



**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)**

<b>PO. No.</b>	<b>Programme Outcomes</b> <b>After completing B.S. (Artificial Intelligence) Programme the students will be able to.....</b>
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.
<b>PSO. NO</b>	<b>Programme Specific Outcomes</b> <b>The student will be able to...</b>
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	%	Course s	Credit s	%
		(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
<b>Total (Major) (A)</b>		<b>42</b>	<b>86</b>	<b>65.15</b>	<b>55</b>	<b>126</b>	<b>71.59</b>	<b>54</b>	<b>126</b>	<b>71.59</b>
1	Minor & RM	12	24	18.18	13	28	15.91	13	28	15.91
<b>Total (Minor) (B)</b>		<b>12</b>	<b>24</b>	<b>18.18</b>	<b>12</b>	<b>28</b>	<b>15.91</b>	<b>13</b>	<b>28</b>	<b>15.91</b>
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
<b>Total (C)</b>		<b>11</b>	<b>22</b>	<b>16.67</b>	<b>11</b>	<b>22</b>	<b>12.50</b>	<b>11</b>	<b>22</b>	<b>12.50</b>
<b>Grand Total (A+B+C)</b>		<b>65</b>	<b>132</b>	<b>100</b>	<b>79</b>	<b>176</b>	<b>100</b>	<b>78</b>	<b>176</b>	<b>100</b>

### 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:
- (1<sup>st</sup> Year: Certificate, 2<sup>nd</sup> Year: Diploma, 3<sup>rd</sup> Year: Degree, 4<sup>th</sup> 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: 12<sup>th</sup> 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.



**Karmaveer Bhaurao Patil University, Satara**  
**Faculty of Science and Technology**

**B.S. (AI) Part-I**

<b>Semester I</b>				
<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credits</b>
1	<b>Course I</b>	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	<b>Course II</b>	BAIT114	Fundamental of Computers	2
		BAIT115	Computational Statistics-I	2
		BAIP116	Lab I (based on Fundamental of Computers and Computational Statistics-I)	2
3	<b>Course III</b>	BAIT117	Software Quality Assurance	2
		BAIT118	Computational Mathematics-I	2
		BAIP119	Lab I (based on Software Quality Assurance and Computational Mathematics-I)	2
4	<b>OE</b>	BAITOE1	Business Economics- I	2
5	<b>IKS</b>	BAITIKS1	Indian knowledge system	2
<b>Total</b>				<b>22</b>
<b>Semester II</b>				
<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credits</b>
1	<b>Course I</b>	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	<b>Course II</b>	BAIT124	Operating Systems	2
		BAIT125	Computation mathematics-II	2
		BAIP126	Lab II (based on Operating Systems and Computation mathematics-II)	2
3	<b>Course III</b>	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	<b>OE</b>	BAITOE2	Business Economics-II	2
5	<b>VEC</b>	BAITVEC1	Democracy, Election and Indian Constitution	2
<b>Total</b>				<b>22</b>
<b>EXIT OPTION:</b> Award of UG Certificate in Major <b>with 44 credits</b> & an additional 4 credits core NSQF Course/Internship OR Continue with Major & Minor.				

**B.S. (Artificial Intelligence) Part-II**

<b>Semester III</b>				
<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credits</b>
1	<b>Major</b>	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	<b>Minor</b>	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	<b>OE</b>	BAITOE3	Business Economics III	2
4	<b>VSC</b>	BAIPVSC1	Basics of MySQL	2
5	<b>SEC</b>	BAIPSEC1	OpenCV for AI solutions	2
6	<b>AEC</b>	BAITAEC1	English for communication-I	2
7	<b>IKS</b>	BAITIKS2	History of Computer in India	2
<b>Total</b>				<b>22</b>

<b>Semester IV</b>				
<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credits</b>
1	<b>Major</b>	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	<b>Minor</b>	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
	<b>OE</b>	BAITOE4	Business Economics IV	2
	<b>VSC</b>	BAIPVSC2	Desktop Publishing	2
3	<b>SEC</b>	BAIPSEC2	Data analytics using R programming	2
4	<b>AEC</b>	BAITAEC2	English for communication-II	2
5	<b>VEC</b>	BAITVEC2	Environmental Studies	2
<b>Total</b>				<b>22</b>
<b>EXIT OPTION:</b> Award of UG Diploma in Major and Minor <b>with 88 credits</b> & an additional 4 credits core NSQF Course/Internship OR Continue with Major & Minor.				

### **B.S. (Artificial Intelligence) Part - III**

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

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

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

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

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

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

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

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

Chairman  
BoS in AI

Secretary  
Academic Council

Chairman  
Academic Council