



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

**B. Sc. (Fisheries)**

**Programme and Credit Structure as per NEP 2020 (NEP 2.0)**

{Ref. Government of Maharashtra letter no. □□□□□.□□□□/□□□.□.□□/□□□□-□□□ □□ □□  
□□□□□□: □□ □□□□ □□□□}

The degree shall be titled as 'Bachelor of Science (Fisheries) under the Faculty of Science and Technology

**B. Sc. Sem. I & II from Academic Year 2024-25**

**B. Sc. Sem. III & IV from Academic Year 2025-26**

**B. Sc. Sem. V & VI from Academic Year 2026-27**

**B. Sc. Sem. VII&VIII from Academic Year 2027-28**

**Programme Outcomes for B. Sc. (Fisheries)**

<b>PO. No.</b>	<b>Programme Outcomes</b> <b>After completing B. Sc. Programme the students will be able to.....</b>
PO-1	graduate with proficiency in the subject of their choice.
PO-2	eligible to continue higher studies in his subject.
PO-3	eligible to appear for jobs with the minimum requirement of B. Sc Program.
PO-4	demonstrate skills for the preparation of various products.
PO-5	make the students aware of natural resources and the environment.
PO-6	enable the students to acquire knowledge of subject and related subjects to understand nature and the environment for the benefit of human beings.
PO-7	develop the ability for the application of acquired knowledge to improve agriculture and related fields to make themselves self-reliant
PO-8	impart knowledge of fishery science is the basic objective of the course.
PO-9	abilities to apply scientific methods, collect scientific data, problem-solving
PO-10	The student will develop a scientific attitude which is the major objective, this makes the students open-minded, critical observations, curiosity, thinking etc.
PO-11	make the students skilled enough to develop employment in the processing industries or start their own processing unit.

PO-12	enable the students to acquire knowledge of subject and related subjects to apply them for the benefit of human beings.
<b>PSO.</b> <b>NO</b>	<b>Programme Specific Outcomes</b> <b>The student will be able to...</b>
PSO-1	Understand the basics of Fisheries.
PSO-2	demonstrate a comprehensive understanding of the principles and concepts of fisheries science, including fish biology, ecology, behavior, and population dynamics.
PSO-3	gain knowledge about aquaculture practices, including fish farming techniques, species selection, nutrition, water quality management, and environmental impacts of aquaculture operations.
PSO-4	Acquired sufficient skills and knowledge in aquaculture reproduction, hatchery management and applied genetics.
PSO-5	Analyze and evaluate different fisheries management strategies, including sustainable harvesting practices, quota systems, habitat restoration, and regulations aimed at conserving fish populations and ecosystems.
PSO-6	Analyze economic factors affecting fisheries, including market dynamics, supply and demand, pricing mechanisms, subsidies, and the economic valuation of fishery resources and ecosystem services.
PSO-7	Appreciate the importance of biodiversity conservation in fisheries management, including protecting endangered species, preserving habitats, and maintaining ecosystem health and resilience.
PSO-8	Develop effective communication skills to engage with stakeholders, policymakers, and the public on fisheries-related issues, including disseminating scientific research, outreach campaigns, and advocacy efforts.
PSO-9	Attain skills needed in the fisheries-based industries through an internship.

### 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 Fisheries
2	Sem. III & IV	2025-26	2Year	88	5.0	UG Diploma in Fisheries
3	Sem. V & VI	2026-27	3Year	132	5.5	B. Sc. in Fisheries (UG Three Year Degree)
4	Sem. VII & VIII	2027-28	4Year	176	6.0	B. Sc. in Fisheries [Honors/Research] (UG Four Year Degree)

### Credit Distribution

Sr. No.	Course	3 Year Degree Programme			4 Year Honors Degree Programme			4 Year Honors with Research Degree Programme		
		Course s	Credit s	%	Courses	Credits	%	Cours es	Credi ts	%
		(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):**

- 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 are Required for Passing and there is a separate head of Passing for End Semester Examination (ESE) and Continuous Comprehensive Evaluation (CCE).
- Scheme of Examination & Standard of Passing for ESE and CCE:
- As per the decision of the concern Board of Studies or Competent Authority.
- A candidate who acquire 32 credits or more during semester – I & II shall be admitted to B. Sc. II (appear for semester – III & IV examination).
- However the candidate shall not be admitted to B.Sc. III (Semester - V) unless he/she passed in all the subjects at B.Sc. I (Semester - I & Semester - II) and acquire 32 credits or more during semester – III & IV.
- However the candidate shall not be admitted to B. Sc. IV (Semester - VII) unless he/she passed in all the subjects at B. Sc. III (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. Sc. (Fisheries) Part-I**

<b>Semester I</b>				
<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course</b>	<b>Credits</b>
1	Course-I	BFT 111	Fish Taxonomy and Identification	02
		BFT 112	Fish Anatomy and Physiology	02
		BFP 113	Practical Based on BFT 111 and BFT 112	02
2	Course-II	-	DSC I, DSC II, DSP I	06
3	Course-III	-	DSC I, DSC II, DSP I	06
4	OE	BFTOE1	Business communication P-I	02
5	IKS	BFTIKS 1	Introduction to Indian Knowledge System I	02
<b>Total</b>				<b>22</b>
<b>Semester II</b>				
<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course</b>	<b>Credits</b>
1	Course-I	BFT 121	Aquatic Ecology	02
		BFT 122	Aquaculture	02
		BFP 123	Practical Based on BFT 121 and BFT 122	02
2	Course-II	-	DSC III, DSC IV, DSP II	06
3	Course-III	-	DSC III, DSC IV, DSP II	06
4	OE	BFTOE2	Business communication P-II	02
5	VEC	BFTVEC1	Democracy, Good Governance and Constitution of India	02
<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. Sc. (Fisheries) Part-II**

<b>Semester III</b>				
<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course</b>	<b>Credits</b>
1	Major	BFT 231	Fishery Biology I (P-V)	02
2	Major	BFT 232	Inland Fishery I (P-VI)	02
3	Major Lab-III	BFP 233	Practical Based on Paper V and Paper VI	02
4	Minor	-	DSC V, DSC VI, DSP III	06
5	OE	BFTOE3	Business Communication P-III	02
6	VSC	BFPVSC 1	Fresh Water Aquaculturist	02

7	SEC	BFPSEC 1	Fish Seed Grower	02
8	AEC	BFTAEC 1	English P-I	02
9	IKS	BFTIKS 2	Fundamentals of Ayurveda P-II	02
			<b>Total</b>	<b>22</b>
<b>Semester IV</b>				
Sr. No.	Components	Course Code	Course	Credits
1	Major	BFT 241	Aquaculture-II (P-VII)	02
2	Major	BFT 242	Fish Biology and Harvest Technology (P-VIII)	02
3	Major Lab IV	BFP 243	Practical Based on Paper VII and Paper VIII	02
4	Minor	-	DSC VII, DSC VIII, DSP IV	06
5	OE	BFTOE 4	Business Communication P-IV	02
6	VSC	BFPVSC 2	Ornamental Fish Breeding	02
7	SEC	BFPSEC 2	Hatchery Manager	02
8	AEC	BFTAEC 2	English P-II	02
9	VEC	BFTVEC 2	Environmental Awareness for Fisheries Scientist II	02
			<b>Total</b>	<b>22</b>
<b>EXIT OPTION: Award of UG Diploma in Major and Minor with 88 Credits &amp; an additional 4 credits core NSQF Course/ Internship OR Continue with Major &amp; Minor</b>				

### B. Sc. (Fisheries) Part-III

<b>Semester V</b>				
Sr. No.	Components	Course Code	Course	Credits
1	Major	BFT 351	Fishery Biology II and Culture Fishery (P-IX)	02
2	Major	BFT 352	Fish Physiology II, Fish breeding and Fish seed transportation (P-X)	02
3	Major	BFT 353	Molecular Cell Biology and Fish Biotechnology (P-XI)	02
4	Electives (Any one out of two)	BFT 354	Fishery economics and Financing in fisheries (P-XIIE1)	02
		BFT 354	Fish Products and byproduct technology (P-XIIE2)	02
5	Major Lab	BFP 355	Lab – V	02
6	Elective Lab	BFP 356	Lab – I	02
7	VSC	BFPVSC 3	Freshwater technical supervisor III	02
8	AEC	BFTAEC 3	English P-III	02
9	OJT	BFTOJT 1	On Job Training in Fisheries I	04

10	CEP	BFTCE P 1	Community Engagement Programme in Fisheries	02
			<b>Total</b>	<b>22</b>
<b>Semester VI</b>				
Sr.	Components		Course	Credits
1	Major	BFT 361	Marine ecology and Fisheries (P-XIII)	02
2	Major	BFT 362	Fish Pathology and Fishery technology (P-XIV)	02
3	Major	BFT 363	Advanced aquaculture (P-XV)	02
4	Electives (Any one out of two)	BFT 364	Fish breeding and Hatchery Mangement (P-XVIE1)	02
		BFT 364	Fishery Education, Extension and economics of Aquaculture (P-XVIE2)	02
5	Major Lab	BFP 365	Lab – VI	02
6	Elective Lab	BFP 366	Lab – II	02
7	VSC	BFPVS C 4	Live fish feed cultivator IV	02
8	SEC	BFPSE C 3	Fish Farm Manger III	02
9	FP	BFTFP 1	Field Project in Fisheries	02
10	CC	BFTCC 1	Co-curricular Course in Fisheries	02
11	AEC	BFTAE C 4	English P-IV	02
			<b>Total</b>	<b>22</b>
<b>EXIT OPTION: Award of UG Degree in Major with 132 credits OR Continue with Major &amp; Minor.</b>				

### B. Sc. (Fisheries) Part-IV Honors Degree

<b>Semester VII</b>				
Sr. No.	Components	Course Code	Course	Credits
1	Major	BFT 471	Biosystematics and Biodiversity of Fishes (P-XVII)	04
2	Major	BFT 472	Water Quality Management (P-XVIII)	04
3	Major	BFT 473	Limnology (P-XIX)	04
4	Electives (Any one out of two)	BFT 474	Aquaculture Environment Management - IV (P-XXE1)	02
		BFT 474	Sustainable Aquaculture (P-XXE2)	02
5	Major Lab	BFP 475	Lab – VII	02
6	Elective Lab	BFP 476	Lab – III	02
7	Minor	BFT 477	Research Methodology	04

			<b>Total</b>	<b>22</b>
<b>Semester VIII</b>				
<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course</b>	<b>Credits</b>
1	Major	BFT 481	Principles and Practices of Aquaculture (P-XXI)	04
2	Major	BFT 482	Fish Processing Technology (P-XXII)	04
3	Major	BFT 483	Fishery Technology (P-XXIII)	04
4	Electives (Any one of two)	BFT 484	Aquaculture Biotechnology (P-XXIVE1)	02
		BFT 484	Applied Genetics in Aquaculture (P-XXIVE2)	02
5	Major Lab	BFP 485	Lab – VIII	02
6	Elective Lab	BFP 486	Lab – IV	02
7	OJT	BFTOJT 2	On Job Training in Fisheries II	04
			<b>Total</b>	<b>22</b>
<b>Award of Four year UG Honors Degree in Major and Minor with 176 credits.</b>				

**B. Sc. (Fisheries) Part-IV Honors with Research Degree**

<b>Semester VII</b>
---------------------



<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course</b>	<b>Credits</b>
1	Major	BFT 472	Water Quality Management (P-XVIII)	04
2	Major	BFT 473	Limnology (P-XIX)	04
3	Electives	BFT 474	Aquaculture Environment Management (P-XIXE1)/ Sustainable Aquaculture (P-XIXE2)	04
4	Major Lab	BFP 475	Lab – VII	02
5	Minor	BFT 477	Research Methodology	04
6	RP	BFTRP 1	Research Project in Fisheries I	04
			<b>Total</b>	<b>22</b>
<b>Semester VIII</b>				
<b>Sr. No.</b>	<b>Components</b>	<b>Course Code</b>	<b>Course</b>	<b>Credits</b>
1	Major	BFT 481	Principles and Practices of aquaculture(P-XX)	04
2	Major	BFT 482	Fish Processing technology(P-XXI)	04
3	Electives	BFT 483	Aquaculture Biotechnology (P-XXIII E1)/ Applied Genetics in Aquaculture (P-XXIII E2)	04
4	Major Lab	BFP 485	Lab – VIII	02
5	RP	BFTRP 2	Research Project in Fisheries II	08
			<b>Total</b>	<b>22</b>
<b>Award of Four year UG Honors Degree in Major and Minor with 176 credits.</b>				

Chairman  
BoS in Zoology

Secretary  
Academic Council

Chairman  
Academic Council