Karmaveer Bhaurao Patil University, Satara
Faculty of Science and Technology

B. S. (Artificial Intelligence)
Programme and Credit Structure as per NEP 2020
{Ref. Government of Maharashtra letter no. एनइपी.२०२२/प्र.क.०९/विशि-३शि का ना दिनांक: १३ मार्च २०२४}

The degree shall be titled as 'Bachelor of Science [Artificial Intelligence) under the faculty of Science and Technology

B.S. Sem. I & II from Academic Year 2024-25
B.S. Sem. III & IV from Academic Year 2025-26
B.S. Sem. V & VI from Academic Year 2026-27
B. S. Sem. VII & VIII from Academic Year 2027-28

Programme Outcomes for B.S. (Artificial Intelligence)

PO. No.	Programme Outcomes After completing B.S. (Artificial Intelligence) Programme the students will be able to……….
PO-1	Discuss and ask questions related to the various aspects of Artificial Intelligence (AI)
PO-2	Perform experiments and projects related to AI, including implementing algorithms, training models, and testing AI systems.
PO-3	develop skills in practical work, experiments.
PO-4	understand AI terms, concepts, facts, phenomenon, and their relationships.
PO-5	make the students aware of natural resources and the environment.
PO-6	Critically analyze the interactions between AI systems and their impact on society, ethics, and human interactions.
PO-7	develop the ability for the application of acquired knowledge to improve agriculture and related fields to make themselves self-reliant
PO-8	Design and implement AI experiments to solve real-world problems
PO-9	understand scientific terms, concepts, facts, phenomenon and their relationships.
PO-10	develop skill in practical work, AI Projects and terminologies
PO-11	develop scientific attitude among the students and to make the students open minded, critical and curious so that they enter research field with a positive approach.
PO-12	make the students skilled to get employment in the AI based industries.
PO-13	make the students aware of Artificial Intelligence.
PO-14	Apply the knowledge of AI to develop sustainable solutions for industries such as healthcare, finance, and automation.
PSO. NO	**Programme Specific Outcomes** **The student will be able to…**
PSO-1	Discuss and ask questions related to the different aspects of Artificial Intelligence.
PSO-2	Perform experiments and projects related to it.
PSO-3	Critically analyze the different algorithms and sorting techniques.
PSO-4	Apply the knowledge of Artificial Intelligence in finding sustainable solutions for the society as well as industry.
PSO-5	Apply the knowledge of Artificial Intelligence in becoming self- reliant either through entering into a job, establishing a model agricultural set up or initiating a entrepreneurial venture
PSO-6	Explain, describe and discuss the concepts of Artificial Intelligence.
PSO-7	Perform and design experiments related to Machine Learning and Artificial Intelligence.
PSO-8	Decide and undertake a project

PSO-9	Attain skills needed in the AI based industries through an internship.
PSO-10	Improve the research-based skills by entering into a research internship as well as in house project.
PSO-11	Present their research findings in research conglomerations like conferences and in research journals in the form of publications.
PSO-12	Critically analyze their role as an environment sustainability goals oriented citizen

Semester, Credit Framework, NSQF Level and Exit Points

Sr. No.	Semester	Year	Year	Credits	Level	Exit Points &Award
1	Sem. I & II	2024-25	1Year	44	4.5	UG Certificate in Artificial Intelligence
2	Sem. III & IV	2025-26	2Year	88	5.0	UG Diploma in Artificial Intelligence
3	Sem. V &VI	2026-27	3Year	132	5.5	B.Sc. in Artificial Intelligence (UG Three Year Degree)

Credit Distribution

Sr. No.	Course	3 Year Degree Programme			4 Year Honors Degree Programme			4 Year Honors with Research Degree Programme		
		Courses	Credits	%	Courses	Credits	%	Courses	Credits	%
		(3 Yr)	(3 Yr)		(4 Yr)	(4 Yr)		(4 Yr)	(4 Yr)	
1	Major	26	52	39.39	34	80	45.45	32	72	40.91
2	Elective	04	08	6.06	08	16	9.09	08	16	9.09
3	IKS	02	04	3.03	02	04	2.27	02	04	2.27
4	VSC	04	08	6.06	04	08	4.55	04	08	4.55
5	FP	01	02	1.52	01	02	1.14	01	02	1.14
6	OJT	01	04	3.03	02	08	4.55	01	04	2.27
7	RP	00	00	0.00	00	00	00	02	12	6.82
8	SEC	03	06	4.55	03	06	3.41	03	06	3.41
9	CEP	01	02	1.52	01	02	1.14	01	02	1.14
Total (Major) (A)		**42**	**86**	**65.15**	**55**	**126**	**71.59**	**54**	**126**	**71.59**
1	Minor & RM	12	24	18.18	13	28	15.91	13	28	15.91
Total (Minor) (B)		**12**	**24**	**18.18**	**12**	**28**	**15.91**	**13**	**28**	**15.91**
1	OE	04	08	6.06	04	08	4.55	04	08	4.55
2	AEC	04	08	6.06	04	08	4.55	04	08	4.55
3	VEC	02	04	3.03	02	04	2.27	02	04	2.27
4	CC	01	02	1.52	01	02	1.14	01	02	1.14
Total (C)		**11**	**22**	**16.67**	**11**	**22**	**12.50**	**11**	**22**	**12.50**
Grand Total (A+B+C)		**65**	**132**	**100**	**79**	**176**	**100**	**78**	**176**	**100**

Duration:

➢ The program shall be a full-time program.

➢ The duration of program shall be three years for Bachelor of Science and four years for Bachelor of Science with Honors or Bachelor of Science with Research.

➢ Every year students will have exist option with:

➢ (1st Year: Certificate, 2nd Year: Diploma, 3rd Year: Degree,4th Year: Honors / Research)

➢ These students are allowed to re-enter the degree program within three years and complete the degree program within the stipulated maximum period of Seven Years.

Eligibility: 12th Pass with Science, or equivalent.
Medium of Instruction: The medium of instructions shall be in English.
Scheme of Examination & Standard of Passing (CCE and ESE):

➢ A candidate who acquires 32 credits or more during semester – I & II shall be admitted to B.S. II (appear for semester – III & IV examination).

- End Semester Exam (ESE): 30 Marks (Min 12 Marks for Passing)
- Continuous Comprehensive Evaluation (CCE): 20 Marks (Min 08 Marks for Passing)
- Total Marks = 50 Marks
- Minimum 40% Marks Required for Passing and there is separate head of Passing for End Semester Examination (ESE) and Continuous Comprehensive Evaluation (CCE).
- As per the decision of the concerned Board of Studies.
- However, the candidate shall not be admitted to B.S. III (Semester - V) unless he/she passed in all the subjects at B.S. I (Semester - I & Semester - II) and acquire 32 credits or more during semester – III & IV.
- However the candidate shall not be admitted to B. S. IV (Semester - VII) unless he/she passed in all the subjects at B.S. I, B. S. II (Semester - I & Semester - II, semester – III & IV and Semester - V & Semester - VI).
- However, under the National Education Policy the rules extended by KBP University, time to time regarding ATKT will be applicable.

Eligibility of the Core Faculty:

- As per rules and regulations of Karmaveer Bhaurao Patil University, Satara and Govt. of Maharashtra.

Eligibility for Professor of Practice or Professional Trainer:

- Any other eligibility as per the guidelines and regulations passed by concern board of studies, academic council of the autonomous college and rules & regulations of Karmaveer Bhaurao Patil University, Satara and Government of Maharashtra and UGC norms.

B.S. (AI) Part-I

Semester I				
Sr. No.	Components	Course Code	Course Title	Credits
1	Course I	BAIT111	Fundamental of Artificial Intelligence	2
		BAIT112	Programming in C	2
		BAIP113	Lab I (based on Fundamental of Artificial Intelligence and Programming in C)	2
2	Course II	BAIT114	Fundamental of Computers	2
		BAIT115	Computational Statistics-I	2
		BAIP116	Lab I (based on Fundamental of Computers and Computational Statistics-I)	2
3	Course III	BAIT117	Software Quality Assurance	2
		BAIT118	Computational Mathematics-I	2
		BAIP119	Lab I (based on Software Quality Assurance and Computational Mathematics-I)	2
4	OE	BAITOE1	Business Economics- I	2
5	IKS	BAITIKS1	Indian knowledge system	2
			Total	**22**
Semester II				
Sr. No.	Components	Course Code	Course Title	Credits
1	Course I	BAIT121	Object oriented programming using Python	2
		BAIT122	Database Systems	2
		BAIP123	Lab II (based on Object oriented programming using Python and Database Systems)	2
2	Course II	BAIT124	Operating Systems	2
		BAIT125	Computation mathematics-II	2
		BAIP126	Lab II (based on Operating Systems and Computation mathematics-II)	2
3	Course III	BAIT127	Fundamentals of C++	2
		BAIT128	Computational Statistics-II	2
		BAIP129	Lab II (based on Introduction to Problem Solving and Programming Paradigms and Computational Statistics-II)	2
4	OE	BAITOE2	Business Economics-II	2
5	VEC	BAITVEC1	Democracy, Election and Indian Constitution	2
			Total	**22**
EXIT OPTION: Award of UG Certificate in Major **with 44 credits** & an additional 4 credits core NSQF Course/Internship OR Continue with Major & Minor.				

B.S. (Artificial Intelligence) Part-II

Semester III				
Sr. No.	Components	Course Code	Course Title	Credits
1	Major	BAIT231	Web Programming with AI	2
		BAIT232	AI enhanced Software Engineering	2

		BAIP233	Lab III (based on Web Programming with AI and AI enhanced Software Engineering)	2
2	**Minor**	BAIT234	AI for Electronics Application Development	2
		BAIT 235	Fundamentals of Digital Electronics	2
		BAIP236	Lab III (based on AI for Electronics Application Development)	2
3	**OE**	BAITOE3	Business Economics III	2
4	**VSC**	BAIPVSC1	Basics of MySQL	2
5	**SEC**	BAIPSEC1	OpenCV for AI solutions	2
6	**AEC**	BAITAEC1	English for communication-I	**2**
7	**IKS**	BAITIKS2	History of Computer in India	**2**
Total				**22**

Semester IV				
Sr. No.	**Components**	**Course Code**	**Course Title**	**Credits**
1	**Major**	BAIT241	Algorithms in Artificial Intelligence	2
		BAIT242	Object Oriented Programming for AI	2
		BAIP243	Lab V (based on Algorithms in Artificial Intelligence and Object Oriented Programming for AI)	2
2	**Minor**	BAIT244	AI application for Internet of things	2
		BAIT245	Sensor and Signal Processing for AI	2
		BAIP246	Lab I (based on AI application for Internet of things)	2
	OE	BAITOE4	Business Economics IV	2
	VSC	BAIPVSC2	Desktop Publishing	2
3	**SEC**	BAIPSEC2	Data analytics using R programming	2
4	**AEC**	BAITAEC2	English for communication-II	2
5	**VEC**	BAITVEC2	Environmental Studies	2
Total				**22**
EXIT OPTION: Award of UG Diploma in Major and Minor **with 88 credits** & an additional 4 credits core NSQF Course/Internship OR Continue with Major & Minor.				

B.S. (Artificial Intelligence) Part - III

Semester V				
Sr. No.	**Components**	**Course Code**	**Course Title**	**Credits**
1	**Major**	BAIT351	Artificial Intelligence (P-IX)	2
2	**Major**	BAIT352	Artificial Intelligence (P-X)	2
3	**Major**	BAIT353	Artificial Intelligence (P-XI)	2
4	**Electives**	BAIT354E-1	Artificial Intelligence (P-XIIE1)	2
		BAIT354E-2	Artificial Intelligence (P-XIIE2)	
5	**Major Lab**	BAIP355	Lab V	2
6	**Elective Lab**	BAIP356 E-1	Lab I	2
		BAIP356 E-2		
7	**VSC**	BAIPVSC3	Lab III	2
8	**AEC**	BAITAEC3	English For Communication - III	2
9	**OJT**	BAIPOJT1	On Job Training in Artificial Intelligence	4
10	**CEP**	BAITCEP1	Community Engagement Program	2
			Total	**22**

Semester VI				
Sr. No.	Components	Course Code	Course Title	Credits
1	**Major**	BAIT361	Artificial Intelligence (P-XIII)	2
2	**Major**	BAIT362	Artificial Intelligence (P-XIV)	2
3	**Major**	BAIT363	Artificial Intelligence (P-XV)	2
4	**Electives**	BAIT364E-1 BAIT364E-2	Artificial Intelligence (P-XVIE1/ Artificial Intelligence (P-XVIE2)	2
5	**Major Lab**	BAIP365	Lab VI	2
6	**Elective Lab**	BAIP366 E-1 BAIP366 E-2	Lab II	2
7	**VSC**	BAIPVSC4	Lab IV	2
8	**SEC**	BAIPSEC3	Lab IV	2
9	**FP**	BAIPFP1	Field Project in Artificial Intelligence	2
10	**CC**	BAITCC1	Co-curricular Course in Artificial Intelligence	2
11	**AEC**	BAITAEC4	English For Communication - IV	2
			Total	**22**
EXIT OPTION: Award of UG Degree in Major **with 132 credits** & Continue with Major & Minor.				

B.S. (Artificial Intelligence) Part - IV Honors Degree

Semester VII				
Sr. No.	Components	Course Code	Course Title	Credits
1	**Major**	BAIT471	Artificial Intelligence (P-XVII)	4
2	**Major**	BAIT472	Artificial Intelligence (P-XVIII)	4
	Major	BAIT473	Artificial Intelligence (P-XIX)	4
3	**Electives**	BAIT474 E-1 BAIT474 E-2	Artificial Intelligence (P-XXE1/ Artificial Intelligence (P-XXE2)	2
4	**Major Lab**	BAIP475	Lab VII	2
5	**Elective Lab**	BAIP476 E-1 BAIP476 E-2	Lab III	2
5	**Minor**	BAIT476	Research Methodology	4
			Total	**22**

Semester VIII				
Sr. No.	Components	Course Code	Course Title	Credits
1	**Major**	BAIT481	Artificial Intelligence (P-XX)	4
2	**Major**	BAIT482	Artificial Intelligence (P-XXI)	4
3	**Major**	BAIT483	Artificial Intelligence (P- XXII)	4
4	**Electives**	BAIT483 E-1 BAIT484 E-2	Artificial Intelligence (P-XXIIE1/ Artificial Intelligence (P-XXIIE2)	2
5	**Major Lab**	BAIP485	Lab VIII	2
6	**Elective Lab**	BAIP486 E-1 BAIP486 E-2	Lab IV	2
5	**OJT**	BAIPOJT2	On Job Training in Artificial Intelligence - II	4
			Total	**22**
Award of Four-year UG Honors Degree in Major & Minor with 176 credits.				

B.S. (Artificial Intelligence) Part - IV Honors with Research Degree

Semester VII				
Sr. No.	**Components**	**Course Code**	**Course Title**	**Credits**
1	**Major**	BAIT471	Artificial Intelligence (P-XVII)	4
2	**Major**	BAIT472	Artificial Intelligence (P-XVIII)	4
3	**Electives**	BAIT474 E-1 BAIT474 E-2	Artificial Intelligence (P-XIXE1/ Artificial Intelligence (P-XIXE1)	4
4	**Major Lab**	BAIP475	Lab IX	2
5	**RP**	BAIPRP1	Research Methodology	4
6	**Minor**	BAIT477	Research Project in Artificial Intelligence I	4
Total				**22**

Semester VIII				
Sr. No.	**Components**	**Course Code**	**Course Title**	**Credits**
1	**Major**	BAIT481	Artificial Intelligence (P-XX)	4
2	**Major**	BAIT482	Artificial Intelligence (P-XXI)	4
3	**Electives**	BAIT484 E-1 BAIT484 E-2	Artificial Intelligence (P-XXIIE1/ Artificial Intelligence (P-XXIIE2)	4
4	**Major Lab**	BAIP485	Lab VIII	2
5	**RP**	BAIPRP2	Research Project in Artificial Intelligence II	8
Total				**22**
Award of Four-year UG Honors with Research Degree in Major & Minor with 176 credits.				

Chairman   Secretary   Chairman
BoS in AI   Academic Council   Academic Council