



|| 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 AIML

**SCHEME: 2023**

**SEM: V**

**Revision date: 9th April 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	3	23AIT501	Theory of Computations	AIML	AIML	3	3	0	0		50	03	50	-	100
2	IPCC	5	23AII502	Computer Networks	AIML	AIML	4	3	0	2	PBL	50	03	50	-	100
3	IPCC	6	23AII503	Machine Learning	AIML	AIML	4	3	0	2	ABL	50	03	50	-	100
4	PCCL	3	23AIL504	Data Visualization Lab	AIML	AIML	1	0	0	2		50	03	-	50	100
5	PEC	1	23AIP51y	Professional Elective Course - 1	AIML	AIML	3	3	0	0		50	03	50	-	100
6	ETC	3	23AIE53y	Emerging Technology Course - 3	AIML	AIML	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	23AIAE5y	Ability Enhancement Course - 5	AIML	AIML	1	1	0	0		50	02	50	-	100
								(or)								
								0	0	2		50	02	-	50	100
9	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							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		Emerging Technology Course - 3		Ability Enhancement Course - 5	
Course Code	Course Title	Course Code	Course Title	Course Code	Course Title
23AIP511	Fundamentals of Digital Image Processing	23AIE531	Android Development with Kotlin	23AIAE51	Julia
23AIP512	Cloud Computing	23AIE532	PyTorch	23AIAE52	Green IT
23AIP513	Introduction to Graph Database	23AIE533	Predictive Analytics	23AIAE53	R-Programming
23AIP514	Information Retrieval	23AIE534	Ethical Hacking	23AIAE54	Technical writing using LaTeX

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

**SCHEME: 2023**

**SEM: VI**

**Revision date: 9th April 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	4	23AIT601	Language Translation Techniques	AIML	AIML	3	3	0	0		50	03	50	-	100
2	IPCC	7	23AII602	Natural Language Processing	AIML	AIML	4	3	0	2	PBL	50	03	50	-	100
3	PCCL	4	23AIL603	Language Translation Techniques lab	AIML	AIML	1	0	0	2		50	03	-	50	100
4	PEC	2	23AIP62y	Professional Elective Course - 2	AIML	AIML	3	3	0	0		50	03	50	-	100
5	OEC	1	23AIO61y	Open Elective Course - 1	Any dept.	Any dept.	3	3	0	0		50	03	50	-	100
6	ETC	4	23AIE64y	Emerging Technology Course - 4	AIML	AIML	3	3	0	0	@	50	03	50	-	100
7	AEC	6	23RMAE61	Research Methodology & IPR	AIML	AIML	3	3	0	0	@	50	03	50	-	100
8	PRJ	1	23AIPRJ1	Major Project - Phase I	AIML	AIML	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-Research 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 (23AIP62y)		Open Elective Course - 1 (23AIO61y)		Emerging Technology Course - 4 (23AIE64y)	
Course Code	Course Title	Course Code	Course Title	Course Code	Course Title
23AIP621	Introduction to Vector Database	23AIO611	Introduction to Artificial Intelligence	23AIE641	UI/UX using Flutter
23AIP622	Natural Computing	23AIO612	OOPs with C++	23AIE642	Django Framework and Application
23AIP623	Human-Centred AI	23AIO613	Introduction to Java Programming	23AIE643	Scalable Data Analytics
23AIP624	Distributed Systems	23AIO614	Introduction to Operating systems	23AIE644	Network Security

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

**SCHEME: 2023**

**SEM: VII**

**Revision date: 9th April 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	23AIT701	Machine Learning Operations (MLOPS)	AIML	AIML	3	3	0	0		50	03	50	-	100
2	IPCC	8	23AII702	Deep Learning	AIML	AIML	4	3	0	2		50	03	50	-	100
3	PEC	3	23AIP73y	Professional Elective Course - 3	AIML	AIML	3	3	0	0		50	03	50	-	100
4	OEC	2	23AIO72y	Open Elective Course - 2	Any dept.	Any dept.	3	3	0	0		50	03	50	-	100
5	HSMC	7	23AIT704	Software Engineering & Project Management	AIML	AIML	2	2	0	0		50	03	50	-	100
6	PRJ	2	23AIPRJ2	Major Project - Phase II			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 (23AIP73y)		Open Elective Course - 2 (23AIO72y)	
Course Code	Course Title	Course Code	Course Title
23AIP731	Cyber Security	23AIO721	Data Analytics with R
23AIP732	Generative-AI	23AIO722	Introduction to Machine Learning
23AIP733	IoT and 5G Technology	23AIO723	Introduction to Big Data
23AIP734	Virtual & Augmented Reality	23AIO724	Cloud services in AI

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

**SCHEME: 2023**

**SEM: VIII**

**Revision date: 9th April 2025**

S. #	Course Type	Course Type Series	Course Code	Course Title	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	SLC	1	23AIS1yy	Self-Learning Course - 1 (NPTEL)		3	0	0	0	@	50	-	50	-	100
2	SLC	2	23AIS2yy	Self-Learning Course - 2 (NPTEL)		3	0	0	0	@	50	-	50	-	100
3	INT	1	23AIINT1	Industrial Internship		10				@	100	03	-	100	200
<b>Total</b>						<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200</b>		<b>100</b>	<b>100</b>	<b>400</b>

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) (23AIS1yy)			Self-Learning course - 2 (NPTEL) (23AIS2yy)		
Course Code	Course Title	NPTEL Code	Course Code	Course Title	NPTEL Code
<b>NOTE:</b>					
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.					

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