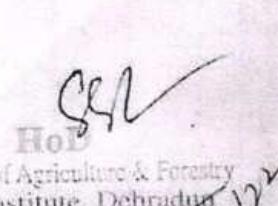
Semester-II

S.No	Course Code	Course Title	Credit Distribution			MM
			T	P	Total	
1.	BSAC-201	Fundamentals of Genetics	2	1	3	100
2.	BSAC-202	Agricultural Microbiology	1	1	2	100
3.	BSAC-203	Soil and Water Conservation Engineering	1	1	2	100
4.	BSAC-204	Fundamentals of Crop Physiology	1	1	2	100
5.	BSAC-205	Fundamentals of Agricultural Economics	2	0	2	100
6.	BSAC-206	Fundamentals of Plant Pathology	3	1	4	100
7.	BSAC-207	Fundamentals of Entomology	3	1	4	100
8.	BSAC-208	Fundamentals of Agricultural Extension Education	2	1	3	100
9.	BSAC-209	Communication Skills and Personality Development	1	1	2	100


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29/12/17

10.	BSAN-110/ NSS/NCC/Physical Education & Yoga BSAN-111/ Practices** BSAN-112	0	2	2	100
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Total Number of Courses	C:Core Courses(09)	*R:Remedial Course(Nil);**N:Non gradial course(Nil)	Course wise Total credits C:24, R:02, N:Nil=26
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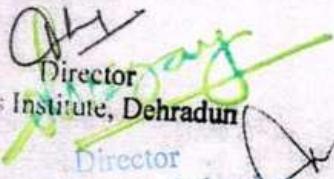
Semester -III

S.No	Course Code	Course Title	Credit Distribution			
			T	P	Total	MM
1.	BSAC-301	Crop Production Technology - I (<i>Kharif Crops</i>)	1	1	2	
2.	BSAC-302	Fundamentals of Plant Breeding	2	1	3	
3.	BSAC-303	Agricultural Finance and Cooperation	2	1	3	
4.	BSAC-304	Agri- Informatics	1	1	2	
5.	BSAC-305	Farm Machinery and Power	1	1	2	
6.	BSAC-306	Production Technology for Vegetables and Spices	1	1	2	
7.	BSAC-307	Environmental Studies and Disaster Management	2	1	3	
8.	BSAC-308	Statistical Methods	1	1	2	
9.	BSAC-309	Livestock and Poultry Management	3	1	4	

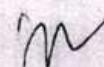
Total Number of Courses	C:Core Courses(09)	*R:Remedial Course(Nil);**N:Non gradial course(Nil)	Course wise Total credits C:23, R:Nil, N:Nil
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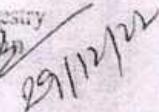
Semester-IV

S.No	Course Code	Course Title	Credit Distribution			
			T	P	Total	MM
1.	BSAC-401	Crop Production Technology -II (<i>Rabi Crops</i>)	1	1	2	100
2.	BSAC-402	Production Technology for Ornamental Crops, MAP and Landscaping	1	1	2	100
3.	BSAC-403	Renewable Energy and Green Technology	1	1	2	100
4.	BSAC-404	Problematic Soils and their Management	2	0	2	100
5.	BSAC-405	Production Technology for Fruit and Plantation Crops	1	1	2	100
6.	BSAC-406	Principles of Seed Technology	2	1	3	100
7.	BSAC-407	Farming System & Sustainable Agriculture	1	0	1	100


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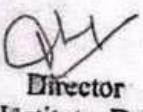
8.	BSAC-408	Agricultural Marketing Trade & Prices	2	1	3	100
9.	BSAC-409	Introductory Agro-meteorology & Climate Change	1	1	2	100
10.	Given in the list	Elective Course(one course can be selected from the list of Elective Courses)	2	1	3	100
Total	Number of Courses	C:Core Courses(09) *R:Remedial Course(Nil);**N:Non gradial course(Nil); Elective Course:01	Course wise Total credits C:19, R:Nil, N:Nil,E:03=22			

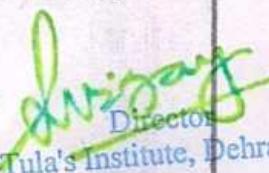
Semester-V

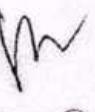
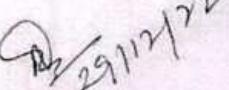
S.No	Course Code	Course Title	Credit Distribution			
			T	P	Total	MM
1.	BSAC-501	Principles of Integrated Pest and Disease Management	2	1	3	100
2.	BSAC-502	Manures, Fertilizers and Soil Fertility Management	2	1	3	100
3.	BSAC-503	Pests of Crops and Stored Grain and their Management	2	1	3	100
4.	BSAC-504	Diseases of Field and Horticultural Crops and their Management -I	2	1	3	100
5.	BSAC-505	Crop Improvement-I (<i>Kharif Crops</i>)	1	1	2	100
6.	BSAC-506	Entrepreneurship Development and Business Communication	1	1	2	100
7.	BSAC-507	Geoinformatics and Nano-technology and Precision Farming	1	1	2	100
8.	BSAC-508	Practical Crop Production – I (<i>Kharif crops</i>)	0	2	2	100
9.	BSAC-509	Intellectual Property Rights	1	0	1	100
10.	Given in the list	Elective Course(one course can be selected from the list of Elective Courses)	2	1	3	100
Total	Number of Courses	C:Core Courses(09) *R:Remedial Course(Nil);**N:Non gradial course(Nil); Elective Course:01	Course wise Total credits C:21, R:Nil, N:Nil,E:03=24			

Semestee-VI

No	Course Code	Course Title	Credit Distribution			
			T	P	Total	MM
1.	BSAC-601	Rainfed Agriculture & Watershed Management	1	1	2	100


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2.	BSAC-602	Protected Cultivation and Secondary Agriculture	1	1	2	100
3.	BSAC-603	Diseases of Field and Horticultural Crops and their Management-II	2	1	3	100
4.	BSAC-604	Post-harvest Management and Value Addition of Fruits and Vegetables	1	1	2	100
5.	BSAC-605	Management of Beneficial Insects	1	1	2	100
6.	BSAC-606	Crop Improvement-II (<i>Rabi crops</i>)	1	1	2	100
7.	BSAC-607	Practical Crop Production -II (<i>Rabi crops</i>)	0	2	2	100
8.	BSAC-608	Principles of Organic Farming	1	1	2	100
9.	BSAC-609	Farm Management, Production & Resource Economics	1	1	2	100
10.	BSAC-610	Principles of Food Science and Nutrition	2	0	2	100
11.	Given in the Elective Course (one course can be selected from the list of Elective Courses)		2	1	3	100
Total	Number of Courses	C:Core Courses(10) *R:Remedial Course(Nil);**N:Non gradial course(Nil); Elective Course:01	Course wise Total credits C:21, R:Nil, N:Nil, E:03=24			

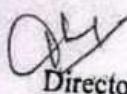
Semester-VII

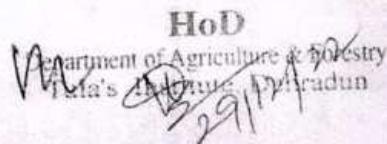
Rural Agricultural Work Experience and Agro-industrial Attachment(RAWE & AIA)

Course Code: BSAW-701 20(0+20)

SN.	Rural Agricultural Work Experience and Agro-industrial Attachment (RAWE & AIA)	Activities	No. of weeks	Total Credits
1	General orientation & On campus training by different faculties	1		
2	Village attachment	4		
3	Unit attachment in Univ./ College, KVK/ Research Station Attachment	1	10	
4	Plant clinic	4		
	Total	10	10	
5	Agro-Industrial Attachment	3		
6	Field Visit	5		


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Project Report Preparation, Presentation and Evaluation	2	
Total weeks for RAWE & AIA	10+10=20	10+10=20

RAWE Component-I
Village Attachment Training Programme

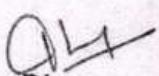
Sl. No.	Activity	Duration
1	Orientation and Survey of Village	
2	Agronomical Interventions	
3	Plant Protection Interventions	2 Week
4	Soil Improvement Interventions (Soil sampling and testing)	
5	Fruit and Vegetable production interventions	
6	Food Processing and Storage interventions	2 Week
7	Animal Production Interventions	
8	Extension and Transfer of Technology activities	

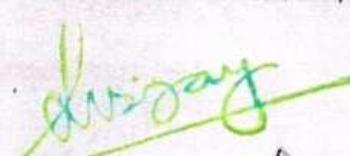
RAWE Component-II
Agro Industrial Attachment

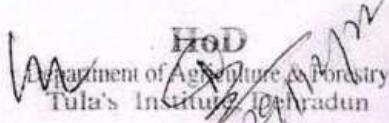
- Students shall be placed in Agro-and Cottage industries and Commodities Boards for 03 weeks.
- Industries include Seed/Sapling production, Pesticides-insecticides, Post harvest-processing-value addition, Agri-finance institutions, etc.

Activities and Tasks during Agro-Industrial Attachment Programme

- Acquaintance with industry and staff'
- Study of structure, functioning, objective and mandates of the industry
- Study of various processing units and hands-on trainings under supervision of industry staff
- Ethics of industry
- Employment generated by the Industry
- Contribution of the industry promoting environment
- Learning business network including outlets of the industry
- Skill development in all crucial tasks of the industry
- Documentation of the activities and task performed by the students
- Performance evaluation, appraisal and ranking of students


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Evaluation pattern & distribution of Marks for RAWE & AIA:

Type of attachment	Daily observation Notes(20)	Report Writing(20)	Presentation/Viva(20)	Written Test(20)	Regularity(20)	Maximum Marks
Village	10	10	10.	10	10	50
Agro-Industry	10	10	10.	10	10	50
Grand Total						100

Semester VIII

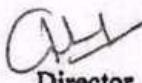
Course Code: BSAL-801

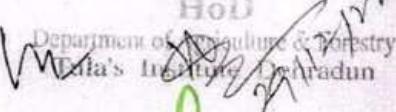
20(0+20)

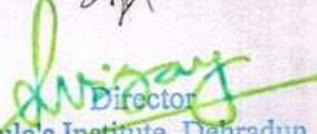
Modules for Experiential Learning Programme (ELP) for Skill Development and Entrepreneurship: A student has to register 20 credits opting for two modules of (0+10) credits each (total 20 credits) from the package of ELP modules in the VIII Semester from the list provided below:

Sr.	Title of the ELP module	Credits(T+P)
1.	Production Technology for Bioagents and Biofertilizer	0+10
2.	Seed Production and Technology	0+10
3.	Mushroom Cultivation Technology	0+10
4.	Soil, Plant, Water and Seed Testing	0+10
5.	Commercial Beekeeping	0+10
6.	Poultry Production Technology	0+10
7.	Commercial Horticulture	0+10
8.	Floriculture and Landscaping	0+10
9.	Food Processing	0+10
10.	Agriculture Waste Management	0+10
11.	Organic Production Technology	0+10
12.	Commercial Sericulture	0+10

NOTE: In addition to above ELP modules other important modules may be given to the students by the University


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Evaluation pattern & distribution of Marks for ELP:

Sl.No.	Parameters	Max. Marks
1.	Project Planning and Writing	10
2.	Presentation	10
3.	Regularity	10
4.	Monthly Assessment	10
5.	Output delivery	10
6.	Technical Skill Development	10
7.	Entrepreneurship Skills	10
8.	Business networking skills	10
9.	Report Writing Skills	10
10.	Final Presentation	10
	Total	100

Elective Courses : A student can select three elective courses out of the following and offer during 4th, 5th and 6th semesters.

S.N.	Course Code	Courses	Credit Hours
1.	BSAE-101	Agribusiness Management	3(2+1)
2.	BSAE-102	Agrochemicals	3(2+1)
3.	BSAE-103	Commercial Plant Breeding	3(1+2)
4.	BSAE-104	Landscaping	3(2+1)
5.	BSAE-105	Food Safety and Standards	3(2+1)
6.	BSAE-106	Biopesticides & Biofertilizers	3(2+1)
7.	BSAE-107	Protected Cultivation	3(2+1)
8.	BSAE-108	Micro propagation Technologies	3(1+2)
9.	BSAE-109	Hi-tech. Horticulture	3(2+1)
10.	BSAE-110	Weed Management	3(2+1)
11.	BSAE-111	System Simulation and Agro-advisory	3(2+1)
12.	BSAE-112	Agricultural Journalism	3(2+1)

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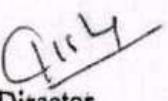
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Annexure No. 11


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SCHOOL OF COMMERCE AND MANAGEMENT

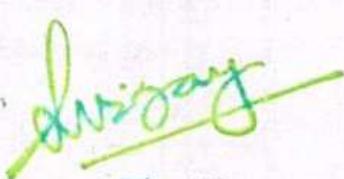
Syllabus

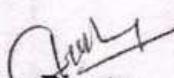
For

B.com.(Honours) Semester Wise
Effective from Academic Session 2018-2019 Onwards

Ordinances and Syllabus for B. Com (Honours)

(2018-19 onwards)


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Maximum Duration of the course

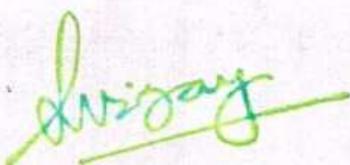
No student shall be admitted as a candidate for the examination for any of the Parts/Semesters after the lapse of six years from the date of admission to the Part-I/Semester-I of the B.Com. (Honours) programme.

Use of simple calculator is allowed. Scientific calculators are not allowed

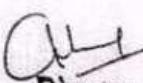
B. Com. (Hons.): Three-Year (6-Semester) Course Structure

B. Com (Hons.) Semester I:

S. No.	Course Code	Course Name	Marks		Duration (Hrs.) (External)
			External	Internal	
1	BCH-1.1	Environmental Studies	70	30	3
2	BCH-1.2	Financial Accounting	70	30	3
3	BCH-1.3	Business Law	70	30	3
4	BCH-1.4	Micro Economics	70	30	3
5	BCH-1.5	Principles and Practices of Management	70	30	3
6	BCH-1.6	Business Environment	70	30	3



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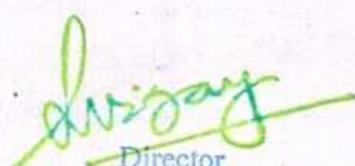

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B. Com (Hons.) Semester II:

S. No.	Course Code	Course Name	Marks		Duration (Hrs.) (External)
			External	Internal	
1	BCH-2.1	Business Communication	70	30	3
2	BCH-2.2	Corporate Accounting	70	30	3
3	BCH-2.3	Corporate Laws	70	30	3
4	BCH-2.4	Macro Economics	70	30	3
5	BCH-2.5	Fundamentals of Financial Management	70	30	3
6	BCH-2.6	Business Statistics	70	30	3

B. Com (Hons.) Semester III:

S. No.	Course Code	Course Name	Marks		Duration (Hrs.) (External)
			External	Internal	
1	BCH-3.1	Human Resource Management	70	30	3
2	BCH-3.2	Cost Accounting	70	30	3
3	BCH-3.3	Computer Applications in Business	(a)	35	15
		Practical	(b)	35	15
4	BCH-3.4	Marketing Management	70	30	3
5	BCH-3.5	Banking and Insurance	70	30	3
6	BCH-3.6	Entrepreneurship	70	30	3


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Note for Practical Examination:

In BCH-3.3 (a), there shall be an end semester examination of 35 marks. Work Book will be prepared by the student consisting of 7.5 marks and a written examination consisting of 7.5 marks, both will be evaluated internally.

In BCH-3.3 (b), there shall be a Practical examination of 35 marks which shall be conducted by the external examiner appointed by the University for the purpose. The practical examination consisting of 15 marks will be conducted internally.

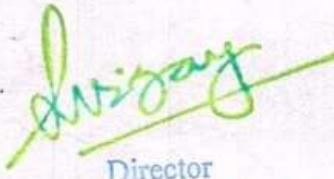
B. Com (Hons.) Semester IV:

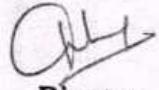
S. No.	Course Code	Course Name	Marks		Duration (Hrs.) (External)
			External	Internal	
1	BCH-4.1	Income Tax Law and Practice	70	30	3
2	BCH-4.2	E – Commerce	35	15	3
		Practical	35	15	-
3	BCH-4.3	Management Accounting	70	30	3
4	BCH-4.4	Organisation Behaviour	70	30	3
5	BCH-4.5	Indian Economy	70	30	3
6	BCH-4.6	Research Methods	70	30	3

Note for Practical Examination:

In BCH- 4.2 (a), there shall be an end semester examination of 35 marks. Work Book will be prepared by the student consisting of 7.5 marks and a written examination consisting of 7.5 marks, both will be evaluated internally.

In BCH- 4.2 (b), there shall be a Practical examination of 35 marks which shall be conducted by the external examiner appointed by the University for the purpose. The practical examination consisting of 15 marks will be conducted internally.


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B. Com (Hons.) Semester V:

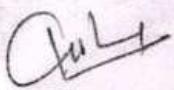
S. No.	Course Code	Course Name	Marks		Duration (Hrs.) (External)
			External	Internal	
1	BCH-5.1	Goods and Services Tax (GST)	70	30	3
2	BCH-5.2	Project Planning and Management	70	30	3
3	BCH-5.3	Auditing	70	30	3
4	BCH-5.4	Financial Markets and Institutions	70	30	3
5	BCH-5.5	Any one paper from Elective Group I*	70	30	3
6	BCH-5.6	Any one paper from Elective Group I *(Other than already selected in BCH-5.5)	70	30	3

*Elective Group I: Any two papers to be selected from the following as BCH - 5.5 and BCH - 5.6

- (i) Working Capital Management
- (ii) Consumer Protection Laws
- (iii) Advertising and Personal Selling
- (iv) Computerised Accounting System
- (v) Corporate Tax Planning

B. Com (Hons.) Semester VI:

S. No.	Course Code	Course Name	Marks		Duration (Hrs.) (External)
			External	Internal	
1	BCH-6.1	International Business	70	30	3
2	BCH-6.2	Business Ethics and Corporate Governance	70	30	3
3	BCH-6.3	Any one paper from Elective Group II**	70	30	3
4	BCH-6.4	Any one paper from Elective Group II** (Other than already selected in BCH-6.3)	70	30	3
5	BCH-6.5	Project Report	70	30	---
6	BCH-6.6	Seminar and Comprehensive Viva-Voce	70	30	---


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**** Elective Group II: Any Two paper to be selected from the following as BCH - 6.3 and BCH-6.4**

- (i) Consumer Behaviour
- (ii) Fundamentals of Investment
- (iii) Industrial and Labour Laws
- (iv) Marketing of Services
- (v) Security Analysis and Portfolio Management

The Project work (BCH-6.5) will be evaluated as under:

- (a) Periodical Presentation: 30 marks (Internal Evaluation)
- (b) Project Evaluation: 40 marks (External Evaluation)
- (c) Viva voce: 30 marks (External Evaluation)

Note for Seminar and Comprehensive Viva-Voce:

In BCH- 6.6, there shall be 30 marks for two seminars which shall be conducted internally. Comprehensive Viva-Voce examination of 70 marks shall be conducted by an external examiner appointed by the University for the purpose.

Use of simple calculator is allowed .Scientific calculators are not allowed

B. Com. (Hons.): Three-Year (6-Semester) Programme

- 1 Ideal Lecture Class Size: 40-50 Students**
- 2 Ideal Tutorial group Size: 10-12 Students**
- 3 Ideal Laboratory Practical Batch Size: 15-20 Students**



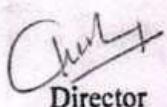
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Annexure No. 12


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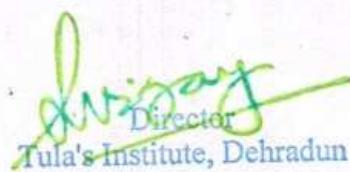
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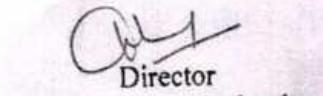


School of Commerce and Management

**Syllabus
For
BBA Semester Wise**

Effective from Academic Session 2011 onwards


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COURSE STRUCTURE & ORDINANCES FOR

BBA Six semester (Three years)

(School of Commerce and Management Sri Dev Suman Uttarakhand University)

1. Three Year Full Time BBA Degree Course: - There will be one full-time Bachelor's Degree Program in Business Administration (BBA). The duration of the course shall be three years (i.e. three academic sessions). Each year will be divided into two semesters (July-December, Jan-June). There will be about 90 teaching days in a semester, the examinations will be held in around December and May for the first/third/fifth and second/fourth/sixth semesters respectively or as convenient to the University.

2. Eligibility For Admission: - The candidates seeking admission to the BBA Degree course must have passed 10+2 of equivalent examination from a recognized Board/University. The procedure for selection of the candidates for admission in the course shall be as such as prescribed by the University from time to time.

3. Total Number of Seats: - There will be a maximum of 60 (sixty) seats for each year of the program in the Department of which 30 will be reserved for general category and 30 (thirty) for self-financed category including NRI/NRI sponsored/Industry sponsored. Foreign nationals seeking admissions to the course shall have to produce a Department of Education and shall have to comply Rules and Regulations in the matter. Where seats reserved for NRIs/ sponsored are vacant until the last date for application/depositing fees, the same shall be filled by candidates in the other self-financed category. But in no case shall seats reserved for self-finance category be filled by general category students. No reservation in self-financed category seats.

4. Reservations in the general category seats will be as per the policy of the Uttarakhand Government.

5. Course Structure: - The structure of the course shall consist of 5 (five) papers in each of the Semesters inclusive of Seminar and Viva-voce. There shall be specialization subjects namely- Marketing Management, Human Resource Management, Financial Management, Insurance Business Management, Retail marketing in the fifth and the sixth semesters respectively. A student shall have to exercise his option of opting for any one of the group as specialization at the end of the fourth semester in such a way that he/she shall have to opt 4 (four) papers in one specialization group-2 (two) each in fifth and sixth semester (respectively).

First Semester (All Papers are Compulsory)

101 Principles and Practice of Management	100 Marks
102 Computer Applications in Business	100 Marks
103 Business Communication	100 Marks
104 Financial Accounting	100 Marks
105 Business Economics	100 Marks

Second Semester (All Papers are Compulsory)

201 Marketing Management	100 Marks
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202	Human Resource Management	100 marks
203	Business Environment	100 marks
204	Production Management	100 marks
205	Business Finance	100 marks
206	Basic of Environment Science- As per University common syllabus for all degree level courses.	

Third Semester (All Papers are Compulsory)

301	International Business	100 marks
302	Organizational Behaviour	100 marks
303	Business Laws	100 marks
304	Accounting For Management	100 marks
305	Quantitative Analysis	100 marks

Fourth Semester (All Papers are Compulsory)

401	Company Law	100 marks
402	Research Methodology	100 marks
403	Logistics Management	100 marks
404	Marketing of Services	100 marks
405	Consumer Behaviour	100 marks

Fifth Semester (Three Papers are Compulsory and Two Electives)

501	Business Policy and Strategy	100 marks
502	Entrepreneurship and Small Business	100 marks
503	Project and Project Presentation/Seminar	100 marks
504	Elective I	100 marks
505	Elective II	100 marks
506		100 marks
507		

Electives (Opt any Two Papers as I and II from any one of the following Specialization Groups namely either from Marketing, HRM, Finance or Insurance Business Management, Retail Marketing)

A – Marketing Management Group

- M-1- Customers Relations Management
- M- 2- Marketing Communication and Advertising
- M-03- Sales and Distribution management

B- Human Resource Management Group

- H-1- Industrial Relations
- H-2- Training and Development
- H-3- Wage & Salary Administration

C- Financial Management Group

- F-1- Banking and Insurance
- F-2- Working Capital Management
- F-3- Financial Institutions and Markets

D- Insurance Management Group

- IN-1- Principles & Practice of Life Insurance
- IN-2- Principles and Practice of General Insurance
- IN-3- Insurance Fund Management

E- Retail Marketing Group

RM-1- Fundamentals of Retailing

RM-2- Retail Environment

RM-3- Retail Technology and CRM

Sixth Semester (Three Papers are Compulsory and Two Electives)

601	Management Information System	100 marks
602	Project Management	100 marks
603	Viva-voce	100 marks
604	Elective III	100 marks
605	Elective IV	100 marks
606		100 marks

Elective (Opt any two Papers as III and IV from any one of the following Specialization Groups namely either from Marketing, HRM, Finance or Insurance Business Management, Retail Marketing)

A - Marketing Management Group

M-1- International Marketing

M-2- Industrial Marketing

M-3- Rural Marketing

B- Human Resource Management Group

H-1- Human Resource Planning and Development

H-2- Business Ethics

H-3- Social Security and Labour Welfare

C- Financial Management Group

F-1- International Financial Management

F-2- Management of Financial Services

F-3- Corporate Tax Planning and Management

D- Insurance Management Group

IN-1- Economic Environment of Insurance Business

IN-2- Fire and Automobile Insurance

IN-3- Legal & Regulatory Aspects of Insurance Business

E- Retail Marketing Group

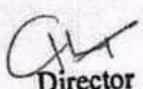
RM-1- Retail Supply Chain Management

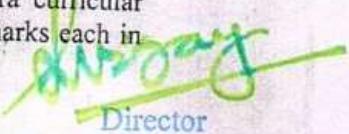
RM-2- Mall Management

RM-3- Retail Store Operations and Management

6. Pattern of Examination: - The maximum marks for each paper, except in case of Project (Paper No. 503) and Viva Voce (Paper No. 603), shall be 100 (one hundred) marks of which 70 (seventy) marks shall be awarded on the basis of External Semester Examination and 30 (Thirty) marks shall be awarded on the basis of Internal Examination. The Project Report (Paper No. 503) and its presentation shall be evaluated by the Internal Expert appointed by the Head of the Department/Director of the Affiliated Institution for their respective students and Viva-Voce shall be conducted jointly by an Internal Expert from the Department/Affiliated Institution and by an External Expert appointed by the University.

Marks for Internal Examination shall be awarded on the basis of the Internal Tests and student's general performance-class participation in various curricular and extra curricular activities and attendance. For that purpose 3 (Three) Internal Tests of 10 (Ten) marks each in


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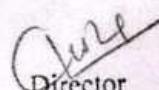
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Approved by AICTE, Ministry of HRD, Govt. of India • ISO 9001:2015

Affiliated: •V.M.S.B Uttarakhand Technical University • Sri Dev Suman Uttarakhand University •Uttarakhand Board of Technical Education

Annexure No. 13



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Uttarakhand Technical University, Dehradun

Scheme of Examination as per AICTE Flexible Curricula

Evaluation Schemes for MBA

W.E.F. Academic Session 2020-21



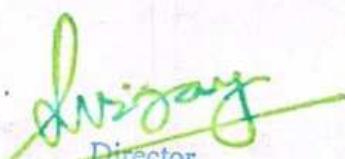
**Master in
Business Administration (MBA)**

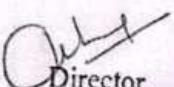
Uttarakhand Technical University, Dehradun

New Scheme of Examination as per AICTE Flexible Curricula

Masters of Business Administration - 2 Year

W.E.F. Academic Session 2020-21


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I Semester

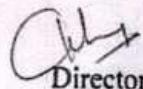
S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted		Total Marks	Contact Hours per Week			Total Credit			
				Theory			External Marks	Internal Marks	L	T	P		
1.	MBAT 101		Principles and Practices of Management	70	30	100	3	0	0	3			
2.	MBAT 102		Financial Accounting	70	30	100	3	0	0	3			
3.	MBAT 103		Quantitative Techniques & Operation Research	70	30	100	3	2	0	4			
4.	MBAT 104		Managerial Economics	70	30	100	3	0	0	3			
5.	MBAT 105		Business Environment	70	30	100	3	0	0	3			
6.	MBAT 106		Business Laws	70	30	100	3	0	0	3			
7	MBAT 107		Professional Business Communication	70	30	100	3	0	0	3			
8.	MBAT 108		MIS and Computer Application in Business	70	30	100	3	0	2	4			
Total				560	240	800	24	2	2	26			
NSS/NCC													

II Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted		Total Marks	Contact Hours per Week			Total Credit			
				Theory			External Marks	Internal Marks	L	T	P		
1.	MBAT 201		Organisational Behaviour	70	30	100	3	0	0	3			
2.	MBAT 202		Management Accounting	70	30	100	3	0	0	3			
3.	MBAT 203		Special Foundation Course	70	30	100	4	0	0	4			
4.	MBAT 204		Marketing Management	70	30	100	3	0	0	3			
5.	MBAT 205		Financial Management	70	30	100	3	0	0	3			
6.	MBAT 206		Human Resource Management	70	30	100	3	0	0	3			
7.	MBAT 207		Production and Operation Management	70	30	100	3	0	0	3			
8.	MBAT 208		Business Research Methods	70	30	100	3	0	0	3			
9.	MBAT 209		State of Art Seminar	70	30	100	0	0	2	1			
Total				630	270	900	25	0	2	26			
NSS/NCC													



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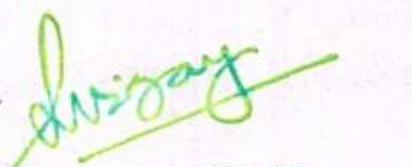


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III Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted		Total Marks	Contact Hours per Week			Total Credit	
				Theory			L	T	P		
				External Marks	Internal Marks						
1.	MBAT 301		Strategic Management	70	30	100	3	0	0	3	
2.	MBAT 302		International Business	70	30	100	3	0	0	3	
3.	MBAT 303		Universal Human Values and Professional Ethics	70	30	100	3	0	0	4	
4.	MBAT 304		Management Concepts & Indian Ethos	70	30	100	3	0	0	2	
5.			Elective Major 1	70	30	100					
6.			Elective Major 2	70	30	100					
7.			Elective Minor 1	70	30	100					
8.	MBAP 308		Internship Training Report and Viva-Voce (Training Report and Presentation* followed by viva voice**)	70**	30*	100					
Total				560	240	800					
NSS/NCC											

Note:The Major electives can be chosen as per the given list semester wise.



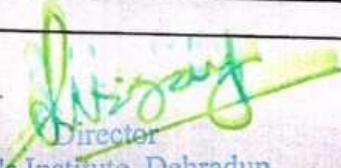
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List of Electives Major Subjects

FINANCE						
Subject Code	Elective -1		L	T	P	C
MBAT 311	Security Analysis and Portfolio Management		3	0	0	3
MBAT 312	Financial Markets and Institutions		3	0	0	3
Subject Code	Elective -2		L	T	P	C
MBAT 313	Corporate Tax Planning		3	0	0	3
MBAT 314	Working capital Management		3	0	0	3
MARKETING						
Subject Code	Elective -1		L	T	P	C
MBAT 321	Integrated Marketing Communication		3	0	0	3
MBAT 322	International Marketing		3	0	0	3
Subject Code	Elective -2		L	T	P	C
MBAT 323	Digital Marketing		3	0	0	3
MBAT 324	Marketing Research		3	0	0	3
HUMAN RESOURCE MANAGEMENT						
Subject Code	Elective -1		L	T	P	C
MBAT 331	Industrial Relations and Labour Laws		3	0	0	3
MBAT 332	Training & Development		3	0	0	3
Subject Code	Elective -2		L	T	P	C
MBAT 333	HR Analytics		3	0	0	3
MBAT 334	Organizational Structure and Change		3	0	0	3
INTERNATIONAL BUSINESS						
Subject Code	Elective -1		L	T	P	C
MBAT 341	International Logistics Management		3	0	0	3
MBAT 342	Cross-Cultural Business Management		3	0	0	3
Subject Code	Elective -2		L	T	P	C
MBAT 343	International Business Laws and Treaties		3	0	0	3
MBAT 344	Management of Multinational Corporations		3	0	0	3
MANAGEMENT INFORMATION SYSTEM						
Subject Code	Elective -1		L	T	P	C
MBAT 351	Management Information System		3	0	0	3
MBAT 352	Business Process Reengineering		3	0	0	3



Subject Code	Elective -2	L	T	P	C
MBAT 353	System Analysis and Design	3	0	0	3
MBAT 354	E-Commerce	3	0	0	3

LOGISTICS & SUPPLY CHAIN MANAGEMENT

Subject Code	Elective -1	L	T	P	C
MBAT 361	Fundamental of Logistics and Supply Chain	3	0	0	3
MBAT 362	Designing and Managing Supply Chain	3	0	0	3
Subject Code	Elective -2	L	T	P	C
MBAT 363	Global Supply Chain & out source Manufacturing	3	0	0	3
MBAT 364	International Logistics	3	0	0	3

AGRIBUSINESS MANAGEMENT

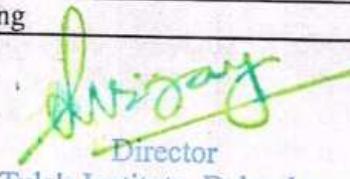
Subject Code	Elective -1	L	T	P	C
MBAT 371	Agribusiness and Rural Environment	3	0	0	3
MBAT 372	Food and Agriculture Policy	3	0	0	3
Subject Code	Elective -2	L	T	P	C
MBAT 373	Agribusiness Financial Management	3	0	0	3
MBAT 374	Farm Business Management	3	0	0	3

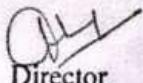
BUSINESS ANALYTICS

Subject Code	Elective -1	L	T	P	C
MBAT 381	Business Analytics	3	0	0	3
MBAT 382	Block Chain Technology	3	0	0	3
Subject Code	Elective -2	L	T	P	C
MBAT 383	Econometrics	3	0	0	3
MBAT 384	Business Intelligence	3	0	0	3

ENTREPRENEURSHIP & VENTURE DEVELOPMENT

Subject Code	Elective -1	L	T	P	C
MBAT 391	New Venture Creation	3	0	0	3
MBAT 392	Creativity, Incubation and Innovation	3	0	0	3
Subject Code	Elective -2	L	T	P	C
MBAT 393	MSME & Startup	3	0	0	3
MBAT 394	Business To Business Marketing	3	0	0	3

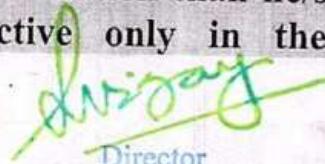

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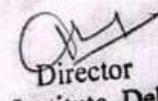
List of Electives Minor Subjects

FINANCE					
Subject Code	Elective -1	L	T	P	C
MBAT 315	Financial Markets and Institutions	3	0	0	3
MARKETING					
Subject Code	Elective -1	L	T	P	C
MBAT 325	Consumer Behaviour	3	0	0	3
HUMAN RESOURCE MANAGEMENT					
Subject Code	Elective -1	L	T	P	C
MBAT 335	Industrial Psychology	3	0	0	3
INTERNATIONAL BUSINESS					
Subject Code	Elective -1	L	T	P	C
MBAT 345	International Business Laws and Treaties	3	0	0	3
MANAGEMENT INFORMATION SYSTEM					
Subject Code	Elective -1	L	T	P	C
MBAT 355	Business Analytics	3	0	0	3
LOGISTICS & SUPPLY CHAIN MANAGEMENT					
Subject Code	Elective -1	L	T	P	C
MBAT 365	Fundamental of Logistics and Supply Chain	3	0	0	3
AGRICULTURE BUSINESS MANAGEMENT					
Subject Code	Elective -1	L	T	P	C
MBAT 375	Agriculture Economics	3	0	0	3
BUSINESS ANALYTICS					
Subject Code	Elective -1	L	T	P	C
MBAT 385	Social & Web Analytics	3	0	0	3
ENTREPRENEURSHIP & VENTURE DEVELOPMENT					
Subject Code	Elective -1	L	T	P	C
MBAT 395	Leading Change in Family Business	3	0	0	3

Note: Minor Elective can be chosen specialization wise only i.e. if any student opt for any particular specialization than he/she has to opt the respective specialization elective only in the consecutive semesters.



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IV Semester

S. No.	Subject Code	Category	Subject Name	Maximum Marks Allotted		Total Marks	Contact Hours per Week			Total Credit			
				Theory			External Marks	Internal Marks	L	T	P		
1.	MBAT 401		Business Ethics and Corporate Governance	70	30	100	3	0	0	3			
2.	MBAT 402		Project Management	70	30	100	3	0	0	3			
3.	MBAT 403		Entrepreneurship Development	70	30	100	3	0	0	3			
4.			Elective Major 3	70	30	100							
5.			Elective Major 4	70	30	100							
6.			Elective Minor 2	70	30	100							
7.	MBAP 407		Master Thesis & Viva-Voce)	150	50	200							
Total				570	230	800							
NSS/NCC													

List of Electives Major Subjects

FINANCE						
Subject Code	Elective -3	L	T	P	C	
MBAT 411	Financial Services	3	0	0	3	
MBAT 412	Mergers and Acquisitions	3	0	0	3	
Subject Code	Elective -4	L	T	P	C	
MBAT 413	Financial Derivatives	3	0	0	3	
MBAT 414	International Financial Management	3	0	0	3	
MARKETING						
Subject Code	Elective -3	L	T	P	C	
MBAT 421	Product & Brand Management	3	0	0	3	
MBAT 422	Sales Management	3	0	0	3	
Subject Code	Elective -4	L	T	P	C	
MBAT 423	Rural Marketing	3	0	0	3	

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MBAT 424	Retail Management	3	0	0	3
HUMAN RESOURCE MANAGEMENT					
Subject Code	Elective -3	L	T	P	C
MBAT 431	International Human Resource Management	3	0	0	3
MBAT 432	Corporate leadership	3	0	0	3
Subject Code	Elective -4	L	T	P	C
MBAT 433	Compensation Management	3	0	0	3
MBAT 434	Performance Management	3	0	0	3
INTERNATIONAL BUSINESS					
Subject Code	Elective -3	L	T	P	C
MBAT 441	EXIM Financing and Documentation	3	0	0	3
MBAT 442	Global Financial Markets and Instruments	3	0	0	3
Subject Code	Elective -4	L	T	P	C
MBAT 443	Foreign Exchange Management and Currency Derivatives	3	0	0	3
MBAT 444	International Human Resource Management	3	0	0	3
MANAGEMENT INFORMATION SYSTEM					
Subject Code	Elective -3	L	T	P	C
MBAT 451	Enterprise Resource Planning	3	0	0	3
MBAT 452	Knowledge Management	3	0	0	3
Subject Code	Elective -4	L	T	P	C
MBAT 453	Managing IT-Enabled Services	3	0	0	3
MBAT 454	Data Warehousing & Data Mining	3	0	0	3
LOGISTICS & SUPPLY CHAIN MANAGEMENT					
Subject Code	Elective -3	L	T	P	C
MBAT 461	Green Logistics	3	0	0	3
MBAT 462	Lean Six Sigma	3	0	0	3

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Subject Code	Elective -4	L	T	P	C
MBAT 463	Lean Supply Chain Management and Supplier Relationship Management	3	0	0	3
MBAT 464	Enterprise Resource Planning for Managers	3	0	0	3

AGRIBUSINESS MANAGEMENT

Subject Code	Elective -3	L	T	P	C
MBAT 471	Agri-Supply Chain Management	3	0	0	3
MBAT 472	Food Technology and Processing Management	3	0	0	3
Subject Code	Elective -4	L	T	P	C
MBAT 473	Agricultural Marketing Management	3	0	0	3
MBAT 474	International Agribusiness Trade	3	0	0	3

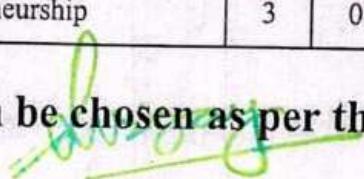
BUSINESS ANALYTICS

Subject Code	Elective -3	L	T	P	C
MBAT 481	Marketing Analytics	3	0	0	3
MBAT 482	Financial Analytics	3	0	0	3
Subject Code	Elective -4	L	T	P	C
MBAT 483	Advanced Research Methods and Predictive Analysis	3	0	0	3
MBAT 484	Business Optimization and Big Data Analysis	3	0	0	3

ENTREPRENEURSHIP & VENTURE DEVELOPMENT

Subject Code	Elective -3	L	T	P	C
MBAT 491	Intellectual Property Rights	3	0	0	3
MBAT 492	Family Business Management	3	0	0	3
Subject Code	Elective -4	L	T	P	C
MBAT 493	Entrepreneurial Finance	3	0	0	3
MBAT 494	Social Entrepreneurship	3	0	0	3

Note: The Major electives can be chosen as per the given list
semester wise.



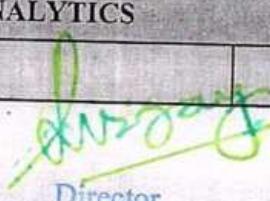
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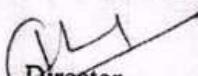
List of Electives Minor Subjects

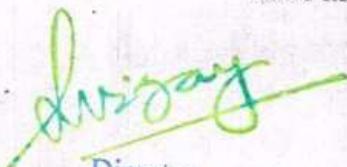
FINANCE					
Subject Code	Elective -2	L	T	P	C
MBAT 415	Mergers and Acquisitions	3	0	0	3
MARKETING					
Subject Code	Elective -2	L	T	P	C
MBAT 425	Digital Marketing	3	0	0	3
HUMAN RESOURCE MANAGEMENT					
Subject Code	Elective -2	L	T	P	C
MBAT 435	Human Resource Planning & Development	3	0	0	3
INTERNATIONAL BUSINESS					
Subject Code	Elective -2	L	T	P	C
MBAT 445	EXIM Financing and Documentation	3	0	0	3
MANAGEMENT INFORMATION SYSTEM					
Subject Code	Elective -2	L	T	P	C
MBAT 455	Managing IT-Enabled Services	3	0	0	3
LOGISTICS & SUPPLY CHAIN MANAGEMENT					
Subject Code	Elective -2	L	T	P	C
MBAT 465	Total Quality Management	3	0	0	3
AGRICULTURAL BUSINESS MANAGEMENT					
Subject Code	Elective -2	L	T	P	C
MBAT 475	Material Management	3	0	0	3
BUSINESS ANALYTICS					
Subject Code	Elective -2	L	T	P	C


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MBAT 485	Operations and Supply Chain Analytics	3	0	0	3
ENTREPRENEURSHIP & VENTURE DEVELOPMENT					
Subject Code	Elective -2	L	T	P	C
MBAT 495	Social Entrepreneurship	3	0	0	3

Note: Minor Elective can be chosen specialization wise only i.e. if any student opt for any particular specialization than he/she has to opt the respective specialization elective only in the consecutive semesters.


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