



|| Jai Sri Gurudev ||
Sri Adichunchanagiri Shikshana Trust (R)

SJB Institute of Technology

BGS Health and Education City, Dr. Vishnuvardhana Road, Kengeri, Bengaluru-560060

Approved by AICTE, New Delhi.

Autonomous Institution affiliated to Visvesvaraya Technological University, Belagavi

Recognized by UGC, New Delhi with 2(f) & 12 (B), Accredited by NAAC with 'A+' grade,

Certified by ISO 9001 - 2015



Autonomous Scheme of Teaching & Examinations (ST&E) (Tentative) UG - BE 3rd Year - ISE

SCHEME: 2023

SEM: V

Revision date:

5/4/2025

S. #	Course Type	Course type Series	Course Code	Course Title	Teaching Dept.	QP setting dept	Credits	Teaching Hrs/Week				CIE Marks	Examinations			
								L	T	P	O		SEE (Dur. & Marks)			
								Lecture	Tutorial	Practical	PBL/ABL / SL/etc.		Dur.	Th.	Lab	Tot.
1	PCC	3	23IST501	Theory of Computation	ISE	ISE	3	3	0	0		50	03	50	-	100
2	IPCC	5	23ISI502	Full Stack Development	ISE	ISE	4	3	0	2		50	03	50	-	100
3	IPCC	6	23ISI503	Database Management systems	ISE	ISE	4	3	0	2		50	03	50	-	100
4	PCCL	3	23ISL504	Data Visualization Lab	ISE	ISE	1	0	0	2		50	03	-	50	100
5	PEC	1	23ISP51y	Professional Elective Course - 1	ISE	ISE	3	3	0	0		50	03	50	-	100
6	ETC	3	23ISE53y	Emerging Technology Course - 3	ISE	ISE	3	3	0	0	@	50	03	50	-	100
7	HSMC	6	23SFHH06/ 23UHVH07	Bioscience or UHV-Universal Human Values	any dept	any dept	1	0	2	0	@	50	02	50	-	100
8	AEC	5	23xxAE5y	Ability Enhancement Course - 5	ISE	ISE	1	1	0	0		50	02	50	-	100
								(or)				(or)				
								0	0	2		50	02	-	50	100
9	NCCM	4	23PASN01	Physical Education - Sports and Athletics	PED	PED	PP/NP				2	50				50
			23YOGN02	Yoga	PED	PED										
			23NSSN03	NSS - National Service Scheme	NSS	NSS										
			23NCCN04	NCC - National Cadet Corps	NCC	NCC										
			23IKSN05	Indian Knowledge System	HSS	HSS										
Total							20	16	2	8	2	450		350	100	850

PCC: Professional Course; IPCC: Integrated Professional Core Course; PCCL: Professional Core Course Laboratory; AEC: Ability Enhancement Course; HSMC: Humanities, Social Sciences & Management Course; NCMC: Non Credit Mandatory Course;
 { @ - Compulsory one activity during the semester};
 {I.E.-Industry Experts}.
 PBL: project Based learning; ABL: Activity Based Learning; SL: Self-Learning

ETC (Emerging Technology Course):

For ETC (L:T:P:O) can be planned by the depts considering practicality & possibility of conduction, same shall be indicated along with course title in the list, if altered than above. If planned altering the prescription, the same shall be approved at the department BOS & authorities. Atleast one activity is mandatory during the delivery of the course. The guidelines is applicable to all the semesters III to VI semesters (ETC-1 to ETC-4).

Bioscience & UHV-Universal Human Values:

- 1) Any one of the course will be offered by the departments in each semester of IV & V based on the institutional planning.
- 2) Both the courses shall be studied and completed by the students registering each in the two semesters. For example, if Bioscience is offered in the IV semester, UHV-Universal Human Values is offered in the V semester.

Ability Enhancement Course-5: 23xxAE5y - 1 Credit course

- 1) The courses and the syllabus shall be defined by the respective dept. BOS.
- 2) SEE will be MCQ if offered as theory course. If offered as LAB course, SEE will be practical, with two internal examiners. Handled by Controller of Examinations.

NCMC (Non Credit Mandatory Course) for course type series-4: Refer to guidelines in III SEM.

Professional Elective Course - 1 (23ISP51y)		Emerging Technology Course - 3 (23ISE53y)		Ability Enhancement Course - 5 (23ISAE5y)	
Course Code	Course Title	Course Code	Course Title	Course Code	Course Title
23ISP511	Advanced Java and J2EE	23ISE531	Ethical Hacking	23ISAE51	Generative AI
23ISP512	Software Engineering and Project Management	23ISE532	Predictive Analytics	23ISAE52	Data Security & Privacy
23ISP513	Introduction to Java Script	23ISE533	Digital Image Processing	23ISAE53	UI/UX
23ISP514	Information Retrieval	23ISE534	Block Chain Applications	23ISAE54	Capacity planning for IT



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								L	T	P	O	CIE Marks	SEE (Dur. & Marks)			
								Lecture	Tutorial	Practical	PBL//ABL / SL/etc.		Dur.	Th.	Lab	Tot.
1	PCC	4	23IST601	Machine Learning	ISE	ISE	3	3	0	0		50	03	50	-	100
2	IPCC	7	23ISI602	Software Testing and Automation	ISE	ISE	4	3	0	2		50	03	50	-	100
3	PCCL	4	23ISL603	Machine Learning Lab	ISE	ISE	1	0	0	2		50	03	-	50	100
4	PEC	2	23ISP62y	Professional Elective Course - 2	ISE	ISE	3	3	0	0		50	03	50	-	100
5	OEC	1	23ISO61y	Open Elective Course - 1	Any dept.	Any dept.	3	3	0	0		50	03	50	-	100
6	ETC	4	23ISE64y	Emerging Technology Course - 4	ISE	ISE	3	3	0	0	@	50	03	50	-	100
7	AEC	6	23RMAE61	Research Methodology & IPR	ISE	ISE	3	3	0	0	@	50	03	50	-	100
8	PRJ	1	23ISPRJ1	Major Project - Phase I	ISE	ISE	2	0	0	4	@	50	03	-	50	100
9	HSMC	7	23SCRH08	Social Connect & Responsibility	Any dept	Any dept	1	1	0	0	@	50	-	-	-	50
10	NCMC	4	23PASN01	Physical Education - Sports and Athletics	PED	PED	PP/NP				2	50				50
			23YOGN02	Yoga	PED	PED										
			23NSSN03	NSS - National Service Scheme	NSS	NSS										
			23NCCN04	NCC - National Cadet Corps	NCC	NCC										
			23IKSN05	Indian Knowledge System	HSS	HSS										
Total							23	19	0	8	2	500		300	100	900

PCC: Professional Course; IPCC: Integrated Professional Core Course; PCCL: Professional Core Course Laboratory; PEC: Professional Elective Course; OEC: Open Elective Course;

HSMC: Humanities, Social Sciences & Management Course; AEC: Ability Enhancement Course; NCMC: Non Credit Mandatory Course; PRJ: Project work.

{@ - Compulsory one activity during the semester}; {I.E.-Industry Experts}; PBL: project Based learning; ABL: Activity Based Learning; SL: Self-Learning

NOTE: CIE & SEE guidelines for S. #7: AEC-23RMAE61-Reserach Methodology & IPR will be same as 3 credit courses BSC/ESC/PCC/ETC/PEC/OEC as mentioned in serial no. 1 of CIE & SEE guidelines.

Open Elective Courses (OEC):

1) Open Electives listed here are to offer for other department students.

2) Students shall select open elective courses offered from other departments, separate consolidated list of courses offered from various departments will be published time to time.

ETC (Emerging Technology Course):

For ETC (L:T:P:O) can be planned by the depts considering practicality & possibility of conduction, same shall be indicated along with course title in the list, if altered than above. If planned altering the prescription, the same shall be approved at the department BOS & authorities. Atleast one activity is mandatory during the delivery of the course. The guidelines is applicable to all the semesters III to VI semesters (ETC-1 to ETC-4).

NCMC (Non Credit Mandatory Course) for course type series-4: Refer to guidelines in III SEM.

Professional Elective Course - 2 (23ISP62y)		Open Elective Course - 1 (23ISO61y)		Emerging Technology Course - 4 (23ISE64y)	
Course Code	Course Title	Course Code	Course Title	Course Code	Course Title
23ISP621	File Structures	23ISO611	Introduction to Network security	23ISE641	Distributed Systems
23ISP622	Cloud Computing and Applications	23ISO612	Introduction to cloud computing	23ISE642	Big Data Analytics
23ISP623	Compiler Design	23ISO613	Programming in Java	23ISE643	Deep Learning
23ISP624	Mobile Application Development	23ISO614	Introduction to Operating systems	23ISE644	Block Chain and Distributed Ledgers



Autonomous Scheme of Teaching & Examinations (ST&E) (Tentative) UG - BE 4th Year - ISE

SCHEME: 2023

SEM: VII

Revision date:

5/4/2025

S. #	Course Type	Course Type Series	Course Code	Course Title	Teaching Dept.	QP setting dept	Credits	Teaching Hrs/Week				Examinations				
								L	T	P	O	CIE Marks	SEE (Dur. & Marks)			
								Lecture	Tutorial	Practical	PBL/ABL / SL/etc.		Dur.	Th.	Lab	Tot.
1	PCC	5	23IST701	Information and Network Security	ISE	ISE	3	3	0	0		50	03	50	-	100
2	IPCC	8	23ISI702	Natural Language Processing	ISE	ISE	4	3	0	2		50	03	50	-	100
3	PEC	3	23ISP73y	Professional Elective Course - 3	ISE	ISE	3	3	0	0		50	03	50	-	100
4	OEC	2	23ISO72y	Open Elective Course - 2	Any dept.	Any dept.	3	3	0	0		50	03	50	-	100
5	HSMC	7	23IST704	Management Entrepreneurship for IT Industry	ISE	ISE	2	2	0	0		50	03	50	-	100
6	PRJ	2	23ISPRJ2	Major Project - Phase II	ISE	ISE	6	0	0	12	@	100	03	-	100	200
Total							21	14	0	14		350		250	100	700

PCC: Professional Core Course; IPCC: Integrated Professional Core Course; PEC: Professional Elective Course; OEC: Open Elective Course; PRJ: Project Work.

PBL: project Based learning; ABL: Activity Based Learning; SL: Self-Learning

Open Elective Courses (OEC):

1) Open Electives listed here are to offer for other department students.

2) Students shall select open elective courses offered from other departments, separate consolidated list of courses offered from various departments will be published time to time.

Professional Elective Course - 3 (23ISP73y)		Open Elective Course - 2 (23ISO72y)	
Course Code	Course Title	Course Code	Course Title
23ISP731	Internet of Things	23ISO721	Software Testing
23ISP732	Robotics and Automation	23ISO722	Introduction to Python
23ISP733	NoSQL	23ISO723	Introduction to Artificial Intelligence
23ISP734	Angular and Node JS	23ISO724	Introduction to Data Mining



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Autonomous Scheme of Teaching & Examinations (ST&E) (Tentative) UG - BE 4th Year - ISE

SCHEME: 2023

SEM: VIII

Revision date:

5/4/2025

S. #	Course Type	Course Type Series	Course Code	Course Title		QP setting dept	Credits	Teaching Hrs/Week				Examinations				
								L	T	P	O	CIE Marks	SEE (Dur. & Marks)			
								Lecture	Tutorial	Practical	PBL/ABL / SL/etc.		Dur.	Th.	Lab	Tot.
1	SLC	1	23ISS1yy	Self-Learning Course - 1 (NPTEL)			3	0	0	0	@	50	-	50	-	100
2	SLC	2	23ISS2yy	Self-Learning Course - 2 (NPTEL)			3	0	0	0	@	50	-	50	-	100
3	INT	1	23ISINT1	Industrial Internship			10				@	100	03	-	100	200
Total							16	0	0	0	0	200		100	100	400

SLC: Self Learning Course; INT: Internship-After 7th SEM exams; SLC courses to be started from 3rd SEM and to be completed by 7th SEM and evaluated and credited in 8th SEM.
PBL: project Based learning; ABL: Activity Based Learning; SL: Self-Learning

Self-Learning Courses (SLC):

- 1) Offering and Registration of Self-learning Courses will commence from 3rd Semester itself and continues till the end of the duration of study.
- 2) Both regular & lateral entry students shall start registering for the self learning courses and complete as per the guidelines published separately. (Refer to the Self Learning Courses guidelines published).
- 3) Calculation of SGPA & CGPA is considered for VIII Semester, irrespective of period or time of completion of the course.

Self-Learning course - 1 (NPTEL) (23ISS1yy)			Self-Learning course - 2 (NPTEL) (23ISS2yy)		
Course Code	Course Title	NPTEL Code	Course Code	Course Title	NPTEL Code
NOTE:					
1) List shall be published separately starting from 3rd SEM itself. (Need not to mention the list here)					
2) The students shall register for NPTEL courses when the lists are announced by the departments & complete as per the guidelines.					