R.V.R & J.C.COLLEGE OF ENGINEERING (Autonomous)

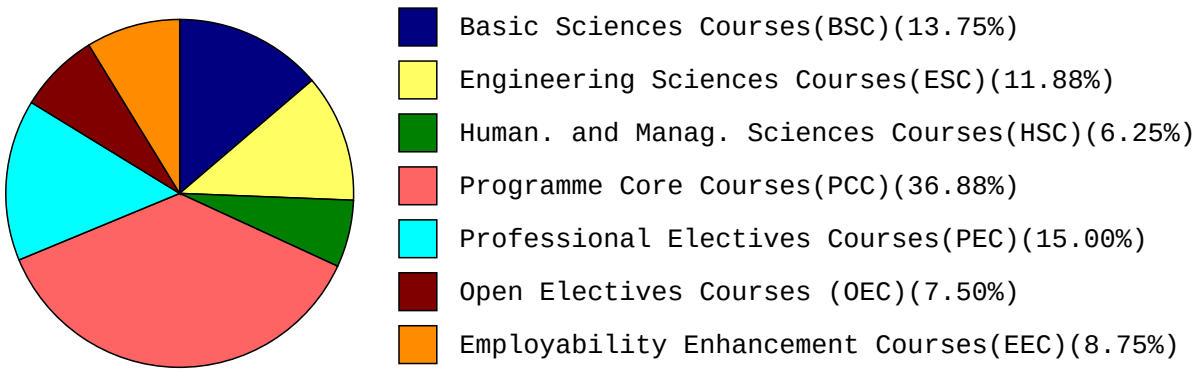
DEPARTMENT OF INFORMATION TCHNOLOGY

B.TECH. INFORMATION TCHNOLOGY

(w.e.f. the batch of students admitted from the academic year 2026-2027)

Programme curriculum (R26) grouping based on course components

Course Component	AICTE reference range - % of credits	% of credits in the program	Number of credits in the program	Total number of Contact Hours
Basic Sciences Courses (BSC)	14-15% (22-24)	13.75	22	24
Engineering Sciences Courses (ESC)	12-13% (19-21)	11.88	19	30
Humanities / Management Sciences Courses (HSC)	3-4% (5-6)	6.25	10	13
Professional Core Courses (PCC)	35-36% (56-58)	36.88	59	72
Professional Elective Courses (PEC)	15-16% (24-26)	15	24	18
Open Elective Courses (OEC)	7-8% (11-13)	7.5	12	12
Employability Enhancement Courses (EEC) [Internship / Project work and internship in Industry]	9-10% (14-16)	8.75	14	22
Skill Enhancement Course(s) (SEC)	0	0	6	12
Mandatory Course(s) (MC)	0	0	0	2
		Total number of Credits	166	



R.V.R & J.C.COLLEGE OF ENGINEERING (Autonomous)

B.TECH. INFORMATION TCHNOLOGY

Course Structure, Scheme of Instruction (R26) and Examination

(w.e.f. the batch of students admitted from the academic year 2026-2027)

Three Weeks Orientation Programme is Mandatory before starting Semester I [First Year]

Semester I [First Year] **COURSE STRUCTURE**

SNo.	Course Details		Scheme of Instruction			Scheme of Examination			Category Code
	Code No.	Subject Name	Periods per week			Maximum Marks		Credits	
			L	T	P	SES	EXT		
1	IT/AD/CD/ CE/CH/CM/CS111	Linear Algebra and Calculus	3	1	-	40	60	4.0	BSC
2	IT/AD/CS/ CD112	Applied Chemistry	3	-	-	40	60	3.0	BSC
3	IT/AD/CD/ CE/CH/CM/CS113	Computational Thinking and Problem Solving with Python	3	-	-	40	60	3.0	ESC
4	IT/AD/CD/ CS114	Digital Logic Design	3	-	-	40	60	3.0	ESC
5	IT/AD/CD/ CM/CS/QC151	AI Tools and Applications Laboratory	-	1	3	40	60	2.5	ESC
6	IT/AD/CD/ CS152	Applied Chemistry Laboratory	-	-	2	40	60	1.0	BSC
7	IT/AD/CD/ CE/CH/CM/CS153	Computational Thinking and Problem Solving with Python Laboratory	-	-	3	40	60	1.5	ESC
8	IT/AD/CD/ CS/EC154	Engineering Graphics and Design	-	1	3	40	60	2.5	ESC
9	IT/AD/CD/ CS155	Digital Logic Design Laboratory	-	-	2	40	60	1.0	ESC
		TOTAL	**12**	**3**	**13**	360	540	**21.5**	TPW-28

Semester II [First Year] **COURSE STRUCTURE**

SNo.	Course Details		Scheme of Instruction			Scheme of Examination			Category Code
	Code No.	Subject Name	Periods per week			Maximum Marks		Credits	
			L	T	P	SES	EXT		
1	IT/AD/CD/ CE/CH/CM/CS121	Differential Equations and Vector Calculus	3	1	-	40	60	4.0	BSC
2	IT/AD/CD/ CS122	Applied Physics	3	-	-	40	60	3.0	BSC
3	IT/AD/CD/ CS/EC123	Communicative English	2	-	-	40	60	2.0	HSC
4	IT/AD/CD/ CM/CS/QC124	C Programming and Data Structures	3	1	4	40	60	4.0	ESC
5	IT/AD/CD/ CS161	Applied Physics Laboratory	-	-	2	40	60	1.0	BSC
6	IT/AD/CD/ CS/EC162	Communicative English Laboratory	-	-	2	40	60	1.0	HSC
7	IT/AD/CD/ CM/CS/QC163	C Programming and Data Structures Laboratory	-	-	3	40	60	1.5	ESC
8	IT/AD/CD/ CS164	Design Thinking	-	1	2	40	60	2.0	HSC
9	MC1	NSS / NCC / Health & Wellness / Yoga	2	-	-	100	-	0.0	MNC
		TOTAL	**13**	**3**	**13**	420	480	**18.5**	TPW-29

Semester III [Second Year] **COURSE STRUCTURE**

SNo.	Course Details		Scheme of Instruction			Scheme of Examination			Category Code
	Code No.	Subject Name	Periods per week			Maximum Marks		Credits	
			L	T	P	SES	EXT		
1	IT211	Probability, Statistics & Complex Analysis	3	-	-	40	60	3.0	BSC
2	IT212	Advanced Data Structures	3	-	-	40	60	3.0	PCC
3	IT213	Computer Organization	3	-	-	40	60	3.0	PCC
4	IT214	Database Management Systems	3	-	-	40	60	3.0	PCC
5	IT215	Discrete Mathematical Structures	3	-	-	40	60	3.0	PCC
6	IT216	Operating Systems	3	-	-	40	60	3.0	PCC
7	IT251	Advanced Data Structures Laboratory	-	-	3	40	60	1.5	PCC
8	IT252	Database Management Systems Laboratory	-	-	3	40	60	1.5	PCC
9	IT253	Data Analysis and Visualization Laboratory	-	1	2	40	60	2.0	PCC
		TOTAL	**18**	**1**	**8**	360	540	**23**	TPW-27

Semester IV [Second Year] **COURSE STRUCTURE**

SNo.	Course Details		Scheme of Instruction			Scheme of Examination			Category Code
	Code No.	Subject Name	Periods per week			Maximum Marks		Credits	
			L	T	P	SES	EXT		
1	IT221	Computational Statistics	3	-	-	40	60	3.0	BSC
2	IT222	Universal Human Values-II Understanding Harmony	1	1	-	40	60	2.0	HSC
3	IT223	Automata Theory and Formal Languages	3	-	-	40	60	3.0	PCC
4	IT224	Design and Analysis of Algorithms	3	-	-	40	60	3.0	PCC
5	IT225	Object Oriented Programming using Java	3	-	-	40	60	3.0	PCC
6	IT226	Software Engineering and Project Management	3	-	-	40	60	3.0	PCC
7	IT261	Skill Enhancement Course-I	-	-	4	40	60	2.0	SEC
8	IT262	Design and Analysis of Algorithms Laboratory	-	-	3	40	60	1.5	PCC
9	IT263	Object Oriented Programming using Java Laboratory	-	-	3	40	60	1.5	PCC
		TOTAL	**16**	**1**	**10**	360	540	**22**	TPW-27
Internship 2 weeks (Mandatory) during summer vacation (to be evaluated during next semester)									
Honors/Minor course (Maximum Two courses can be registered)			**3**	**-**	**-**	**40**	**60**	**3**	HR/MR

Semester V [Third Year] **COURSE STRUCTURE**

SNo.	Course Details		Scheme of Instruction			Scheme of Examination			Category Code
	Code No.	Subject Name	Periods per week			Maximum Marks		Credits	
			L	T	P	SES	EXT		
1	IT311	Artificial Intelligence	3	-	-	40	60	3.0	PCC
2	IT312	Computer Networks	3	-	-	40	60	3.0	PCC
3	IT313	Web Technologies	3	-	-	40	60	3.0	PCC
4	IT314	Professional Elective-I	3	-	-	40	60	3.0	PEC
5	IT315	Professional Elective-II	3	-	-	40	60	3.0	PEC
6	IT316	Open Elective-I	3	-	-	40	60	3.0	OEC
7	IT351	Skill Enhancement Course-II	-	-	4	40	60	2.0	SEC
8	IT352	Summer Internship-I	-	-	-	-	100	1.0	EEC
9	IT353	Artificial Intelligence Laboratory	-	-	3	40	60	1.5	PCC
10	IT354	Web Technologies Laboratory	-	-	3	40	60	1.5	PCC
		TOTAL	**18**	**0**	**10**	360	640	**24**	TPW-28
Honors/Minor course (Maximum Two courses can be registered)			**3**	**-**	**-**	**40**	**60**	**3**	HR/MR

Semester VI [Third Year] **COURSE STRUCTURE**

SNo.	Course Details		Scheme of Instruction			Scheme of Examination			Category Code
	Code No.	Subject Name	Periods per week			Maximum Marks		Credits	
			L	T	P	SES	EXT		
1	IT321	Sustainability & Green Engineering	2	-	-	40	60	2.0	HSC
2	IT322	Full-Stack Technologies	3	-	-	40	60	3.0	PCC
3	IT323	Machine Learning	3	-	-	40	60	3.0	PCC
4	IT324	Professional Elective-III	3	-	-	40	60	3.0	PEC
5	IT325	Professional Elective-IV	3	-	-	40	60	3.0	PEC
6	IT326	Open Elective-II	3	-	-	40	60	3.0	OEC
7	IT361	Skill Enhancement Course-III	-	-	4	40	60	2.0	SEC
8	IT362	Full-Stack Technologies Laboratory	-	-	3	40	60	1.5	PCC
9	IT363	Tinkering Laboratory	-	-	2	40	60	1.0	HSC
10	IT364	Machine Learning Laboratory	-	-	3	40	60	1.5	PCC
		TOTAL	**17**	**0**	**12**	400	600	**23**	TPW-29
Internship 4 weeks (Mandatory) during summer vacation (to be evaluated during next semester)									
Honors/Minor course (Maximum Two courses can be registered)			**3**	**-**	**-**	**40**	**60**	**3**	HR/MR

Semester VII [Fourth Year] **COURSE STRUCTURE**

SNo.	Course Details		Scheme of Instruction			Scheme of Examination			Category Code
	Code No.	Subject Name	Periods per week			Maximum Marks		Credits	
			L	T	P	SES	EXT		
1	IT411	Cyber Security	3	-	-	40	60	3.0	PCC
2	IT412	Professional Elective-V	3	-	-	40	60	3.0	PEC
3	IT413	Professional Elective-VI	3	-	-	40	60	3.0	PEC
4	IT414	Open Elective-III	3	-	-	40	60	3.0	OEC
5	IT415	Open Elective-IV	3	-	-	40	60	3.0	OEC
6	IT416	Professional Elective-VII (MOOCs)	-	-	-	-	100	3.0	PEC
7	IT417	Professional Elective-VIII (MOOCs)	-	-	-	-	100	3.0	PEC
8	IT451	Summer Internship-II	-	-	-	-	100	2.0	EEC
9	IT452	Term Paper/Mini Project	-	-	2	40	60	1.0	EEC
		TOTAL	**15**	**0**	**2**	240	660	**24**	TPW-17
Honors/Minor course (Maximum Two courses can be registered)			**3**	**-**	**-**	**40**	**60**	**3**	HR/MR

Semester VIII [Fourth Year] **COURSE STRUCTURE**

SNo.	Course Details		Scheme of Instruction			Scheme of Examination			Category Code
	Code No.	Subject Name	Periods per week			Maximum Marks		Credits	
			L	T	P	SES	EXT		
1	IT461	Project / Industry Oriented Full Semester Internship	-	-	20	120	80	10.0	EEC
		TOTAL	**0**	**0**	**20**	120	80	**10**	TPW-20