

B. Tech 1st Year (All branches except Bio Technology and Agriculture Engg.) Structure in accordance with AICTE Model Curriculum Effective w.e.f. Academic Session 2018-19

SEMESTER - I

Sl. No	Code	SUBJECT	PERIODS			EVALUATION SCHEME				END SEMESTER		TOTAL	CREDIT
			L	T	P	CT	TA	Total I	PS	TE	PE		
3 WEEKS COMPULSORY INDUCTION PROGRAM													
1	KAS101/ KAS102	Physics/Chemistry	3	1	3	30	20	50	25	100	25	200	5.5
2	KAS103	Mathematics-I	3	1	0	30	20	50	-	100	-	150	4
3	KEE 101/ KCS101	Basic Electrical Engineering/Programming for Problem Solving	3	1	2	30	20	50	25	100	25	200	5
4	KCE101/ KWS101	Engineering Graphics & Design/Workshop Practices	1	0	4	-	-	-	25	-	25	50	3
		MOOCs (For B.Tech. Hons. Degree)*											0
		TOTAL										600	17.5

SEMESTER II

Sl. No.	Code	SUBJECT	PERIODS			EVALUATION SCHEME				END SEMESTER		TOTAL	CREDIT
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KAS201/ KAS202	Physics/Chemistry	3	1	3	30	20	50	25	100	25	200	5.5
2	KAS203	Mathematics II	3	1	0	30	20	50	-	100	-	150	4
3	KEE201/ KCS201	Basic Electrical Engineering/Programming for Problem Solving	3	1	2	30	20	50	25	100	25	200	5
4	KCE201/ KWS201	Engineering Graphics & Design/Workshop Practices	1	0	4	-	-	-	25	-	25	50	3
5	KAS204	Professional English	2	0	2	30	20	50	-	100	-	150	3
		MOOCs (For B.Tech. Hons. Degree)*											0
		TOTAL										750	20.5

Mini Project or Internship (3-4 weeks) shall be conducted during summer break after II semester and will be assessed during III semester

*** List of MOOCs (NPTEL) Based Recommended Courses for first year B. Tech Students**

1. Developing Soft Skills and personality-Odd Semester-8 Weeks-3 Credits
2. Enhancing Soft Skills and personality-Even Semester-8 Weeks-3 Credits

*** AICTE Guidelines in Model Curriculum:**

After successful completion of 160 credits, a student shall be eligible to get Under Graduate degree in Engineering. A student will be eligible to get Under Graduate degree with Honours only, if he/she completes additional university recommended courses only (Equivalent to 20 credits; NPTEL Courses of 4 Weeks, 8 Weeks and 12 Weeks shall be of 2, 3 and 4 Credits respectively) through MOOCs. For registration to MOOCs Courses, the students shall follow NPTEL Site <http://nptel.ac.in/> as per the NPTEL policy and norms. The students can register for these courses through NPTEL directly as per the course offering in Odd/Even Semesters at NPTEL. These NPTEL courses (recommended by the University) may be cleared during the B. Tech degree program (not necessary one course in each semester). After successful completion of these MooCs courses the students, shall, provide their successful completion NPTEL status/certificates to the University (COE) through their college of study only. The student shall be awarded Hons. Degree (on successful completion of MOOCs based 20 credit) only if he/she secures 7.50 or above CGPA and passed each subject of that Degree Programme in single attempt without any grace marks.

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B.Tech. (Mechanical Engineering)

SEMESTER- III

Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KOE031-38/ KAS302	Engg. Science Course/Maths IV	3	1	0	30	20	50		100		150	4
2	KAS301/ KVE301	Technical Communication/Universal Human Values	2	1	0	30	20	50		100		150	3
			3	0	0								
3	KME301	Thermodynamics	3	1	0	30	20	50		100		150	4
4	KME302	Fluid Mechanics & Fluid Machines	3	1	0	30	20	50		100		150	4
5	KME303	Materials Engineering	3	0	0	30	20	50		100		150	3
6	KME351	Fluid Mechanics Lab	0	0	2				25		25	50	1
7	KME352	Material Testing Lab	0	0	2				25		25	50	1
8	KME353	Computer Aided Machine Drawing-I Lab	0	0	2				25		25	50	1
9	KME354	Mini Project or Internship Assessment*	0	0	2			50				50	1
10	KNC301/ KNC302	Computer System Security/Python Programming	2	0	0	15	10	25		50			0
11		MOOCs (Essential for Hons. Degree)											
		Total										950	22

*The Mini Project or internship (3-4 weeks) conducted during summer break after II semester and will be assessed during III semester.

SEMESTER- IV

Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KAS402/ KOE041-48	Maths IV/Engg. Science Course	3	1	0	30	20	50		100		150	4
2	KVE401/ KAS401	Universal Human Values/Technical Communication	3	0	0	30	20	50		100		150	3
			2	1	0								
3	KME401	Applied Thermodynamics	3	0	0	30	20	50		100		150	3
4	KME402	Engineering Mechanics	3	1	0	30	20	50		100		150	4
5	KME403	Manufacturing Processes	3	1	0	30	20	50		100		150	4
6	KME451	Applied Thermodynamics Lab	0	0	2				25		25	50	1
7	KME452	Manufacturing Processes Lab	0	0	2				25		25	50	1
8	KME453	Computer Aided Machine Drawing-II Lab	0	0	2				25		25	50	1
9	KNC402/ KNC401	Python Programming / Computer System Security	2	0	0	15	10	25		50			0
10		MOOCs (Essential for Hons. Degree)											
		Total										900	21

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STUDY AND EVALUATION SCHEME

B-Tech. Mechanical Engineering

YEAR: 3rd / SEMESTER-V

S. No.	Subject Code	Subject Name	Department	L-T-P	Theory / Lab Marks	SESSIONAL		Total	Credit
						Test	Assignment / Attendance		
1	RAS501	Managerial Economics	Applied Science	3--0--0	70	20	10	100	3
2	RAS502/ RUC501	Sociology /Cyber Security	Applied Science	3--0--0	70	20	10	100	3
3	RME501	Machine Design-I	Core Deptt.	3--0--0	70	20	10	100	3
4	RME502	Heat & Mass Transfer	Core Deptt.	3--1--0	70	20	10	100	4
5	RME503	Manufacturing Science & Technology-II	Core Deptt.	3--0--0	70	20	10	100	3
6	RME051-054	Deptt. Elective Course-1	Core Deptt.	3--1--0	70	20	10	100	4
7	RME551	Design and Simulation Lab I	Core Deptt.	0--0--2	50		50	100	1
8	RME552	Heat & Mass Transfer Lab	Core Deptt.	0--0--2	50		50	100	1
9	RME553	Manufacturing Technology-II Lab	Core Deptt.	0--0--2	50		50	100	1
10	RME559	Seminar – I		0--0--2	50		50	100	1
TOTAL								1000	24

DEPTT ELECTIVE COURSE-1

1. RME-051 IC Engines and Compressors
2. RME-052 Mechatronics and Microprocessor
3. RME-053 Finite Element Methods
4. RME-054 Engineering Optimization

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STUDY AND EVALUATION SCHEME

B-Tech. Mechanical Engineering

YEAR: 3rd / SEMESTER-VI

S. No.	Subject Code	Subject Name	Department	L-T-P	Theory / Lab Marks	SESSIONAL		Total	Credit
						Test	Assignment / Attendance		
1	RAS601	Industrial Management	Applied Science	3--0--0	70	20	10	100	3
2	RUC601/ RAS602	Cyber Security/ Sociology	Applied Science	3--0--0	70	20	10	100	3
3	RME601	Fluid Machinery	Core Deptt.	3--0--0	70	20	10	100	3
4	RME602	Theory of Machines	Core Deptt.	3--1--0	70	20	10	100	4
5	RME603	Machine Design-II	Core Deptt.	3--0--0	70	20	10	100	3
6	RME061-064	Deptt. Elective Course-2	Core Deptt.	3--1--0	70	20	10	100	4
7	RME651	Fluid Machinery Lab	Core Deptt.	0--0--2	50		50	100	1
8	RME652	Theory of Machines Lab	Core Deptt.	0--0--2	50		50	100	1
9	RME653	Design and Simulation Lab II	Core Deptt.	0--0--2	50		50	100	1
10	RME654	Refrigeration & Air-conditioning	Core Deptt.	0--0--2	50		50	100	1
TOTAL								1000	24

DEPTT ELECTIVE COURSE-2

1. RME061 Refrigeration & Air-conditioning
2. RME062 Production Planning and Control
3. RME063 Mechanical Vibration
4. RME064 Reliability Engineering



SEVENTH SEMESTER									
Sl.No.	Subject Code	Subject Name	Department	L-T-P	Th/Lab Marks	Sessional		Total	Credit
					ESE	CT	TA		
1		OPEN ELECTIVE COURSE-1	Other Deptt.	3-0-0	70	20	10	100	3
2		DEPTT ELECTIVE COURSE-3	Core Deptt.	3-0-0	70	20	10	100	3
3		DEPTT ELECTIVE COURSE-4	Core Deptt.	3-1-0	70	20	10	100	4
4	RME701	CAD/CAM	Core Deptt.	3-1-0	70	20	10	100	4
5	RME702	Automobile Engineering	Core Deptt.	3-0-0	70	20	10	100	3
6	RME751	CAD/CAM Lab	Core Deptt.	0-0-2	50		50	100	1
7	RME752	IC Engine & Automobile Lab	Core Deptt.	0-0-2	50		50	100	1
8	RME753	INDUSTRIAL TRAINING	Core Deptt.	0-0-3			100	100	2
9	RME754	PROJECT-1	Core Deptt.	0-0-6			200	200	3
	TOTAL				450	100	450	1000	24

DEPARTMENTAL ELECTIVE-3	
Sub.Code	Subject Name
RME070	Composite Materials
RME071	Power Plant Engineering
RME072	Supply Chain Management
RME073	Additive Manufacturing

DEPARTMENTAL ELECTIVE-4	
S.Code	Subject Name
RME075	Operation Research
RME076	Modelling & Simulation
RME077	Computational Fluid Dynamics
RME078	Automation & Robotics

EIGHT SEMESTER									
Sl.No.	Subject Code	Subject Name	Department	L-T-P	Th/Lab Marks	Sessional		Total	Credit
					ESE	CT	TA		
1		OPEN ELECTIVE COURSE-2	Other Deptt.	3-0-0	70	20	10	100	3
2		DEPTT ELECTIVE COURSE-5	Core Deptt.	3-1-0	70	20	10	100	4
3		DEPTT ELECTIVE COURSE-6	Core Deptt.	3-0-0	70	20	10	100	3
4	RME851	SEMINAR	Core Deptt.	0-0-3			100	100	2
5	RME852	PROJECT-2	Core Deptt.	0-0-12	350		250	600	12
	TOTAL				560	60	380	1000	24

DEPARTMENTAL ELECTIVE-5	
Sub.Code	Subject Name
RME080	Non-Destructive Testing
RME081	Advance Welding
RME082	Thermal Turbo Machine
RME083	Energy Conservation & Management

S.Code MOOC Subject Name
RME084 Industrial Safety Engineering.

DEPARTMENTAL ELECTIVE-6	
S.Code	Subject Name
RME085	Total Quality Management
RME086	Gas Dynamics & Jet Propulsion
RME087	Design & Transmission System
RME088	Theory of Elasticity.

S.Code MOOC Subject Name
RME089 Manufacturing of Composites.

B.TECH (COMPUTER SCIENCE AND ENGINEERING)

SEMESTER- III

Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KOE031-38/ KAS302	Engineering Science Course/Maths IV	3	1	0	30	20	50		100		150	4
2	KAS301/ KVE 301	Technical Communication/Universal Human values	2	1	0	30	20	50		100		150	3
			3	0	0								
3	KCS301	Data Structure	3	1	0	30	20	50		100		150	4
4	KCS302	Computer Organization and Architecture	3	1	0	30	20	50		100		150	4
5	KCS303	Discrete Structures & Theory of Logic	3	0	0	30	20	50		100		150	3
6	KCS351	Data Structures Using C Lab	0	0	2				25		25	50	1
7	KCS352	Computer Organization Lab	0	0	2				25		25	50	1
8	KCS353	Discrete Structure & Logic Lab	0	0	2				25		25	50	1
9	KCS354	Mini Project or Internship Assessment*	0	0	2			50				50	1
10	KNC301/ KNC302	Computer System Security/Python Programming	2	0	0	15	10	25		50			0
11		MOOCs (Essential for Hons. Degree)											
		Total										950	22

*The Mini Project or internship (3-4 weeks) conducted during summer break after II semester and will be assessed during III semester.

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SEMESTER- IV													
Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KAS402/ KOE041-48	Maths IV/Engg. Science Course	3	1	0	30	20	50		100		150	4
2	KVE401/ KAS301	Universal Human Values/ Technical Communication	3	0	0	30	20	50		100		150	3
			2	1	0								
3	KCS401	Operating Systems	3	0	0	30	20	50		100		150	3
4	KCS402	Theory of Automata and Formal Languages	3	1	0	30	20	50		100		150	4
5	KCS403	Microprocessor	3	1	0	30	20	50		100		150	4
6	KCS451	Operating Systems Lab	0	0	2				25		25	50	1
7	KCS452	Microprocessor Lab	0	0	2				25		25	50	1
8	KCS453	Python Language Programming Lab	0	0	2				25		25	50	1
9	KNC402/ KNC401	Python Programming/Computer System Security	2	0	0	15	10	25		50			0
10		MOOCs (Essential for Hons. Degree)											
		Total										900	21

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B. Tech. (CSE\CSIT)
FIFTH SEMESTER

Sl No.	Subject Code	Subject Name	L-T-P	Theory/ Lab (ESE) Marks	Sessional		Total	Credit
					Test	Assign/Att		
1	RAS501	MANEGERIAL ECONOMICS	3---0---0	70	20	10	100	3
2	RAS502/ RUC501	INDUSTRIAL SOCIOLOGY /CYBER SECURITY	3---0---0	70	20	10	100	3
3	RCS-501	Database Management Systems	3---0---0	70	20	10	100	3
4	RCS-502	Design and Analysis of Algorithm	3---1---0	70	20	10	100	4
5	RCS-503	Principles of Programming Languages	3---0---0	70	20	10	100	3
6	CS-Elective-1	DEPTT ELECTIVE COURSE-1	3---1---0	70	20	10	100	4
7	RCS-551	Database Management Systems Lab	0---0---2	50	-	50	100	1
8	RCS-552	Design and Analysis of Algorithm Lab	0---0---2	50	-	50	100	1
9	RCS-553	Principles of Programming Languages Lab	0---0---2	50	-	50	100	1
10	RCS-554	Web Technologies Lab	0---0---2	50	-	50	100	1
	TOTAL						1000	24

SIXTH SEMESTER

Sl No.	Subject Code	Subject Name	L-T-P	Theory/ Lab (ESE) Marks	Sessional		Total	Credit
					Test	Assign/Att		
1	RAS601	INDUSTRIAL MANAGEMENT	3---0---0	70	20	10	100	3
2	RAS602 / RUC601	INDUSTRIAL SOCIOLOGY/ CYBER SECURITY	3---0---0	70	20	10	100	3
3	RCS-601	Computer Networks	3---0---0	70	20	10	100	3
4	RCS-602	Compiler Design	3---1---0	70	20	10	100	4
5	RCS-603	Computer Graphics	3---0---0	70	20	10	100	3
6	CS-Elective-2	DEPTT ELECTIVE COURSE-2	3---1---0	70	20	10	100	4
7	RCS-651	Computer Networks Lab	0---0---2	50	-	50	100	1
8	RCS-652	Compiler Design Lab	0---0---2	50	-	50	100	1
9	RCS-653	Computer Graphics Lab	0---0---2	50	-	50	100	1
10	RCS-654	Data Warehousing & Data Mining Lab	0---0---2	50	-	50	100	1
	TOTAL						1000	24

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DEPARTMENTAL ELECTIVES

CS-ELECTIVE -1: Computer Science and Engineering Elective-1

RIT-051: SOFTWARE PROJECT MANAGEMENT

RIT-052: SOFTWARE TESTING & AUDIT

RCS-051: OPERATION RESEARCH

RCS-052: WEB TECHNOLOGIES

CS-ELECTIVE-2: Computer Science Departmental Elective-2

RIT-061: DESIGN AND DEVELOPMENT OF APPLICATIONS

RIT-062: DATAWAREHOUSING & DATA MINING

RCS-061: INTERNET OF THINGS

RCS-062: NEURAL NETWORK

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B.Tech. (Computer Science and Engineering)
VII SEMESTER

Sl. No.	Subject Code	Subject Name	L-T-P	Th/Lab Marks	Sessional		Total	Credit
				ESE	CT	TA		
1	Open Elective-1	Open Elective Course -1	3--0--0	70	20	10	100	3
2	CS Elective-3	Deptt Elective Course-3	3--0--0	70	20	10	100	3
3	CS Elective-4	Deptt Elective Course-4	3--1--0	70	20	10	100	4
4	RCS701	Distributed System	3--1--0	70	20	10	100	4
5	RCS702	Artificial Intelligence	3--0--0	70	20	10	100	3
6	RCS751	Distributed System Lab	0--0--2	50		50	100	1
7	RCS752	Artificial Intelligence Lab	0--0--2	50		50	100	1
8	RCS753	Industrial Training	0--0--3			100	100	2
9	RCS754	Project	0--0--6			200	200	3
TOTAL				450	100	450	1000	24

B.Tech. (Computer Science and Engineering)
VIII SEMESTER

Sl. No.	Subject Code	Subject Name	L-T-P	Th/Lab Marks	Sessional		Total	Credit
				ESE	CT	TA		
1	Open Elective-2	Open Elective Course-2	3--0--0	70	20	10	100	3
2	CS Elective-5	Deptt Elective Course-5	3--1--0	70	20	10	100	4
3	CS Elective-6	Deptt Elective Course-6	3--0--0	70	20	10	100	3
4	RCS851	Seminar	0--0--3			100	100	2
5	RCS852	Project	0--0--12	350		250	600	12
TOTAL				560	60	380	1000	24

DEPARTMENTAL ELECTIVES

CS-ELECTIVE -3:

1. RCS070 Embedded Systems
2. RCS071 Application of Soft Computing
3. RCS072 High Performance Computing
4. RCS073 Human Computer Interface

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CS-ELECTIVE-4:

1. RCS075 Cloud Computing
2. RCS076 Blockchain Architecture Design
3. RCS077 Agile Software Development
4. RCS078 Augmented & Virtual Reality

CS-ELECTIVE-5:

1. RCS080 Machine Learning (Mapping with MOOCS: https://onlinecourses.nptel.ac.in/noc17_cs17/preview
https://onlinecourses.nptel.ac.in/noc17_cs26/preview)
2. RCS081 Game Programming
3. RCS082 Image Processing (Mapping with MOOCS: https://onlinecourses.nptel.ac.in/noc18_ee40/preview
<https://nptel.ac.in/courses/106105032/>)
4. RCS083 Parallel and Distributed Computing (Mapping with MOOCS: <https://nptel.ac.in/courses/106102114/>,
<https://nptel.ac.in/courses/106104024/>)

CS-ELECTIVE-6:

1. RCS085 Speech Natural language processing (Mapping with MOOCS: <https://nptel.ac.in/courses/106101007/>
<https://nptel.ac.in/courses/106105158/>)
2. RCS086 Deep Learning (Mapping with MOOCS: https://onlinecourses.nptel.ac.in/noc18_cs41/preview)
3. RCS087 Data Compression
4. RCS088 Quantum Computing (Mapping with MOOCS: https://onlinecourses.nptel.ac.in/noc18_cy07)

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B.Tech. (Electronics & Communication Engg.)**Semester III**

Sr. No.	Course Code	Course Title	Periods			Evaluation Scheme				End Semester		Total	Credits
			L	T	P	CT	TA	Total	P S	TE	PE		
	KOE031-38/ KAS302	Engg. Science Course /Maths IV	3	1	0	30	20	50		100		150	4
1.	KAS301/ KVE301	Technical Communication /Universal Human values	2	1	0	30	20	50		100		150	3
			3	0	0								
2.	KEC301	Electronic Devices	3	1	0	30	20	50		100		150	4
3.	KEC302	Digital System Design	3	1	0	30	20	50		100		150	4
4.	KEC303	Network Analysis and Synthesis	3	0	0	30	20	50		100		150	3
6.	KEC351	Electronics Devices Lab	0	0	2				25		25	50	1
7.	KEC352	Digital System Design Lab	0	0	2				25		25	50	1
8.	KEC353	Network Analysis and Synthesis lab	0	0	2				25		25	50	1
9.	KEC354	Mini Project or Internship Assessment	0	0	2			50				50	1
10.	KNC301/ /KNC302	Computer System Security /Python Programming	2	0	0	15	10	25		50			0
11.		MOOCs (Essential for Hons. Degree)											
		TOTAL										950	22

*The Mini Project or internship (3-4 weeks) conducted during summer break after II semester and will be assessed during III semester.

Semester IV

Sr. No.	Course Code	Course Title	Periods			Evaluation Scheme				End Semester		Total	Credits
			L	T	P	CT	TA	Total	PS	TE	PE		
1.	KAS402/ KOE041-48	Maths-IV / Engg. Science Course	3	1	0	30	20	50		100		150	4
2.	KVE401/ KAS401	Universal Human Values/ Technical Communication	3	0	0	30	20	50		100		150	3
			2	1	0								
3.	KEC401	Communication Engineering	3	0	0	30	20	50		100		150	3
4.	KEC402	Analog Circuits	3	1	0	30	20	50		100		150	4
5.	KEC403	Signal System	3	1	0	30	20	50		100		150	4
6.	KEC451	Communication Engineering Lab	0	0	2				25		25	50	1
7.	KEC452	Analog Circuits Lab	0	0	2				25		25	50	1
8.	KEC453	Signal System Lab	0	0	2				25		25	50	1
9.	KNC402/ KNC401	Python Programming/ Computer System Security	2	0	0	15	10	25		50			0
10.		MOOCs (Essential for Hons. Degree)											
		TOTAL										900	21

EVALUATION SCHEME

B.TECH. ELECTRONICS ENGINEERING, ELECTRONICS & COMMUNICATION ENGINEERING, ELECTRONICS & TELECOMMUNICATION ENGINEERING

YEAR 4rd/ SEMESTER VII

Sr. No.	Sub Code	Subject Name	Dept.	L-T-P	Th/Lab Marks	Sessional		Subject Total	Credit
					ESE	CT	TA		
1		Open Elective-I**	Other Dept.	3--0--0	70	20	10	100	3
2		Departmental Elective-III	Core Deptt.	3--0--0	70	20	10	100	3
3		Departmental Elective-IV	Core Deptt.	3--1--0	70	20	10	100	4
4	REC701	Data Communication Networks	Core Deptt.	3--1--0	70	20	10	100	4
5	REC702	VLSI Design	Core Deptt.	3--0--0	70	20	10	100	3
6	REC751	Optical Communication Lab	Core Deptt.	0--0--2	50	-	50	100	1
7	REC752	Electronics Circuit Design Lab	Core Deptt.	0--0--2	50	-	50	100	1
8	REC753	Industrial Training Viva-Voce	Core Deptt.	0--0--3	-	-	100	100	2
9	REC754	Project-I	Core Deptt.	0--0--6	-	-	200	200	3
	TOTAL				450	100	450	1000	24

LIST OF DEPTT. ELECTIVES:

Elective – III REC 07* Departmental Elective III

1. REC070 Optical Network
2. REC071 Information Theory & Coding
3. REC072 Digital Image Processing
4. REC073 Advance Programming in Engineering

Elective – IV REC 07* Departmental Elective IV

1. REC075 Optical Communication
2. REC076 Filter Design
3. REC077 Applied Fuzzy Electronic Systems
4. REC078 Computerized Process Control

EVALUATION SCHEME

B.Tech. Electronics Engineering, Electronics & Communication Engineering, Electronics & Telecommunication Engineering

YEAR 4rd/ SEMESTER VIII

Sr. No	Sub Code	Subject Name	Dept.	L-T-P	Th/LAB Marks	Sessional		Subject Total	Credit
					ESE	CT	TA		
1		Open Elective-II**	Other Dept.	3-0-0	70	20	10	100	3
2		Departmental Elective-V	Core Deptt.	3-1-0	70	20	10	100	4
3		Departmental Elective-VI	Core Deptt.	3-0-0	70	20	10	100	3
4	REC851	GD &Seminar	Core Deptt.	0-0-3			100	100	2
5	REC852	Project	Core Deptt.	0-0-12	350	-	250	600	12
	TOTAL				560	60	380	1000	24

LIST OF DEPTT. ELECTIVES:

Elective – IV REC 08* Departmental Elective V

1. REC080 Electronic Switching
2. REC081 Analytical Instrumentation
3. REC082 Advanced Display Technologies & Systems
4. REC083 Satellite & RADAR systems (NPTEL: <https://nptel.ac.in/courses/117105131/>)

Elective – VI REC 08* Departmental Elective VI

1. REC085 Wireless & Mobile Communication (NPTEL :<https://nptel.ac.in/courses/117102062/>)
2. REC086 Voice Over IP
3. REC087 Speech Processing
4. REC088 Micro and Smart Systems(NPTEL: <https://nptel.ac.in/courses/112108092/>)



B. Tech 1st Year (All branches except Bio Technology and Agriculture Engg.) Structure in accordance with AICTE Model Curriculum Effective w.e.f. Academic Session 2018-19

SEMESTER - I

Sl. No	Code	SUBJECT	PERIODS			EVALUATION SCHEME				END SEMESTER		TOTAL	CREDIT
			L	T	P	CT	TA	Total I	PS	TE	PE		
3 WEEKS COMPULSORY INDUCTION PROGRAM													
1	KAS101/ KAS102	Physics/Chemistry	3	1	3	30	20	50	25	100	25	200	5.5
2	KAS103	Mathematics-I	3	1	0	30	20	50	-	100	-	150	4
3	KEE 101/ KCS101	Basic Electrical Engineering/Programming for Problem Solving	3	1	2	30	20	50	25	100	25	200	5
4	KCE101/ KWS101	Engineering Graphics & Design/Workshop Practices	1	0	4	-	-	-	25	-	25	50	3
	MOOCs (For B.Tech. Hons. Degree)*												0
		TOTAL										600	17.5

SEMESTER II

Sl. No.	Code	SUBJECT	PERIODS			EVALUATION SCHEME				END SEMESTER		TOTAL	CREDIT
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KAS201/ KAS202	Physics/Chemistry	3	1	3	30	20	50	25	100	25	200	5.5
2	KAS203	Mathematics II	3	1	0	30	20	50	-	100	-	150	4
3	KEE201/ KCS201	Basic Electrical Engineering/Programming for Problem Solving	3	1	2	30	20	50	25	100	25	200	5
4	KCE201/ KWS201	Engineering Graphics & Design/Workshop Practices	1	0	4	-	-	-	25	-	25	50	3
5	KAS204	Professional English	2	0	2	30	20	50	-	100	-	150	3
		MOOCs (For B.Tech. Hons. Degree)*											0
		TOTAL										750	20.5

Mini Project or Internship (3-4 weeks) shall be conducted during summer break after II semester and will be assessed during III semester

*** List of MOOCs (NPTEL) Based Recommended Courses for first year B. Tech Students**

1. Developing Soft Skills and personality-Odd Semester-8 Weeks-3 Credits
2. Enhancing Soft Skills and personality-Even Semester-8 Weeks-3 Credits

*** AICTE Guidelines in Model Curriculum:**

After successful completion of 160 credits, a student shall be eligible to get Under Graduate degree in Engineering. A student will be eligible to get Under Graduate degree with Honours only, if he/she completes additional university recommended courses only (Equivalent to 20 credits; NPTEL Courses of 4 Weeks, 8 Weeks and 12 Weeks shall be of 2, 3 and 4 Credits respectively) through MOOCs. For registration to MOOCs Courses, the students shall follow NPTEL Site <http://nptel.ac.in/> as per the NPTEL policy and norms. The students can register for these courses through NPTEL directly as per the course offering in Odd/Even Semesters at NPTEL. These NPTEL courses (recommended by the University) may be cleared during the B. Tech degree program (not necessary one course in each semester). After successful completion of these MOOCs courses the students, shall, provide their successful completion NPTEL status/certificates to the University (COE) through their college of study only. The student shall be awarded Hons. Degree (on successful completion of MOOCs based 20 credit) only if he/she secures 7.50 or above CGPA and passed each subject of that Degree Programme in single attempt without any grace marks.

THIRD SEMESTER

CIVIL ENGINEERING

SESSION 2019-20

S.No	Subject	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
	Codes		L	T	P	CT	TA	Total	PS	TE	PE		
1	KOE031-38/KAS303	Engineering Science Course/Maths III	3	1	0	30	20	50		100		150	4
2	KAS301/ KVE301	Technical Communication/ Universal Human Values	2	1	0	30	20	50		100		150	3
			3	0	0								
3	KCE301	Engg. Mechanics	3	1	0	30	20	50		100		150	4
4	KCE302	Surveying and Geomatics	3	1	0	30	20	50		100		150	4
5	KCE303	Fluid Mechanics	3	0	0	30	20	50		100		150	3
6	KCE351	Building Planning & Drawing Lab	0	0	2				25		25	50	1
7	KCE352	Surveying and Geomatics Lab	0	0	2				25		25	50	1
8	KCE353	Fluid Mechanics Lab	0	0	2				25		25	50	1
9	KCE354	Mini Project or Internship Assessment*	0	0	2			50				50	1
10	KNC301/ KNC302	Computer System Security/ Python Programming	2	0	2	15	10	25		50			0
11		MOOCs (Essential for Hons. Degree)											
		Total										950	22

*The Mini Project or Internship (3-4 weeks) conducted during summer break after II semester and will be assessed during III semester.

SEMESTER - IV													
S.No	Subject	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
	Codes		L	T	P	CT	TA	Total	PS	TE	PE		
1	KAS403/ KOE041-48	Maths III/ Engg. Science Course	3	1	0	30	20	50		100		150	4
2	KVE401/ KAS401	Universal Human Values/Technical Communication	3	0	0	30	20	50		100		150	3
			2	1	0								
3	KCE401	Materials, Testing & Construction Practices	3	0	0	30	20	50		100		150	3
4	KCE402	Introduction to Solid Mechanics	3	1	0	30	20	50		100		150	4
5	KCE403	Hydraulic Engineering and Machines	3	1	0	30	20	50		100		150	4
6	KCE451	Material Testing Lab	0	0	2				25		25	50	1
7	KCE452	Solid Mechanics Lab	0	0	2				25		25	50	1
8	KCE453	Hydraulics & Hydraulic Machine Lab	0	0	2				25		25	50	1
9	KNC402/ KNC401	Python Programming/Computer System Security	2	0	0	15	10	25		50			0
10		MOOCs (Essential for Hons. Degree)											
		Total										900	21

FIFTH SEMESTER

Sl No.	Subject Code	Subject Name	Teaching Deptt.	L-T-P	Th/Lab Marks	Sessional		Total	Credit
					ESE	CT	TA.		
1	RAS501	MANEGIRIAL ECONOMICS	Applied Science	3—0---0	70	20	10	100	3
2	RAS-502/ RUC501	SOCIOLOGY /CYBER SECURITY	Applied Science	3—0---0	70	20	10	100	3
3	RCE501	GEOTECHNICAL ENGINEERING	Core Deptt.	3—0---0	70	20	10	100	3
4	RCE502	DESIGN OF STRUCTURE-I	Core Deptt.	3—1---0	70	20	10	100	4
5	RCE503	QUANTITY ESTIMATION AND MANAGEMENT	Core Deptt.	3—0---0	70	20	10	100	3
6	RCE051 RCE052 RCE053	ELECTIVE -I MODERN CONSTRUCTION MATERIALS CONCRETE TECHNOLOGY GEOENVIRONMENTAL	Core Deptt.	3—1--0	70	20	10	100	4

CIVIL ENGINEERING

		ENGINEERING							
7	RCE551	GEOTECHNICAL ENGINEERING LAB	Core Deptt.	0—0---2	50		50	100	1
8	RCE552	CAD LAB-1	Core Deptt.	0—0---2	50		50	100	1
9	RCE553	CONSTRUCTION MANAGEMENT LAB	Core Deptt.	0—0---2	50		50	100	1
10	RCE554	CONCRETE LAB	Core Deptt.	0—0---2	50		50	100	1
	TOTAL				620	120	260	1000	24

SESSION 2018-19

SIXTH SEMESTER**CIVIL ENGINEERING****SESSION 2018-19**

Sl No	Subject Code	Subject Name	Teaching Deptt.	L-T-P	Th/Lab Marks	Sessional		Total	Credit
						ESE	CT TA.		
1	RAS601	INDUSTRIAL MANAGEMENT	Applied Science	3—0---0	70	20	10	100	3
2	RUC601/ RAS602	CYBER SECURITY/SOCIOLOGY	Applied Science	3—0---0	70	20	10	100	3
3	RCE601	DESIGN OF STRUCTURE-II	Core Deptt.	3—0---0	70	20	10	100	3
4	RCE602	ENVIRONMENTAL ENGINEERING	Core Deptt.	3—1---0	70	20	10	100	4
5	RCE603	TRANSPORTATION ENGINEERING	Core Deptt.	3—0---0	70	20	10	100	3
6	RCE061 REC062 RCE063	ELECTIVE -2 FOUNDATION DESIGN INTEGRATED WASTE MANAGEMENT FOR A SMART CITY GEOSYNTHESIS AND REINFORCED SOIL STRUCTURES	Core Deptt.	3—1---0	70	20	10	100	4
7	RCE651	CAD LAB-2	Core Deptt.	0—0---2	50		50	100	1
8	RCE652	ENVIRONMENTAL ENGINEERING LAB	Core Deptt.	0—0---2	50		50	100	1
9	RCE653	TRANSPORTATION ENGINEERING LAB	Core Deptt.	0—0---2	50		50	100	1
10	RCE 654	STRUCTURAL DETAILING LAB	Core Deptt.	0—0---2	50		50	100	1
	TOTAL				620	120	260	1000	24

SEVENTH SEMESTER			CIVIL ENGINEERING		SESSION 2019-20				
S. No.	Subject Code	Subject Name	Department	L-T-P	Th/Lab Marks	Sessional		Total	Credit
					ESE	CT	TA		
1		Open Elective Course-1	Other Deptt.	3---0---0	70	20	10	100	3
2	RCE071	Elective -3 Geology and Soil Mechanics	Core Deptt.	3---0---0	70	20	10	100	3
	RCE072	Rural Development Engineering							
	RCE073	Structural Health Monitoring & Rehabilitation							
	RCE074	River Engineering							
3	RCE075	Elective -4 Computational Fluid Dynamics	Core Deptt.	3---1---0	70	20	10	100	4
	RCE076	Railways, Airport & Water Ways							
	RCE077	Air & Noise Pollution Control							
	RCE078	Ground Improvement Techniques							
4	RCE701	Design of Structure-III	Core Deptt.	3---1---0	70	20	10	100	4
5	RCE702	Water Resources	Core Deptt.	3---0---0	70	20	10	100	3
6	RCE751	Non Destructive Testing Laboratory	Core Deptt.	0---0---2	50		50	100	1
7	RCE752	Mini Project	Core Deptt.	0---0---2	50		50	100	1
8	RCE753	Industrial Training	Core Deptt.	0---0---3			100	100	2
9	RCE754	Project-1	Core Deptt.	0---0---6			200	200	3
	TOTAL				450	100		1000	24

Industrial Training: Industrial Training 1 (completed after IVth sem) & 2 (completed after VIth sem) is to be evaluated in VII semester.

Project-1:-Students will initiate Project work in VII semester as Project -1 and the same will be completed in VIII semester as Project-2.

Evaluation of Project-1 should be based on the progress reported by the student and certified by the supervisor.

EIGHTH SEMESTER

CIVIL ENGINEERING

SESSION 2019-20

S No.	Subject Code	Subject Name	Teaching Deptt.	L-T-P	Th/Lab Marks	Sessional		Total	Credit
					ESE	CT	TA		
1		Open Elective Course -2	Other Deptt.	3---0---0	70	20	10	100	3
2	RCE081 RCE082 RCE083 RCE084	Elective -5 Finite Element Method Structural Dynamics Advanced Concrete Design Solid Waste Management	Core Deptt.	3---1---0	70	20	10	100	4
3	RCE085 RCE086 RCE087 RCE088	Elective -6 Engineering Hydrology and Ground Water Management Urban Transportation System & Planning Probability Methods in Civil Engineering Earthquake Resistant Design of Structure	Core Deptt.	3---0---0	70	20	10	100	3
4	RCE851	Seminar	Core Deptt.	0 ---0---3			100	100	2
5	RCE852	Project-2	Core Deptt.	0---0---12	350		250	600	12
	TOTAL				560	60	380	1000	24

The required identification and distribution of electives through NPTEL has been made as given below.

Sem	Departmental Elective	Name of Elective through NPTEL
VIII	5	RCE082 Structural Dynamics
	6	RCE087 Probability Methods in Civil Engineering

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BCA Evaluation Scheme

BCA I SEM	SUBJECT NAME	MARKS		
CODE		Ext	Int	Total
BCA-101	MATHEMATICS-I	75	25	100
BCA-102	PROGRAMMING PRICIPLE & ALGORITHM	75	25	100
BCA-103	COMPUTER FUNDAMENTAL & OFFICE AUTOMATION	75	25	100
BCA-104	PRINCIPLE OF MANAGEMENT	75	25	100
BCA-106	BUSINESS COMMUNICATION	75	25	100
✓ 008	ENVIRONMENTAL STUDIES (Qualifying Paper)			
PRACTICAL				
BCA-105	COMPUTER LABORATORY & PRACTICAL WORK OF COMPUTER FUNDAMENTAL & OFFICE AUTOMATION	50		50
BCA-107	COMPUTER LABORATORY & PRACTICAL WORK OF C PROGRAMMING	50		50
TOTAL				600

BCA II SEM	SUBJECT NAME	MARKS		
CODE		Ext	Int	Total
BCA-201	MATHEMATICS II	75	25	100
BCA-202	C PROGRAMMING	75	25	100
BCA-203	ORGANIZATION BEHAVIOR	75	25	100
BCA-204	DIGITAL ELECTRONICS & COMPUTER ORGANIZATION	75	25	100
BCA-205	FINANCIAL ACCOUNTING & MANAGEMENT	75	25	100
PRACTICAL				
BCA-206	Computer Laboratory & Practical work of C Programming	100		100
TOTAL				600

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BCA Evaluation Scheme

BCA III SEM	SUBJECT NAME	MARKS		
CODE		Ext	Int	Total
BCA-301	OBJECT ORIENTED PROGRAMMING using C++	75	25	100
BCA-302	DATA STRUCTURE USING C & C++	75	25	100
BCA-303	COMPUTER ARCHITECTURE & ASSEMBLY LANGUAGE	75	25	100
BCA-304	BUSINESS ECONOMICS	75	25	100
BCA-305	ELEMENTS OF STATISTICS	75	25	100
PRACTICAL				
BCA-306	COMPUTER LABORATORY & PRACTICAL WORK OF OOPs	50		50
BCA-307	COMPUTER LABORATORY & PRACTICAL WORK OF DS	50		50
		TOTAL		600

BCA IV SEM	SUBJECT NAME	MARKS		
CODE		Ext	Int	Total
BCA-401	COMPUTER GRAPHICS & MULTIMEDIA APPLICATION	75	25	100
BCA-402	OPERATING SYSTEM	75	25	100
BCA-403	SOFTWARE ENGINEERING	75	25	100
BCA-404	OPTIMIZATION TECHNIQUES	75	25	100
BCA-406	MATHEMATICS-III	75	25	100
PRACTICAL				
BCA-405	COMPUTER LABORATORY & PRACTICAL WORK OF CGMA	100		100
		TOTAL		600

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BCA Evaluation Scheme

BCA V SEM	SUBJECT NAME	MARKS		
CODE		Ext	Int	Total
BCA-501	INTRODUCTION TO DBMS	75	25	100
BCA-502	JAVA PROGRAMMING AND DYNAMIC WEBPAGE DESIGN	75	25	100
BCA-503	COMPUTER NETWORK	75	25	100
BCA-504	NUMERICAL METHODS	75	25	100
PRACTICAL				
BCA-505	COMPUTER LABORATORY & PRACTICAL WORK OF DBMS	50		50
BCA-506	COMPUTER LABORATORY & PRACTICAL WORK OF JAVA PROGRAMMING & DYNAMIC WEBPAGE DESIGN	50		50
BCA-507	MINOR PROJECT		50	50
BCA-508	SUMMER TRAINING		50	50
		TOTAL		600

BCA VI SEM	SUBJECT NAME	MARKS		
CODE		Ext	Int	Total
BCA-601	COMPUTER NETWORK SECURITY	75	25	100
BCA-602	INFORMATION SYSTEM	75	25	100
BCA-603	E-COMMERCE	75	25	100
BCA-604	KNOWLEDGE MANAGEMENT	75	25	100
PRACTICAL				
BCA-605	MAJOR PROJECT		150	150
BCA-606	PRESENTATION ON MAJOR PROJECT	50		50
		TOTAL		600

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Chaudhary Charan Singh University, Meerut
BBA Scheme of Teaching & Evaluation

SEMESTER - I

S.No.	Code	Course Title	L	T	P	Internal	External	Total
1	101	Fundamentals of Management	4	0	0	25	75	100
2	102	Organizational Behaviour	4	0	0	25	75	100
3	103	Managerial Economics	4	0	0	25	75	100
4	104	Accounting & Financial Analysis	4	0	0	25	75	100
5	105	Business Law	4	0	0	25	75	100
6	106	Business organization & Ethics	4	0	0	25	75	100
7	008	Environmental Studies (Qualifying)	4	0	0	25	75	100

SEMESTER - II

S.No.	Code	Course Title	L	T	P	Internal	External	Total
1	201	Organizational Behavior	4	0	0	25	75	100
2	202	Business Communication	4	0	0	25	75	100
3	203	Indian Economy	4	0	0	25	75	100
4	204	Business Statistics	4	0	0	25	75	100
5	205	Business Environment	4	0	0	25	75	100
6	206	Principles of Accounting	4	0	0	25	75	100

SEMESTER - III

S.No.	Code	Course Title	L	T	P	Internal	External	Total
1	301	Advertising Management	4	0	0	25	75	100
2	302	Indian Banking System	4	0	0	25	75	100
3	303	Human Resource Management	4	0	0	25	75	100
4	304	Marketing Management	4	0	0	25	75	100
5	305	Company Accounts	4	0	0	25	75	100
6	306	Company Law	4	0	0	25	75	100

SEMESTER - IV

S.No.	Code	Course Title	L	T	P	Internal	External	Total
1	401	Consumer Behaviour	4	0	0	25	75	100
2	402	Financial Management	4	0	0	25	75	100
3	403	Production Management	4	0	0	25	75	100
4	404	Sales Management	4	0	0	25	75	100
5	405	Research Methodology	4	0	0	25	75	100
6	406	Operation Research	4	0	0	25	75	100

SEMESTER - V

S.No.	Code	Course Title	L	T	P	Internal	External	Total
1	501	Managerial Economics	4	0	0	25	75	100
2	502	Entrepreneurship & Small Business	4	0	0	25	75	100
3	503	Income Tax	4	0	0	25	75	100
4	504	Cost & Management Accounting	4	0	0	25	75	100
5	505	Industrial Law	4	0	0	25	75	100
6	506	Fundamentals of Computers	4	0	0	25	75	100

SEMESTER - VI

S.No.	Code	Course Title	L	T	P	Internal	External	Total
1	601	International Trade	4	0	0	25	75	100
2	602	Strategic Management & Business Policy	4	0	0	25	75	100
3	603	Vat & Service Tax	4	0	0	25	75	100
4	604	Management Information System	4	0	0	25	75	100
5	605	Auditing	4	0	0	25	75	100
6	606	Fundamentals of e-commerce	4	0	0	25	75	100

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Bachelor of Pharmacy (B. Pharm.)
COURSE OF STUDY & SCHEME OF EVALUATION FOR INTERNAL AND END SEMESTER EXAMINATIONS
(W.E.F. Session 2019-20)

FIRST SEMESTER

Course Code	Name of the Course	No. of Hours/ week	Continuous Mode	Internal Assessment			End Semester Exams		Total Marks	Credit Points
				Sessional Exams		Total	Marks	Duration		
				Marks	Duration					
BP101T	Human Anatomy and Physiology- Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP102T	Pharmaceutical Analysis I – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP103T	Pharmaceutics I – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP104T	Pharmaceutical Inorganic Chemistry- Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP105T	Communication Skills – Theory	2	20	30	2 Hrs	50	---	---	50	2
BP106RBT BP106RMT	Remedial Biology/ Mathematics – Theory	2	20	30	2 Hrs	50	---	---	50	2
BP107P	Human Anatomy and Physiology – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP108P	Pharmaceutical Analysis I – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP109P	Pharmaceutics I – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP110P	Pharmaceutical Inorganic Chemistry- Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP111P	Communication Skills – Practical	2	10	15	2 Hrs	25	---	---	25	1
BP112RBP	Remedial Biology- Practical	2	10	15	2 Hrs	25	---	---	25	1
Total		38 [#] /40 [#]	110 [#] /120 [#]	175 [#] /190 [#]	26 [#] /28 [#] Hrs	285 [#] /310 [#]	440 [#]	28 [#] Hrs	725 [#] /750 [#]	29 [#] /30 [#]

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

^SApplicable ONLY for the students who have studied Physics/ Chemistry/ Botany/ Zoology at HSC and appearing for Remedial Mathematics (RM) course.

ECOND SEMESTER

Course Code	Name of the Course	No. of Hours/ week	Internal Assessment				End Semester Exams		Total Marks	Credit Points
			Continuous Mode	Sessional Exams		Total	Marks	Duration		
				Marks	Duration					
BP201T	Human Anatomy and Physiology II – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP202T	Pharmaceutical Organic Chemistry I – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP203T	Biochemistry – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP204T	Pathophysiology – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP205T	Computer Applications in Pharmacy – Theory	3	25	50	2 Hrs	75	---	---	75	3
BP206T	Environmental Sciences – Theory	3	25	50	2 Hrs	75	---	---	75	3
BP207P	Human Anatomy and Physiology II – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP208P	Pharmaceutical Organic Chemistry I – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP209P	Biochemistry – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP210P	Computer Applications in Pharmacy – Practical	2	10	15	2 Hrs	25	---	---	25	1
	Total	36	115	205	22 Hrs	320	405	24 Hrs	725	29

THIRD SEMESTER*

Course Code	Name of the Course	No. of Hours/ week	Internal Assessment				End Semester Exams			Total Marks	Credit Points
			Continuous Mode	Sessional Exams		Total	Marks	Duration			
				Marks	Duration						
BP301T	Pharmaceutical Organic Chemistry II – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP302T	Physical Pharmaceutics I – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP303T	Pharmaceutical Microbiology – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP304T	Pharmaceutical Engineering – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP305P	Pharmaceutical Organic Chemistry II – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP306P	Physical Pharmaceutics I – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP307P	Pharmaceutical Microbiology – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP308P	Pharmaceutical Engineering – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
KVE301	Universal Human Values and Professional Ethics**	3	20	30	1 Hr	50	100	3 Hrs	150	3	
	Total	35	80	130	21 Hrs	210	540	31 Hrs	750	27	

*The lateral entry students taking admission directly to second year shall compulsorily appear for and pass the Communications Skill Subject Examination in the Third Semester.

**Human values & Professional Ethics will be offered as a compulsory course for which passing marks shall be 30% in End Semester Examination and 40% in aggregate.

FOURTH SEMESTER*

Course Code	Name of the Course	No. of Hours/ week	Internal Assessment				End Semester Exams		Total Marks	Credit Points
			Continuous Mode	Sessional Exams		Total	Marks	Duration		
				Marks	Duration					
BP401T	Pharmaceutical Organic Chemistry III – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP402T	Medicinal Chemistry I – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP403T	Physical Pharmaceutics II – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP404T	Pharmacology I – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP405T	Pharmacognosy I – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4
BP406P	Medicinal Chemistry I – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP407P	Physical Pharmaceutics II – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP408P	Pharmacology I – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
BP409P	Pharmacognosy I – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2
Total		36	70	115	21 Hrs	185	515	31 Hrs	700	28

*The lateral entry students taking admission directly to second year shall compulsorily appear for and pass the Computer Applications in Pharmacy Subject Examination in the Fourth Semester.

FIFTH SEMESTER

Course Code	Name of the Course	No. of Hours/ week	Internal Assessment					End Semester Exams		Total Marks	Credit Points
			Continuous Mode	Sessional Exams		Total	Marks	Duration			
				Marks	Duration						
BP501T	Medicinal Chemistry II – Theory	3	10	15	1 Hr	25	75	3 Hrs	100	4	
BP502T	Industrial Pharmacy I – Theory	3	10	15	1 Hr	25	75	3 Hrs	100	4	
BP503T	Pharmacology II – Theory	3	10	15	1 Hr	25	75	3 Hrs	100	4	
BP504T	Pharmacognosy and Phytochemistry	3	10	15	1 Hr	25	75	3 Hrs	100	4	
BP505T	Pharmaceutical Jurisprudence – Theory	3	10	15	1 Hr	25	75	3 Hrs	100	4	
BP506P	Industrial Pharmacy I – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP507P	Pharmacology II – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP508P	Pharmacognosy and Phytochemistry II – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP509P	Report on Hospital Training-I	-	-	-	-	-	100	-	100	2	
	Total	27	65	105	17 Hrs	170	580	27 Hrs	750	28	

SIXTH SEMESTER

Course Code	Name of the Course	No. of Hours/ week	Internal Assessment					End Semester Exams		Total Marks	Credit Points
			Continuous Mode	Sessional Exams		Total	Marks	Duration			
				Marks	Duration						
BP601T	Medicinal Chemistry III – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP602T	Pharmacology III – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP603T	Herbal Drug Technology – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP604T	Biopharmaceutics and Pharmacokinetics – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP605T	Pharmaceutical Biotechnology-Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP606T	Quality Assurance– Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP607P	Medicinal Chemistry III – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP608P	Pharmacology III – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP609P	Herbal Drug Technology – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP610P	Report on Industrial Training	-	-	-	-	-	100	-	100	2	
	Total	36	75	120	18 Hrs	195	655	30 Hrs	850	32	

SEVENTH SEMESTER

Course Code	Name of the Course	No. of Hours/week	Internal Assessment					End Semester Exams		Total Marks	Credit Points
			Continuous Mode	Sessional Exams		Total	Marks	Duration			
				Marks	Duration						
BP701T	Instrumental Methods of Analysis – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP702T	Industrial Pharmacy II – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP703T	Pharmacy Practice – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP704T	Novel Drug Delivery System (NDDS) – Theory	4	10	15	1 Hr	25	75	3 Hrs	100	4	
BP705P	Instrumental Methods of Analysis/ NDDS – Practical	4	5	10	4 Hrs	15	35	4 Hrs	50	2	
BP706PS	Practice School	12	50	100	5 Hrs	150	---	---	150	6	
BP707P	Report on Hospital Training-II	-	-	-	-	-	100	-	100	2	
Total		32	95	170	13 Hrs	265	435	16 Hrs	700	26	

EIGHTH SEMESTER

Course Code	Name of the Course	No. of Hours/	Internal Assessment			End Semester Exams		Total Marks	Credit Points
			Continuous Mode	Sessional Marks	Duration	Total	Marks	Duration	
BP801T	Biostatistics and Research Methodology	4	10	15	1 Hr	25	75	3 Hrs	4
BP802T	Social and Preventive Pharmacy	4	10	15	1 Hr	25	75	3 Hrs	4
BP803ET	Pharma Marketing Management*	4 + 4 = 8	10 + 10 = 20	15 + 15 = 30	1 + 1 = 2 Hrs	25 + 25 = 50	75 + 75 = 150	3 + 3 = 6 Hrs	4 + 4 = 8
BP804ET	Pharmaceutical Regulatory Science*								
BP805ET	Pharmacovigilance*								
BP806ET	Quality Control and Standardization of Herbal*								
BP807ET	Computer Aided Drug								
BP808ET	Cell and Molecular	12							
BP809ET	Cosmetic Science*								
BP810ET	Experimental								
BP811ET	Advanced Instrumentation Techniques*								
BP812ET	Dietary Supplements and Nutraceuticals*								
BP813ET	Pharmaceutical Product Development*	-	-	-	-	-	150	4 Hrs	6
BP814ET	LSSSDC Elective*								
BP815PW	Project Work (On Elective)								
BP816P	Report on Industrial Tour	-	-	-	-	-	100	-	2
Total		28	40	6	4 Hrs	10	550	16 Hrs	24

*(ET: Elective subject) Every candidate has to opt for two of the elective subjects, and has to carry out project on any one of them. The student has the choice to choose both the elective subjects from the already prescribed list of elective subjects by the PCI or choose one elective subject from the existing prescribed list of elective subjects of B. Pharm. programme by the PCI and the other (second subject) elective from list of skill pack/modules available with the LSSSDC from time to time.

O-D. Ph. 4.GENERAL

- (A) **Course of Study:** The course of study for Diploma in Pharmacy part-I and Diploma in pharmacy part- II shall include the subjects as given in the Tables I & II below. The number of hours devoted to each subject for its teaching is given against columns 2 and 3 of the Tables below.

TABLE-I Diploma in Pharmacy (Part-I)

Subject	Theory		Practical	
	hours /year	Hrs. / week	hours /year	Hrs. / week
Pharmaceutics-I	75	3	100	4
Pharmaceutical Chemistry-I	75	3	75	3
Pharmacognosy	75	3	75	3
Biochemistry & Clinical Pathology	50	2	75	3
Human Anatomy & Physiology	75	3	50	2
Health Education & community pharmacy	50	2		
	400	16	375	15

TABLE-II Diploma in Pharmacy (Part-II)

Subject	Theory		Practical	
	hours /year	Hrs. /week	hours /year	Hrs/ week
Pharmaceutics-II	75	3	100	4
Pharmaceutical Chemistry-II	100	4	75	3
Pharmacology & Toxicology	75	3	50	2
Pharmaceutical Jurisprudence	50	2	-	
Drug store and Business Management	75	3	-	
Hospital & Clinical Pharmacy	75	3	50	2
	450	18	275	11

- (b) **Examinations:** There shall be an examination for Diploma in Pharmacy (part-I) to examine students of the first year course and an examination for Diploma in Pharmacy (part-II) to examine students of the second year course. Each examination may be held twice every year. The first examination in every year shall be the annual examination and the second examination shall be supplementary examination of the Diploma in Pharmacy (part-I) or Diploma in pharmacy (Part-II) as the case may be. The examinations shall be of written and practical (including oral) nature. Carrying maximum marks for each part of subject, as indicated in Table III and IV:R-29(A) (Plan and scheme of examination for Diploma in Pharmacy).

O-D. Ph.5. PRACTICAL TRAINING

Diploma in Pharmacy (Part-III)

(a) **Period and other conditions of practical training:**

After having appeared in Part-II examination of Diploma in Pharmacy conducted by Board/University or other approved examination Body or any other course accepted

as being equivalent by the Pharmacy Council of India, a candidate shall be eligible to undergo practical training in one or more of the following institutions namely:

Hospitals/Dispensaries run by Central/State Government/Municipal corporations/central Government Health scheme and Employees state Insurance scheme. A pharmacy, chemist and Druggist licensed under the Drugs and cosmetics Rules, 1945 made under the Drugs and Cosmetics Act, 1940(23 of 1940). The institutions referred in sub-regulation(1) shall be eligible to impart training subject to the condition that the number of student pharmacists that may be taken in any Hospital, pharmacy, Chemist and Druggist licensed under the Drugs and cosmetics Rules, 1945 made under the Drugs and cosmetics Act, 1940 shall not exceed two where there is one registered pharmacist engaged in the work in which the student pharmacist is undergoing practical training, where there is more than one registered pharmacist similarly engaged, the number shall not exceed one for each additional such registered pharmacist. Hospital and Dispensary other than those specified in sub-regulation(1) for the purpose of giving practical training shall have to be recognized by pharmacy council of India on fulfilling the conditions specified in Appendix-D to these regulations.

In the course of practical training, the trainees shall have exposure to: Working knowledge of keeping of records required by various acts concerning the profession of pharmacy and Practical experience in the manipulation of pharmaceutical apparatus in common use, the reading, translation and copying of prescription including checking of dose, the dispensing of prescriptions illustrating the commoner methods of administering medicaments; the storage of drugs and medical preparations. The practical training shall be not less than five hundred hours spread over a period of not less than three months provided that not less than two hundred and fifty hours and devoted to actual dispensing of prescriptions.

(b) Procedure to be followed prior to commencing of the training:

The head of the academic training institution, shall supply application in triplicate in 'Practical Training Contract Form for Qualification as pharmacist' to candidate eligible to under-take the said practical training, the contract form shall be as specified in Appendix-E to these regulations.

The head of an academic training institution shall fill section I of the contract Form. The trainee shall fill section II of the said contract Form and the Head of the institution agreeing to impart the training (hereinafter referred to as the Apprentice Master) shall fill section III of the said contract Form.

It shall be the responsibility of the trainee to ensure that one copy (hereinafter referred to as the first copy of the contract Form) so filled is submitted to Head of the academic training institution and the other two copies (hereinafter referred to as the second copy and the third copy) shall be filled with Apprentice Master (if he so desires) or with the trainee pending completion of the training.

(c) Certificate of Passing Diploma in Pharmacy(part-III) on satisfactory completion of the apprentice period, the Apprentice Master shall fill Section IV of the second copy and third copy of contract form and cause it to be sent to the head to the academic training institution who shall suitably enter in the first copy of the



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	THIRD SEMESTER	Subject code	L	T	P	TH	p	Total	Credit
1.	Cereals, Millets and Pulses crops (field crops Kharif crops)	D-391	4	-	2	50	25	75	3
2.	Principle of Plant Breeding	D-392	4	-	2	50	25	75	3
3.	Farm Power and Machinery, Farm Structures, power and Machinery (ICAR)	D-393	4	-	2	50	25	75	3
4.	Environmental science & Agro Ecology	D-394	4	-	2	50	25	75	3
5.	Agricultural Marketing, export and Cooperation	D-395	4	-	2	50	25	75	3
6.	Vegetable Production	D-396	3	-	2	50	25	75	3
7.	Elementary Microbiology and Soil Microbiology	D-397	3	-	2	50	25	75	3
	FOURTH SEMESTER	Subject code	L	T	P	TH	p	Total	Credit
1.	Oil seeds commercial crops fields crops II Rabi Crops (ICAR)	D-491	4	-	2	50	25	75	3
2.	Breeding of Field Crops	D-492	5	-	2	50	25	75	3
3.	Principles of Soil Physics and conservation soil survey/ land planning and remote sensing (ICAR)	D-493	5	-	2	50	25	75	3
4.	Live stock production and management (including poultry) live stock production India poultry swine and goat farming along with animal diseases (ICAR)	D-494	4	-	2	50	25	75	3
5.	Economics Entomology including crops	D-495	5	-	2	50	25	75	3
6.	Fruit Production including plantation crops (ICAR)	D-496	5	-	2	50	25	75	3

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S. N.	Name of the subjects	Subject code	periods			Evaluation Scheme			Credit
	FIRST SEMESTER		L	T	P	TH	p	Total	
1.	Principle of crop production principles of Agronomy (ICAR)	D-191	3	-	2	50	25	75	3
2.	Fundamentals of Soil science	D-192	3		2	50	25	75	3
3.	Elements of Genetics	D-193	3	-	2	50	25	75	2
4.	Elementary Statistics & Applied Mathematics (ICAR)	D-194	4	-	2	50	25	75	2
5.	Agricultural Meteorology	D-195	3	-	2	50	25	75	2
6.	Rural sociology & Educational Psychology	D-196	3	-	2	50	25	75	2
7.	Fundamentals of Horticulture	D-197	3	-	2	50	25	75	3
8.	Physical Education	D-198	-	-	2	-	50	50	1
9.	Structural & Spoken English	D-199	2	-	2	50	25	75	2
10.	Environmental Studies (Qualifying course)	D-008	2	-	-	100	-	100	-
11.	Bhartiya Sanskriti evam Rashtra Gaurav (foundation Course)	D-009	2	-	-	100	-	100	-
	SECOND SEMESTER	Subject code	L	T	P	TH	p	Total	Credit
1.	Irrigation & Water Management	D-291	3	-	2	50	25	75	2
2.	Fundamentals of Extension . Education & Rural Development	D-292	4		2	50	25	75	3
3.	Elementary Crop Physiology	D-293	4	-	2	50	25	75	3
4.	Introductory Entomology	D-294	4	-	2	50	25	75	2
5.	Introductory Plant Pathology	D-295	3	-	2	50	25	75	2
6.	Elementary Plant Biochemistry & Chemistry of plant products	D-296	4	-	2	50	25	75	4
7.	Introduction to agricultural & natural resources economics and Farm Management Economics	D-297	4	-	2	50	25	75	4

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	FIFTH SEMESTER	Subject code	L	T	P	TH	p	Total	Credit
1.	Introduction to Plant Biotechnology	D-591	3	-	2	50	25	75	2
2.	Milk & Milk Processing	D-592	4	-	2	50	25	75	3
3.	Preservation of Fruits & Vegetables	D-593	3	-	2	50	25	75	3
4.	Crop Pest & IPM	D-594	4	-	2	50	25	75	4
5.	Weed Management	D-595	3	-	2	50	25	75	2
6.	Crop Disease & their Management	D-596	4	-	2	50	25	75	4
7.	Soil Fertility & Fertilizers	D-597	3	-	2	50	25	75	3
	SIXTH SEMESTER	Subject code	L	T	P	TH	p	Total	Credit
1.	Principles of seed Technology	D-691	-	-	-	50	25	75	2
2.	Dairy Products Technology	D-692	-	-	-	50	25	75	3
3.	Post Harvest Engineering	D-693	-	-	-	50	25	75	3
4.	Farming System & Sustainable Agriculture	D-694	-	-	-	50	-	50	2
5.	Agriculture Finance Business Management & trade	D-695	-	-	-	50	25	75	3
6.	Communication , Diffusion of Agriculture Innovation	D-696	--	-	-	50	25	75	3
7.	Mushroom Cultivation	D-697	-	-	-		25	25	1

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	SEVENTH SEMESTER	Subject code	L	T	P	TH	p	Total	Credit
1.	Rainfed Agriculture	D-791		-		50	25	75	3
2.	Silviculture & Agroforestry	D-792		-		50	25	75	3
3.	Production Technology of Medicinal and Aromatic Crops	D-793		-		50	25	75	2
4.	Management of Problems Soils	D-794		-		50	25	75	3
5.	Dairy Chemistry & Animal Nutrition	D-795		-		50	25	75	3
6.	Computer Application	D-796		-		50	25	75	2
	EIGHTH SEMESTER	Subject code	L	T	P	TH	p	Total	Credit
1.	RAWE			-				100	13

Note: All the theoretical and practical examinations are conducted and evaluated by external examiners appointed by CCS University Meerut

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