NATIONAL BOARD OF ACCREDITATION

Data Capturing Points of the Program Applied for NBA Accreditation– Tier I/II UG (Engineering) Institute Programs

Program Name : Biotechnology	**Discipline**: Engineering & Technology
Level : Under Graduate	**Tier**: 1
Application No: 10466	**Date of Submission**: 10-03-2025

PART A- Profile of the Institute

A1.Name of the Institute: BASAVESHWAR ENGG. COLLEGE	
Year of Establishment : 1963/1994	Location of the Institute: Bagalkote
A2. Institute Address:S.NIJALINGAPPA VIDYANAGAR	
City:BAGALKOT	State:Karnataka
Pin Code:587102	Website:www.becbgk.edu
Email:BECPRINCIPAL@YAHOO.COM	Phone No(with STD Code):08354-234060
A3. Name and Address of the Affiliating University (if any):	
Name of the University : VISVESVARAYA TECH. UNIVERSITY BELGAUM,KARNATAKA STATE	City: Belgaum
State : Karnataka	Pin Code: 590018
A4. Type of the Institution: Government Aided Institute	
A5. Ownership Status: Government Aided	

A6. Details of all Programs being Offered by the Institution:

- No. of UG programs: **11**
- No. of PG programs: **7**

Table No. A6.1: List of all programs offered by the Institute.

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Engineering & Technology	UG	Artificial Intelligence and Machine Learning	2020	--	Artificial Intelligence and Machine Learning
2	Engineering & Technology	UG	Automobile Engineering	2024	--	Automobile Engineering
3	Engineering & Technology	UG	Biotechnology	2002	--	Biotechnology
4	Engineering & Technology	UG	Civil Engineering	1963	--	Civil Engineering
5	Engineering & Technology	UG	Computer Science and Engineering	1983	--	Computer Science and Engineering
6	Engineering & Technology	UG	Electrical and Electronics Engineering	1963	--	Electrical and Electronics Engineering

7	Engineering & Technology	UG	Electronics & Communication Engineering	1985	--	Electronics and Communication Engineering
8	Engineering & Technology	UG	Electronics & Computer Engineering	2024	--	Electronics and Computer Engineering
9	Engineering & Technology	PG	Environmental Engineering	2003	--	Civil Engineering
10	Engineering & Technology	PG	Food Biotechnology	2020	2024	Biotechnology
11	Engineering & Technology	PG	Geotechnical Engineering	1994	--	Civil Engineering
12	Engineering & Technology	UG	Industrial & Production Engineering	1984	--	Industrial and Production Engineering
13	Engineering & Technology	UG	Information Science & Engineering	1999	--	Information Science and Engineering
14	Engineering & Technology	PG	Machine Design	2002	--	Mechanical Engineering
15	Engineering & Technology	PG	Masters in Computer Applications	2023	--	Masters in Computer Applications
16	Engineering & Technology	UG	Mechanical Engineering	1963	--	Mechanical Engineering
17	Engineering & Technology	PG	Structural Engineering	1994	--	Civil Engineering
18	Management	PG	Master of Business Administration	2009	--	Management

A7. Programs to be considered for Accreditation vide this Application:

Table No. A7.1: List of programs to be considered for accreditation.

Name of the Department	Having Allied Departments	Name of the Program	Program Level
Electrical and Electronics Engineering	No	Electrical and Electronics Engineering	UG
Biotechnology	No	Biotechnology	UG

Table No. A7.2: Allied Department(s) to the Department of the program considered for accreditation as above.

Cluster ID. Name of the Department (in table no. A7.1) Name of allied Departments/Cluster (for table no. A7.1)

No Record

PART-B: Program information

B1. Provide the Required Information for the Program Applied For:

Table No. B1: Program details.

A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPETENT AUTHORITY ARROVAL DETAILS	ACCREDITATION STATUS	FROM	TO	NO. OF TIMES PROGRAM ACCREDITED	PROGRAM DURATION
1	Biotechnology	UG	2002 / --	30	No	NA	30	2002	South-West/1-43664924117/2024/EOA	Granted accreditation for 3 years for the period (specify period)	2022	2025	3	4

List of the Allied Departments/Cluster and Programs:

B2. Detail of Head of the Department for the program under consideration:

A. Name of the HoD :	Dr. Bharati S Meti
B. Nature of appointment:	Regular
C. Qualification:	M.Sc. and PhD

B3. Program Details

Table No.B3.1: Admission details for the program excluding those admitted through multiple entry and exit points.

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	30	30	30	30	30	30	30
N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	29	18	17	20	19	12	19
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	0	1	0	0	0	0
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	1	1	1	2	1	2	1
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	30	19	19	22	20	14	20

CAY= Current Academic Year. CAYm1= Current Academic Year Minus 1 CAYm2= Current Academic Year Minus 2. LYG= Last Year Graduate. LYGm1= Last Year Graduate Minus 1. LYGm2= Last Year Graduate Minus 2.

B4. Enrolment Ratio in the First Year

Table No. B4.1: Student enrolment ratio in the 1st year.

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	30	29	1	100.00
2023-24 (CAYm1)	30	18	1	63.33
2022-23 (CAYm2)	30	17	1	60.00

Average [(ER1 + ER2 + ER3) / 3] = 74.44≡ 14.00

B5. Success Rate of the Students in the Stipulated Period of the Program

Table No.B5.1: The success rate in the stipulated period of a program.

Item	(2020-21) LYG	(2019-20) LYGm1	(2018-19) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	30.00	30.00	30.00
B=No. of students who graduated from the program in the stipulated course duration	17.00	11.00	18.00
Success Rate (SR)= (B/A) * 100	56.67	36.67	60.00

Average SR of three batches ((SR_1+ SR_2+ SR_3)/3): 51.11

B6. Academic Performance of the First-Year Students of the Program

Table No.B6.1: Academic Performance of the First-Year Students of the Program.

Academic Performance	CAYm1(2023-24)	CAYm2(2022-23)	CAYm3 (2021-22)
Mean of CGPA or mean percentage of all successful students(X)	6.43	5.80	6.23
Y=Total no. of successful students	16.00	14.00	22.00
Z=Total no. of students appeared in the examination	18.00	17.00	22.00
API [X*(Y/Z)]	5.72	4.78	6.23

Average API[(AP1+AP2+AP3)/3] : 5.58

B7: Academic Performance of the Second Year Students of the Program

Table No.B7.1: Academic Performance of the Second Year Students of the Program.

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2rd year/10)	7.10	6.55	6.65
Y=Total no. of successful students	20.00	22.00	17.00
Z=Total no. of students appeared in the examination	20.00	22.00	17.00

API [X * (Y/Z)]	7.10	6.55	6.65

Average API [(AP1 + AP2 + AP3)/3] : 6.77

B8. Academic Performance of the Third Year Students of the Program

Table No.B8.1: Academic Performance of the Third Year Students of the Program

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	6.78	6.75	7.39
Y=Total no. of successful students	22.00	17.00	11.00
Z=Total no. of students appeared in the examination	22.00	17.00	11.00
API [X*(Y/Z)]:	6.78	6.75	7.39

Average API [(AP1 + AP2 + AP3)/3] : 6.97

B9. Placement, Higher Studies, and Entrepreneurship

Table No.B9.1: Placement, higher studies, and entrepreneurship details.

Item	LYG (2020-21)	LYGm1(2019-20)	LYGm2(2018-19)
FS*=Total no. of final year students	30.00	30.00	30.00
X=No. of students placed	10.00	9.00	16.00
Y=No. of students admitted to higher studies	7.00	3.00	6.00
Z= No. of students taking up entrepreneurship	0.00	0.00	0.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	56.67	40.00	73.33

Average Placement Index = (P_1 + P_2 + P_3)/3: 56.67 Placement Index Points:

PART C: Faculty Details in Department and Allied Departments

(Data to be filled in for the Department and Allied Departments)

C1. Faculty details of Department and Allied Departments

Table No.C1: Faculty details in the Department for the past 3 years including CAY

Sr.No	Name of the Faculty	PAN No.	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at Time Joining in this Institution	Present Designation	The date on which Designated as Professor/ Associate Professor if any	Nature of Association (Regular/ Contract/ Ad hoc)	Currently Associated (Y/N)	In case of NO, Date of Leaving	IS HOD?

1	Dr. Bharati S Meti	XXXXXXX50R	M.Sc. and PhD	Gulbarga University Gulbarga	Plant Biotechnology	18/09/2003	21.5	Assistant Professor	Professor	01/11/2011	Regular	Yes		Yes
2	Dr.Sharada S B	XXXXXXX41Q	M.Sc. (Biotechnology) and PhD	Gulbarga University Gulbarga	Biotechnology	13/05/2005	19.9	Assistant Professor	Associate Professor	01/12/2014	Regular	Yes		No
3	Dr.Madhumala Y	XXXXXXX36N	M.Sc. (Microbiology) and Ph.D.	Visvesvaraya Technological University, Belagavi	Microbiology	05/02/2007	18.1	Assistant Professor	Assistant Professor		Regular	Yes		No
4	Dr. Preeti S Kumarmath	XXXXXXX22K	M.Sc. and PhD	Visvesvaraya Technological University, Belagavi	Biochemistry	19/02/2007	18	Assistant Professor	Assistant Professor		Regular	Yes		No
5	Dr. Shilpa K Jigajinni	XXXXXXX42F	M.Sc. and PhD	Visvesvaraya Technological University, Belagavi	Biochemistry	04/10/2010	14.5	Assistant Professor	Assistant Professor		Regular	Yes		No
6	Dr. Jayachandra S Y	XXXXXXX36G	M.Sc. (Biotechnology) and PhD	Gulbarga University Gulbarga	Biotechnology	02/02/2022	3.1	Assistant Professor	Assistant Professor		Regular	Yes		No
7	Dr. Basavaraj S Nainegali	XXXXXXX86H	ME/M. Tech and PhD	NITK, Surathkal	Biochemical Engineering	04/01/2023	2.2	Assistant Professor	Assistant Professor		Regular	Yes		No

Table No.C2: Faculty details of Allied Departments for the past 3 years including CAY.

C2. Student-Faculty Ratio (SFR)

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):
UG1=1st UG program
UGn=nth UG program
B= No. of Students in UG 2nd year (ST)
C= No. of Students in UG 3rd year (ST)
D= No. of Students in UG 4th year (ST)
No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):
PG1=1st PG program.
PGm=mth PG program
A= No. of Students in PG 1st year
B= No. of Students in PG 2nd year
Student Faculty Ratio **(SFR)** = S/F
S= No. of students of all programs in the Department including all students of allied departments/clusters.

No. of students (ST)=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)

Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.

F=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

No. of UG Programs in the Department1 No. of PG Programs in the Department1

Table No.C2.1: Student-faculty ratio.

Description	**CAY(2024-25)**	**CAYm1 (2023-24)**	**CAYm2 (2022-23)**
UG1.B	30	31	30
UG1.C	31	30	30
UG1.D	30	30	30
UG1: Biotechnology	**91**	**91**	**90**
PG1.A	0	18	18
PG1.B	18	18	18
PG1: Food Biotechnology	**18**	**36**	**36**
DS=Total no. of students in all UG and PG programs in the Department	109	127	126
AS=Total no. of students of all UG and PG programs in allied departments	0	0	0
S=Total no. of students in the Department (DS) and allied departments (AS)	**S1=** 109	**S2=** 127	**S3=** 126
DF=Total no. of faculty members in the Department	7	7	6
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	**F1=** 7	**F2=** 7	**F3=** 6
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0
Student Faculty Ratio (SFR)=S/(F-FF)	**SFR1= 12.11**	**SFR2= 18.14**	**SFR3= 21.00**
Average SFR for 3 years	**SFR= 17.08**		

C3. Faculty Qualification

- Faculty qualification index (FQI) = 2.5 * [(10X +4Y)/RF] where
- X=No. of faculty members with Ph.D. degree or equivalent as per AICTE/UGC norms.
- Y=No. of faculty members with M. Tech. or ME degree or equivalent as per AICTE/ UGC norms.
- RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section C2 of this documents: (RF=S/20).

Table No.C3.1: Faculty qualification.

Year	**X**	**Y**	**RF**	**FQ = 2.5 x [(10X + 4Y) / RF)]**
2024-25(CAY)	7	0	5.00	35.00
2023-24(CAYm1)	7	0	6.00	29.17
2022-23(CAYm2)	4	2	6.00	20.00

C4. Faculty Cadre Proportion

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required = 1/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents:.
- RF2= No. of Associate Professors required = 2/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- RF3= No. of Assistant Professors required = 6/9 * No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents:.
- Faculty cadre and qualification and experience should be as per AICTE/UGC norms.

Table No.C4.1: Faculty cadre proportion details.

Year	Professors		Associate Professors		Assistant Professors	
	Required RF1	Available AF1	Required RF2	Available AF1	Required RF3	Available AF3
2024-25	1.00	1.00	1.00	1.00	3.00	5.00
2023-24	1.00	1.00	1.00	1.00	4.00	5.00
2022-23	1.00	1.00	1.00	1.00	4.00	4.00
Average	RF1=1.00	AF1=1.00	RF2=1.00	AF2=1.00	RF2=3.67	AF2=4.67

C5. Visiting/Adjunct Faculty/Professor of Practice

Table No. C5.1: List of visiting/adjunct faculty/professor of practice and their teaching and practical loads.

(CAYm1)

(CAYm2)

(CAYm3)

C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	1	1	10
2	No. of peer reviewed conference papers published	1	0	0
3	No. of books/book chapters published	1	1	1

C7. Sponsored Research Project

Table No. C7.1: List of sponsored research projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr.Bharati S. Meti	Nil	Dept. of Biotechnology	Bioenergy Research, Information & Demonstration Activity	KSBDB-BRIDC	One year	2.85
Dr. Jayachandra S. Y.	Dr. Shilpa K. Jigajinni	Dept. of Biotechnology	Amino acid sequencing of lipase enzyme produced by Lysinibacillus macroides for bio-diesel production	KSCST	One year	0.07
Dr. Madhumala Y.	Dr. B. R. Hiremath	Dept. of Biotechnology	Removal of heavy metals from wastewater by bioremediation method using Microalgae	Indian Water Works Association	One year	0.10
						Amount received (Rs.):3.02

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. Bharati S. Meti	Nil	Dept. of Biotechnology	Bioenergy Research, Information & Demonstration Activity	KSBDB-BRIDC	One year	3.80
Dr. Shilpa K. Jigajinni	Dr. Jayachandra S. Y.	Dept. of Biotechnology	Development of efficient biocatalyst for biodiesel production	VGST	One year	3.00
Dr. Shilpa K. Jigajinni	Nil	Dept. of Biotechnology	Statistical optimization of Immobilization process to enhance the lipase activity for biodiesel production	KSCST	One year	0.08
						Amount received (Rs.):6.88

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. Bharati S. Meti	Nil	Dept. of Biotechnology	Bioenergy Research, Information & Demonstration	KSBDB-BRIDC	One year	1.90
Dr. Bharati S. Meti	Prof. Shilpa K. Jigajinni	Dept. of Biotechnology	Cloning and expression of lipase as biocatalyst for biodiesel production	KSCST	One year	0.07
Dr. Madhumala Y.	Nil	Dept. of Biotechnology	Biosorption of Cyanides using biofilms	VTU, Belagavi	One year	0.05
Dr. Sharada P.	Nil	Dept. of Biotechnology	Formulation of herbal based cleanser for fruits and vegetable wash	KSCST	One year	0.05
						Amount received (Rs.):2.07

Total Amount (Lacs) Received for the Past 3 Years: 11.97

Note*:

- Only sponsored research projects will be considered. Infrastructure-based projects will not be considered here.

C8. Consultancy Work

Table No. C8.1: List of consultancy projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. Bharati S. Meti	Nil	CMC, Bagalkote	3rd party inspection	CMC/TMC	1 month	0.92
Dr. Bharati S. Meti	Nil	KSBDB, GOK	Bioenergy Research, Information and Demonstration	KSBDB	1 year	2.26
						Amount received (Rs.):3.18

(CAYm2)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. Bharati S. Meti	Nil	KSBDB, GOK	Bioenergy Research, Information and Demonstration	KSBDB	1 year	0.38
						Amount received (Rs.):0.38

(CAYm3)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Dr. Bharati S. Meti	Nil	KSBDB, GOK	Bioenergy Research, Information and Demonstration	KSBDB	1 year	1.74
						Amount received (Rs.):1.74

Total amount (Lacs) received for the past 3 years: 5.30

Note*:

- Only consultancy projects will be considered. Infrastructure-based projects will not be considered here.

C9. Institution Seed Money or Internal Research Grant to its Faculty for Research Work

Table No. C9.1: List of faculty members received seed money or internal research grant from the Institution.

(CAYm1)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Nil	Nil	Nil	0.00	0.00	Nil
			Amount received (Rs.): 0.00		

(CAYm2)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Nil					
			Amount received (Rs.): 0		

(CAYm3)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Nil	Nil	Nil	0.00	0.00	Nil
			Amount received (Rs.): 0.00		

Total amount (Lacs) received for the past 3 years : 0.00

PART D: Laboratory Infrastructure in the Department

(Data to be filled in for the Department)

D1. Adequate and Well-Equipped Laboratories, and Technical Manpower

Table No.D1.1: List of laboratories and technical manpower.

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	Biochemistry	15	Colorimeter, pH meter, Electronic weigh balance, Cyclomixer, Magnetic Stirrer, Water Bath, Bunsun burner.	3 hrsx5days/week	Mr. G. R. Katote	Instructor	B. Sc.
2	Unit Operation	15	Pressure drop in packed Bed , Heat transfer in Packed bed, Convective mass transfer coefficient, Wetted wall column, Diffusivity measurement apparatus, Tray dryer	3 hrsx2days/week	Mr. M. S. Huchannavar	Foreman	B. Sc. B.Ed
3	Heat & Mass Transfer	15	Pressure drop in packed bed, Soxhlet's apparatus, Cooling centrifuge, Sedimentation, Distillation unit.	3 hrsx2days/week	Mr. M. S. Huchannavar	Foreman	B. Sc. B.Ed
4	Microbiology	15	Electronic weigh balance, Colony Counter, Hot air oven, Microscope, Laminar air flow (vertical) Bacteriological incubator, pH meter, Digital colorimeter, Autoclave	3 hrsx5days/week	Mr. M. S. Huchannavar	Foreman	B. Sc. B.Ed
5	Analysis of dairy products lab	15	Electronic weigh Balance, Colony Counter, Hot air Oven, Microscope, Laminar air flow, Bacteriological incubator, pH meter, Digital colorimeter	3 hrsx2days/week	Mr. M. S. Huchannavar	Foreman	B. Sc. B.Ed
6	Biostatistics and Biomodeling	15	Computers with accessories, LCD with Smart Board, SPSS softwares.	3 hrsx2days/week	Mr. M. S. Huchannavar	Foreman	B. Sc. B.Ed
7	Immunotechnology	15	Deep Refrigerator, ELISA reader.	3 hrsx2days/week	Mr. G. R. Katote	Instructor	B. Sc.
8	Molecular Biology	15	Vertical slab gel-electrophoresis, Sub marine gel-electrophoresis. Trans-illuminator, pH meter, Cooling centrifuge, PCR, Water bath, BOD incubator, Hot air oven	3 hrsx2days/week	Mr. G. R. Katote	Instructor	B. Sc.
9	Extraction methods and herbal products	15	Electronic weigh balance, Soxhlet's apparatus, Lab blender, Distillation unit.	3 hrsx2days/week	Mr. M. S. Huchannavar	Foreman	B. Sc. B.Ed
10	Genetic Engineering	15	Incubator, Vertical slab gel-electrophoresis, Sub marine gel-electrophoresis, Trans-illuminator, Orion pH meter, Cyclomixer, Magnetic Stirrer, Cooling centrifuge, Digital	3 hrsx2days/week	Mr. G. R. Katote	Instructor	B. Sc.
11	Bioinformatics	15	Computers with accessories, LCD with smart board	3 hrsx2days/week	Mr. M. S. Huchannavar	Foreman	B. Sc. B.Ed
12	Biokinetics & Enzyme Technology	15	Colorimeter, pH meter, Hot air oven, Electric Balance, Cyclomixer, Magnetic Stirrer, Digital colorimeter, Hot Air Oven, Water Bath	3 hrsx2days/week	Mr. G. R. Katote	Instructor	B. Sc.
13	Upstream Process & Bioseparation Techniques	15	UV-VIS-Spectrophotometer, Cross flow casette, Fermentor, Thin layer chromatography, Autoclave, Orbital shaking incubator, Ultra sonicator, Cooling	3 hrsx3days/week	Mr. M. S. Huchannavar &	Foreman Instructor	B. Sc. B.Ed B. Sc.

D2. Safety Measures in Laboratories

Table No. D2.1: List of various safety measures in laboratories.

Sr. No	Laboratory Name	Safety Measures
1	Biochemistry Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
2	Microbiology Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
3	Extraction methods and herbal products Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
4	Analysis of Dairy Products Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
5	Immunotechnology Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
6	Biokinetics & Enzyme Technology Lab	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
7	Molecular Biology & Genetic Engineering Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
8	Genetic Engineering & Applications laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets

9	Upstream Process & Bioseparation Techniques Lab	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
10	Unit Operations Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
11	Biostatistics and Tools Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
12	Bioinformatics Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets
13	Food Testing Laboratory	Fire extinguishers, Gloves, Masks, Aprons, Display of Basic Rules of laboratory Acid Dispensers First Aid Instructions Sand Buckets

D3. Project Laboratory/Research Laboratory

The department has established research laboratories with latest equipments to facilitate project works related to academics and research projects.

Table No. 7.5.1: List of project laboratory/research laboratory /Centre of Excellence.

S. N.	Name of the Laboratory
1.	Food Testing Laboratory under the support of KITS, GoK
2.	Bioenergy Research, Information and Demonstration centre in association with KSBDB, GoK
3.	Poly house with Race way ponds with the support of BVVS management

S. N.	Name of the Laboratory	Details of the equipment available in the laboratory	Outcome
1.	Food Processing and Food Testing Laboratory	Rotary Vacuum Flash Evaporator UV Visible Double beam Spectrophotometer Hot Air Oven High Speed Cooling Centrifuge Digital Electronic Weighing Balance Digital Refractometer Quartz Double Distillation Unit Viscometer/Rheometer Autoclave Bomb Caloriemeter Texture Analyser Pilot Scale Spray Dryer Unit Laminar Air Flow Orbital Shaking Incubator Kjeldahl's apparatus	Start ups established -02 Patents :02 Total UG projects completed- 06 Total PG projects completed-07 Miniprojects-02 Internships-02 Technical paper Publications-05 Products developed -05 Startup fund received - 05 Lakhs

2.	Bioenergy Research, Information and Demonstration centre	Oil expeller Seed decorticator 1 ltr biodiesel production 50 ltrs biodiesel production Biodiesel testing lab Density Viscosity Flash/Fire point Copper corrosion Moisture Calorific value	Start ups established -02 Patents awarded :02 Ph.D awarded-05 Total UG projects completed- 19 Total PG projects completed-04 Miniprojects-02 Internships-02 Publications-17 Workshops conducted -02 Internships to other college students-05 Startup fund received - 23 Lakhs
3	Poly house with Race way ponds	05 Race way ponds with total capacity of litres Harvesting unit Drying unit	Start up established: 01 Commercial products developed -05 Innovation grant worth of Rs.68 lakhs-02

Cereal and Bakery pilot scale Facility

Fruit and vegetable pilot scale facility

Biodiesel testing lab

Poly house with race way ponds

PART E: First Year faculty and financial Resources

(Data to be filled in for the first year course faculty and budget allocation and utilization)

E1. First Year Student-Faculty Ratio (FYSFR)

Table No. E1.1: FYSFR details.

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4= S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage= ((NS1*0.8) +(NS2*0.2))/RF
2022-23(CAYm2)	780	39	18	59	67
2023-24(CAYm1)	780	39	20	67	75
2024-25(CAY)	990	50	20	71	60

E2. Budget Allocation, Utilization, and Public Accounting at Institute Level

Table No. E2.1: Budget and actual expenditure incurred at Institute level.

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Infrastructure Built-Up	3500000.00	3281141.00	200000000.00	165788889.00	15000000.00	12424080.00	20000000.00	16038156.00
Library	3000000.00	2815157.00	4000000.00	3990082.00	5000000.00	4998422.00	1400000.00	1376911.00
Laboratory equipment	20000000.00	17734490.00	20000000.00	18522412.00	14500000.00	13192618.00	1400000.00	1329633.00
Teaching and non-teaching staff salary	340000000.00	322249461.00	320000000.00	311932538.00	340000000.00	321257109.00	320000000.00	318759644.00
Outreach Programs	150000.00	110008.00	100000.00	45570.00	100000.00	93440.00	100000.00	45275.00
R&D	500000.00	481580.00	800000.00	786207.00	400000.00	300000.00	1200000.00	1144685.00
Training, Placement and Industry linkage	6000000.00	5714047.00	3000000.00	2925722.00	5000000.00	4118771.00	5000000.00	4445438.00
SDGs	2000000.00	1532652.00	1500000.00	1317716.00	1500000.00	1470999.00	1500000.00	1471714.00

Entrepreneurship	15000000.00	10528650.00	2000000.00	1782532.00	10000000.00	6097226.00	0	0
Others, specify	50000000.00	48456248.00	100000000.00	91635338.00	60000000.00	59612042.00	50000000.00	45453141.00
Total	**440150000.00**	**412903434.00**	**651400000.00**	**598727006.00**	**451500000.00**	**423564707.00**	**400600000.00**	**390064597.00**

E3. Budget Allocation, Utilization, and Public Accounting at Program Specific Level

Table No. E3.1: Budget and actual expenditure incurred at program level.

Items	**Budgeted in 2024-2025**	**Actual Expenses in 2024-2025 till**	**Budgeted in 2023-2024**	**Actual Expenses in 2023-2024 till**	**Budgeted in 2022-2023**	**Actual Expenses in 2022-2023 till**	**Budgeted in 2021-2022**	**Actual Expenses in 2021-2022 till**
Laboratory equipment	900000	755542	100000	20650	200000	0	100000	0
Software	0	0	0	0	0	0	0	0
SDGs	0	0	0	0	0	0	0	0
Support for faculty development	200000	116254	100000	18219	50000	3493	0	0
R & D	50000	5275	100000	162007	0	0	200000	15665
Industrial Training, Industry expert, Internship	100000	82344	100000	0	0	0	0	0
Miscellaneous Expenses*	50000	3632	50000	25031	50000	4554	50000	2549
Total	**1300000**	**963047**	**450000**	**225907**	**300000**	**8047**	**350000**	**18214**