



PRAVARA INSTITUTE OF MEDICAL SCIENCES

(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

(Formerly Centre for Biotechnology)

Loni- 413736, Dist. Ahmednagar, Maharashtra, India

NAAC Reaccredited with 'A' Grade (CGPA 3.17)

REGULATIONS GOVERNING

THE FOUR YEAR UNDERGRADUATE PROGRAMME IN

B.Sc. (HONS./HONS. WITH RESEARCH) MEDICAL BIOTECHNOLOGY

AS PER

THE NATIONAL EDUCATION POLICY (NEP) - 2020

No	NCrF Level	Programme	Duration	Total Credits Earned
1	Level 4.5	UG Certificate in Life Sciences	1 year (I-II Sem)	44
2	Level 5.0	UG Diploma in Biomedical Sciences	2 years (III-IV Sem)	88
3	Level 5.5	UG Degree in Medical Biotechnology	3 years (V-VI Sem)	128
4	Level 6.0	B.Sc. (Hons.) Medical Biotechnology	4 years (VII-VIII Sem)	168
		B.Sc. (Hons. with Research) Medical Biotechnology		

Approved by Academic Council Resolution No:

AC/2023(1)/D-17(vii); Dated: 20/06/2023

IMPLEMENTED FROM 2024-2025 A.Y.

Pravara Institute of Medical Sciences (Deemed to be University)

University Established under section (3) of UGC Act, 1956.

NAAC Accredited with 'A' Grade (CGPA 3.17)

LONI - 413736, (Near Shirdi), Tal. Rahata,
Dist. Ahmednagar (Maharashtra), India.

Phone : +91-2422- 273600, 271000

Fax : +91-2422-273442

E-mail : contact@pmtpims.org

Homepage : http://www.pravara.com



- Dr. Balasaheb Vikhe Patil Rural Medical College
- Rural Dental College
- Dr. APJ Abdul Kalam College of Physiotherapy
- Smt. Sindhutai Eknathrao Vikhe Patil College of Nursing
- Centre for Bio-Technology
- School of Public Health and Social Medicine
- Dr. Vitthalrao Vikhe Patil Pravara Rural Hospital

Ref. No.: PIMS/R/2024/78

Date: 08/01/2024

NOTIFICATION No. 4(i) / 2024

Subject: Notification regarding Conversion of 3-year B. Sc. Medical Biotechnology programme to 4 Year B. Sc. (Hons) Medical Biotechnology Programme.

**Reference: 1) Academic Council Meeting dated 20th June, 2023.
2) Executive Council Meeting dated 29th December, 2023.**

It is hereby notified for information to all concerned that as per resolution passed by Academic Council vide Resolution No. AC/2023(1)/D-17(vii), dated 20th June, 2023 and Executive Council vide Resolution No. EC/25/2023 dated 29th December, 2023 it has been decided to convert the ongoing 3 year B.Sc Medical Biotechnology Programme into 4 Year B. Sc. (Hons) Medical Biotechnology Programme. Accordingly the revised "Rules, Regulations and Curriculum for B.Sc. (Hons) Medical Biotechnology Programme has also been approved with Semester Pattern and Credit and Outcome Based System.

The Director, College of Biosciences & Technology, Loni and the Dean, Faculty of Allied Health Sciences are authorised to follow & implement the said Programme with effect from Academic Year 2024-25 onwards.


Registrar
Registrar

Pravara Institute of Medical Sciences
(Deemed to be University)
Loni-413736 Tal Rahata Dist Ahmednagar
(M.S.India)

Copy for information:

1. Hon'ble President, PIMS (DU), Loni
2. Hon'ble Vice-Chancellor, PIMS (DU), Loni

Copy for information & necessary action :

3. The Director, College of Biosciences & Technology, Loni.
4. Dean, Faculty of Allied Health Sciences.
5. Controller of Examination, PIMS (DU), Loni.

TABLE OF CONTENTS

S.No	Title	Page No.
1.	Preamble	1-2
2.	Definitions	2-5
3.	Title and Commencement	5
4.	Eligibility and Admission Procedure	5-7
5.	Programme Offered	7
6.	Programme Structure and Credits	8
7.	Certification and Duration of the Programme	8-9
8.	Medium of Instruction, Mode of Instruction, Programme Structure and Transactions	9
9.	Preparation of Syllabi by the Board of Studies (BoS)	9-10
10.	Multiple Entry and Multiple Exit Options	10-12
11.	Awarding UG Certificate, UG Diploma, and Degree	13
12.	Attendance Required for Admission to Semester End Examinations	14
13.	Curriculum	14
14.	Credits	15
15.	Credit, Units Per Course and Structure of Syllabus	15-16
16.	Course Code and Numbering Pattern	16-17
17.	Examination for Course	17-18
18.	Conduction of Semester End Examination and Evaluation	18-19
19.	The Detailed Schematic of the Formative and Summative Assessments	19-21
20.	Research Project, Assessment Pattern and Viva-Voce	22

S.No	Title	Page No.
21.	Teaching-Learning Process and Conduction of Examination and Evaluation for AEC except Functional Marathi, VEC, IKS and SEC Courses	23-24
22.	Evaluation Scheme for FP, IN and OJT Courses	24
23.	Evaluation Scheme for CC Courses/Activity	24-25
24.	Evaluation Scheme for Community Engagement Program	25-26
25.	Standard of Passing	26
26.	Computation of SGPA and CGPA	27
27.	Study Break from a Program	28
28.	Migration/ Transfer of Candidates	28
29.	Declaration of Results and Award of Degree	28-29
30.	Improvement of Results	30
31.	Examinations Grievance Redress and Reforms	31
32.	Removal of Difficulties	31
33.	Repeal and Savings Clause	31
34.	Pattern of Marks statement: Annexure 1-10	32-41
35.	Calculation of SGPA and CGPA (Annexure – 11)	42
36.	Calculation of SGPA and CGPA (Annexure – 12)	43
37.	Summary Scheme For Choice Based Credit System (B. Sc. (Hons.) Medical Biotechnology)	44
38.	Summary Scheme For Choice Based Credit System (B. Sc. (Hons. with Research) Medical Biotechnology)	45
39.	References	46

Regulations Governing the Four Year Bachelor's Degree Programmes of Pravara Institute of Medical Sciences –DU as per NEP- 2020

Preamble:

PIMS-DU was established in September 2003. Since its inception, as per the provisions of the UGC regulations governing deemed to be universities, it has notified regulations for academic administrations. Besides, based on the needs, it has formulated and enacted its own regulations. Now it proposes to implement its own regulations governing the four year bachelor's degree programmes based on National Educational Policy (NEP) - 2020.

UGC has mandated for the implementation of CBCS, SGPA and CGPA for UG programmes. This initiative is to offer number of course options of study - core, compulsory (major and minor), elective, specialization (Discipline Specific Elective -DSE), interdisciplinary courses and generic/open electives, common value-added courses and skill-oriented programmes. The guidelines call for Credit System, Choice Based System, Semester Grade Point Average, Cumulative Grade Point Average Systems (CBCS-SGPA-CGPA). The Board of Management of PIMS-DU has approved the restructuring of existing courses in accordance with NEP 2020. The Academic Council of the of PIMS-DU hereby prepared regulations governing four-year undergraduate programme in B. Sc. (Hons. /Hons. with Research) Medical Biotechnology (I to VIII Semesters).

The Salient Features of the Four-year Undergraduate Programme

- (a) It is a Choice Based Credit System under Semester Scheme with SGPA and CGPA.
- (b) The relative importance of courses of study is measured in terms of Credits, Grade Points, and Letter Grades.
- (c) The programmes comprise courses such as Discipline Specific Core (DSC), Discipline Specific Practical (DSP), Discipline Specific Elective (DSE), Minor (MI), Open Elective (OE), Ability Enhancement Course (AEC), Value Education Course (VEC), Indian Knowledge System (IKS), Vocational Skill Course (VSC), Skill Enhancement Course (SEC), Community Engagement Program (CEP), Co-Curricular (CC), Field Project (FP), Research Methodology (RM), Research Project (RP), On Job Training (OJT) and Internship Training (IN).

- (d) The programme permits multiple/lateral entry and exit during even semesters based on the vacant seat available with horizontal mobility in course selections and vertical growth in the core courses.
- (e) The students shall participate in value-based activities, skill enhancement programs, internships, and on-the-job training.
- (f) The candidate has the option to exit after the second, fourth, or sixth semester of the programmes and will be awarded a UG Certificate, UG Diploma, or UG Degree, respectively, with the provision to re-enter to complete the degree.
- (g) The result shall be declared based on the aggregate percentage of marks obtained and the Cumulative Grade Point Average (CGPA) earned, either annually in the case of multiple exits or at the end of the entire programme. There is a provision to transfer the credits earned by the candidate when transferring from one institution to another.
- (h) The programme permits the consideration of credits earned from SWAYAM/NPTEL/MOOCs and other platforms recognized by the University/UGC/Govt. of Maharashtra.

1. Definitions:

- 1.1. **Board of Studies, Academic Council and Board of Management:** the academic bodies of the university maintaining standards of instruction, education and examination within the PIMS-DU.
- 1.2. **Academic Year:** a period of two semesters (one odd + one even) depending on the structure of the academic programmes offered by a university.
- 1.3. **Bachelors/Undergraduate Degree:** a 4 year undergraduate “Bachelor’s Degree programme” offered and awarded by PIMS-DU through its constituent units from the respective faculty.
- 1.4. **BOE:** Board of Examiners of the University or Board of Examiners in a particular/group of subjects
- 1.5. **BOS:** Board of Studies in a particular subject, or group of subjects.
- 1.6. **BOAE:** Board of Appointment of Examiners.
- 1.7. **CBT:** College of Biosciences and Technology, a constitute unit of PIMS-DU.
- 1.8. **Committee:** Committee of BOM or AC or BoS of PIMS-DU.
- 1.9. **Department:** the Department of a concerned subject in the constituent College.

- 1.10. **Course:** Course is a logical and defined part of the programme, offered in the form of theory paper, practical, field work, project work or any other form specified from time to time usually of 2 to 8 credits.
- 1.11. **Fee:** the tuition fee and others (if any) prescribed by PIMS-DU.
- 1.12. **Continuous Internal Assessment (C.I.A.):** the tests and assignments conducted for a particular course during the semester for a specified marking system.
- 1.13. **Hons./Honours:** a Four-Year Undergraduate Programme (FYUP), inspired by the NEP 2020 pattern, and is intended to be of greater quality than a regular Bachelor's.
- 1.14. **Semester:** one half of an academic year consisting of 15-18 weeks of academic work equivalent to 90 actual teaching days.
- 1.15. **Semester End Examination (SEE):** the examination conducted after the completion of 90 teaching days, offered course-wise for a specified duration by PIMS-DU.
- 1.16. **Student:** an individual who has enrolled in PIMS-DU pursuing 4 year Bachelor Degree Programme.
- 1.17. **University:** Pravara Institute of Medical Sciences – Deemed to be University (PIMS-DU).
- 1.18. **Major discipline:** is the discipline or subject of main focus and the degree will be awarded in that discipline. Students should secure the prescribed number of credits (about 50% of total credits) through core courses in the major discipline.
- 1.19. **Minor discipline:** helps a student to gain a broader understanding beyond the major discipline.
- 1.20. **Lecture courses:** Courses involving lectures relating to a field or discipline by an expert or qualified personnel in a field of learning, work/vocation, or professional practice.
- 1.21. **Tutorial courses:** Courses involving problem-solving and discussions relating to a field or discipline under the guidance of qualified personnel in a field of learning, work/vocation, or professional practice.
- 1.22. **Practicum or Laboratory work:** A course requiring students to participate in a project or practical or lab activity that applies previously learned/studied principles/theory related to the

chosen field of learning, work/vocation, or professional practice under the supervision of an expert or qualified individual in the field of learning, work/vocation or professional practice.

- 1.23. **Seminar:** A course requiring students to participate in structured discussion/conversation or debate focused on assigned tasks/readings, current or historical events, or shared experiences guided or led by an expert or qualified personnel in a field of learning, work/vocation, or professional practice.
- 1.24. **Field practice/projects:** Courses requiring students to participate in field-based learning/projects generally under the supervision of an expert of the given external entity.
- 1.25. **Internship:** A course requiring students to participate in a professional activity or work experience with an entity external to the education institution such as government or private organizations, normally under the supervision of an expert of the given external entity to provide opportunities for students to actively engage in on-site experiential learning.
- 1.26. **On Job Training (OJT):** is a form of practical training provided at the workplace to acquiring new competencies and skills needed for a job in a real, or close to real, working environment.
- 1.27. **Community Engagement and Service:** Courses requiring students to participate in field-based learning/projects generally under the supervision of an expert of the given external entity. The curricular component of 'community engagement and service' will involve activities that would expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems.
- 1.28. **One Credit:** One credit is equivalent to 15 hours of teaching (lecture or tutorial) or 30 hours of practical or field work or community engagement and service per semester.
- 1.29. **Grade point (GP):** It is numerical weight allotted to each letter grade on a 10-point scale. GP is the 10% of the marks obtained in T/P course out of max 100. It is not on the basis of normalization in a given range for a GP and letter grade.
- 1.30. **Credit point:** A GP x 100 divided by maximum marks for the said course x number of credits of Course (T/P/FW) = (GP for a course will be multiplied by number of credits for the course).

- 1.31. **Semester Grade Point Average (SGPA):** Total of all credit points of all the courses of a semester divided by total credits of the semester.
- 1.32. **Cumulative Grade Point Average (CGPA):** It is the aggregation of all the SGPA of a given programme. It can be calculated by adding the CPs of all courses and all the semesters of programme divided by total number of credits of the entire programme. It is equivalent to the addition of all the SGPA of VIII semester and divided by marks of semester.
- 1.33. **To be Chosen from the Basket:** It typically refers to selecting from a range of options or choices provided within the educational framework based on their interests and career goals.

2. Title and Commencement:

- 2.1. These regulations shall be called "PIMS-DU regulations governing the four-year Bachelor of Science (Hons. /Hons. with Research) Medical Biotechnology.
- 2.2. These regulations shall come into effect from the date of its assent by the Board of Studies, Academic Council and Board of Management with university vides Notification.
- 2.3. Further leading to 1-year (2 Semester) M.Sc Medical Biotechnology after a 4-year (8 Semester) bachelor's degree programme at the College of Biosciences and Technology of PIMS-DU.
- 2.4. A student who has completed a 4-year (8-semester) bachelor's degree (Hons. with Research) Medical Biotechnology programme at the College of Biosciences and Technology of PIMS-DU by securing a minimum of 75% marks in aggregate or an equivalent grade on a point scale (wherever the grading system is followed) may seek direct admission to the Ph.D. Medical Biotechnology, in accordance with the UGC Minimum Standards and Procedures for Award of Ph.D. Degree Regulations – 2022; Dated: 7th November 2022.

3. Eligibility and Admission Procedure:

3.1 Call for Applications:

- 1) The university shall issue a notification for admission to UG Programme soon after the announcement of 10+2/Level 4 results.
- 2) Admission shall be through All India Common Entrance Examination (AICET) conducted by Pravara Institute of Medical Sciences- DU, Loni.
- 3) The academic year normally commences in the month of August every year.

3.2 Eligibility Conditions for Admission:

Level	Eligibility
Level 4.5	<p>1) Senior Secondary School Leaving Certificate or Higher Secondary (12th Grade) Certificate obtained after successful completion of Grade 12 or equivalent stage of education corresponding to Level-4 in science discipline.</p> <p>2) A candidate shall submit a certificate of medical fitness at the time of admission from an authorized Medical Officer certifying that the candidate is physically fit to undergo the academic programme and does not suffer from contagious disease to the HoI.</p>
Level 5.0	<p>1) The students who have successfully completed Level 4.5 of undergraduate programme of this university or any other HEIs registered on Academic Bank of Credits Portal. Additional details are provided in Section 9.</p>
Level 5.5	<p>1) The students who have successfully completed Level 5.0 of undergraduate programme of this university or any other HEIs registered on Academic Bank of Credits Portal. Additional details are provided in Section 9.</p>
Level 6.0	<p>1) The students who have successfully completed Level 5.5 (Bachelor degree of three years or six semesters) of undergraduate programme of this university or any other HEIs registered on Academic Bank of Credits Portal. Additional details are provided in Section 9.</p>

3.3 Admission Eligibility for Second and Subsequent Semesters:

3.3.1 Eligibility for Admission to Bachelor's Degree (Honours):

- 1) All UG programmes shall have carryover system up to 8th semester.
- 2) Attendance of 75% is mandatory for each semester and for each course to be eligible to appear for the Semester-End Examination (SEE). Further, 20% attendance may be condoned for the students participating/involved in Co-curricular/Extra-Curricular activities like NCC/NSS/Sports/Cultural Activities/Study Tours/Field Work/Seminars, etc., with prior permission of the Director/Principal of the College and Vice Chancellor in writing through proper channel.
- 3) Mere submission of application by the candidate to appear for examination without 75% attendance is not eligible for higher semester.
- 4) Candidate with 75% attendance but failing to appear for SEE is also eligible to seek the admission for immediate higher semester.

- 5) Candidate not submitting examination application forms but maintaining 75% attendance is not eligible for admission to higher semester.
- 6) If a candidate appears for II semester SEE and discontinued for III semester and wishes to take admission for IV semester, shall not be allowed for IV semester. Such candidate should again seek admission to III semester as per the university schedule. This is also applicable to other odd semesters.
- 7) A candidate who does not satisfy the requirement of 75% attendance even in one Course (subject/paper) shall not be permitted to take the University examination of that semester and he/she shall seek re-admission to that Semester in a subsequent year as per the university schedule.

3.3.2 Eligibility for Admission to Bachelor's Degree (Honours with Research):

- 1) A candidate seeking admission to a bachelor's degree (honours with research) in a specified field of learning shall have passed the relevant three-year bachelor's (hons.) degree with minimum CGPA of 7.5 in each semester without any backlogs is eligible.
- 2) There is a provision for a carryover system from the 7th to the 8th semester, subject to the fulfilment of 75% attendance in each course.

4. Programme Offered:

The PIMS-DU offers four-year Bachelor of Science (Hons. /Hons. with Research) Medical Biotechnology. The multiple entry and exit options shall be offered to the candidate with the award of UG certificate/ UG diploma/ three-year degree depending upon the number of credits secured. Students who opt to exit after completion of the first year and have secured 44 credits shall be awarded a **UG Certificate in Life Sciences**. Students who opt to exit after completion of the second year and have secured 88 credits shall be awarded a **UG Diploma in Biomedical Sciences**. Students who opt to exit after completion of the third year and have secured 128 credits shall be awarded a **UG Degree in Medical Biotechnology**.

The Exit options shall be provided with certification, diploma and basic bachelor's degree to the students at the end of the second, fourth and sixth semester, respectively. Students shall receive a **UG Degree (Hons. /Hons. with Research) in Medical Biotechnology** upon successfully completing all eight semesters securing 168 credits.

5. Programme Structure and Credits:

A programme shall have the following components,

No	Courses	Category	Credits			
			Hons.	Credits	Hons. with Research	Credits
1.	Discipline Specific Core (DSC)	Major Core	50	108	46	108
2.	Discipline Specific Elective (DSE)		16		16	
3.	Discipline Specific Practical (DSP)		16		16	
4.	Vocational Skill Course (VSC)		10		10	
5.	Internship Training (IN)		4		4	
6.	On Job Training (OJT)		4		0	
7.	Field Project (FP)		4		4	
8.	Research Project (RP)		4		12	
9.	Minor (MI) Courses	Minor	18	22	18	22
10.	Research Methodology (RM)		4		4	
11.	Open Elective (OE)	OE Courses	10	10	10	10
12.	Skill Enhancement Course (SEC)	SEC Courses	6	6	6	6
13.	Ability Enhancement Course (AEC)	AEC, VEC and IKS Courses	6	12	6	12
14.	Value Education Course (VEC)		4		4	
15.	Indian Knowledge System (IKS)		2		2	
16.	Community Engagement Program (CEP)	CEP and CC Courses	2	10	2	10
17.	Co-Curricular (CC)		8		8	
Total Credits			168	168	168	168

6. Certification and Duration of the Programme:

- 6.1 The duration of the B.Sc (Hons./Hons. with Research) Medical Biotechnology programme is 4 academic years (8 semesters). Each semester shall consist of a minimum of 90 teaching days (15 to 18 weeks).
- 6.2 Internship/apprenticeship/work-based vocational education and training may be carried out during the summer term.

6.3 The undergraduate programme offers duration of four years, with opportunities for students to obtain various certifications at different stages throughout their studies, as indicated in the below provided table.

Duration of Study	Semesters Completed	Certification Earned
4 Years	Eight Semesters	Bachelor's Degree (Hons. with Research)
		Bachelor's Degree (Hons.)
3 Years	Six Semesters	Bachelor's Degree
2 Years	Four Semesters	Undergraduate Diploma
1 Year	Two Semesters	Undergraduate Certificate

7. Medium of Instruction, Mode of Instruction, Programme Structure and Transactions:

- 7.1. The medium of instruction for all the courses shall be English except Functional Marathi course.
- 7.2. A student must opt to write the answers in examination in English.
- 7.3. The structure of the programme indicating the course code, title of the course, credits, total marks, minimum marks for passing and other details are given in the **Annexure 1- 10**
- 7.4. The teaching-learning transactions may include the following components as specified by BoS as per Regulations: i) Lecture, ii) Tutorials (if any), iii) Practical's, iv) Demonstrations, v) Field Work, vi) Internship Training/Industrial Visit/On Job Training, vii) Study Tour, viii) Projects, ix) Seminars, x) Assignments and any other specifications.

8. Preparation of Syllabi by the Board of Studies (BoS):

The **BoS in Biotechnology** of PIMS-DU shall form the syllabi for four-year B.Sc (Hons. /Hons. with Research) Medical Biotechnology on to the structural format of these Regulations (Course Code, Title of the Course, Credits, Content, Delivery mode, Evaluation and award of GP/CP/SGPA/CGPA).

Any addition or deletion of the unit / topic in each course without altering the title, credit and is called minor revision. It may be done once in a year. The major revision of the syllabi may be proposed to the BoS once after the 4 years of its implementation.

General Instruction for BoS:

- 8.1. The Board of Studies shall consider the aspects of course matrix-number of hours of instructions. Mode of instruction, allocation of marks, overall hours of study / Course and need for continuity. They shall frame the syllabi for each course comprising of at least 5 units.
- 8.2. The Board of Studies shall clearly indicate the teaching - learning transactions, and the expected outcome of the study of the specific course.
- 8.3. The Board of Studies shall prepare Model Question Papers (based on accepted model for the Programme) as per the course structure and matrix.
- 8.4. The Board of Studies shall review the transaction of syllabi vis-a-vis the teaching- learning strategies and performance of students. It shall review the results and submit an evaluative analysis to the University for necessary action from time to time.
- 8.5. The University shall constitute regular Board of Studies in the concerned or relevant subjects.

9. Multiple Entry and Multiple Exit Options:

Programme Exit	Credits Required	Additional Requirement	Awarded Qualification	Entry/Exit Options	Re-entry to Degree Programme
After 1 st Year	44 Credits	-	UG Certificate	Entry/Exit	Within three years of exit
After 2 nd Year	88 Credits	-	UG Diploma	Entry/Exit	Within three years of exit
After 3 rd Year	128 Credits	-	UG Degree	Entry/Exit	Within three years of exit
After 4 th Year (Honours)	168 Credits	-	UG Hons. Degree		
After 4 Year (Honours with Research)	168 Credits (including 12 from a research project/ dissertation)	Minimum 7.5 CGPA or 75% marks in each semester during first three-years without any backlogs, completion of a research project/ dissertation under faculty guidance in the major discipline.	UG Hons. with Research Degree	Exit	N/A

The students who have completed their UG Certificate, UG Diploma and UG Degree are eligible for multiple entry and exit options provided completion of prescribed number of minimum credits. In this case, the student shall furnish the transcripts or grade cards, syllabus copies, educational certificates, and other relevant documents while applying for admission. The committee constituted by Vice-Chancellor, shall establish the equivalency based on the marks / credits obtained in the courses in the previous institute. The committee may recommend additional courses to be studied by the candidate, which students shall complete during their first year of study. To earn four year Bachelor of Science (Hons./Hons. with Research) Medical Biotechnology, the student must earn the same number of credits specified for regular B. Sc. degree in their 1st, 2nd and 3rd year of study. The multiple entry option shall be entertained only if vacant seats are available and the programme which they have undertaken during 1st, 2nd and 3rd year of their study.

The entry and exit options for students, who enter the undergraduate programme, shall be as follows:

1ST YEAR

Entry 1: The entry requirement for UG certificate (Level 5) programme is Secondary School Leaving Certificate obtained after the successful completion of Grade 12/Level 4 in science. A program of study leading to entry into the first year of the bachelor's degree is through PIMS-DU AICET.

Exit 1: UG certificate shall be awarded when a student opts to exit at the end of 1st year (Level 5). A bachelor's certificate requires completion of all the courses equal to a minimum of 44 Credits at Level 5.

2ND YEAR

Entry 2: The entry requirement for UG diploma (Level 6) is a bachelor's certificate obtained after completing the first year (two semesters) of the undergraduate programme in any **Science stream except physics and mathematics as a major**. Admission to a programme of study is based on the evaluation of documentary evidence (including the academic record) of the applicant's ability to undertake and complete a bachelor's degree programme.

Exit 2: At the end of the 2nd year (Level 6), if students opt to exit, a UG diploma shall be awarded. A UG Diploma requires completion of all the courses equal to a minimum of 88 Credits from Level 5 to Level 6.

3RD YEAR

Entry 3: The entry requirement for an undergraduate programme is a UG diploma obtained after completing two years (four semesters) of the undergraduate program in **Biotechnology/Medical Biotechnology/ Agricultural Biotechnology/Forensic Science/Molecular Biology/Genetics /Microbiology/Biomedical Sciences/Zoology etc.** meaning that students who have studied courses related to Medical Biotechnology as a broad area of their degree programme. A program of study leading to the bachelor's degree is open to those who have met the entrance requirements, including specified levels of attainment, in the programme admission regulations. Admission to a program of study is based on the evaluation of documentary evidence (including the academic record) of the applicant's ability to undertake and complete a bachelor's degree program.

Exit 3: On successful completion of three years, the bachelor's degree shall be awarded. A bachelor's degree requires completion of courses equal to a minimum of 128 Credits from Level 5 to Level 7.

4TH YEAR

Entry 4: An individual seeking admission to a bachelor's degree (Hons, /Hons. with Research) (Level 8) in a discipline would normally have completed all requirements of the relevant three-year bachelor's degree (Level 7) in **Biotechnology/Medical Biotechnology/Molecular Biology/Genetics/Medical Microbiology etc.** meaning that students who have studied courses related to Medical Biotechnology as a broad area of their degree programme. After completing the requirements of a three-year bachelor's degree, candidates who meet a minimum CGPA of 7.5 shall be allowed to continue studies in the fourth year of the undergraduate programme to pursue and complete the Bachelor's (Hons. with Research) degree in the discipline and the student with less than CGPA of 7.5 shall be allowed to continue studies in the fourth year of the undergraduate programme to pursue and complete the Bachelor's (Hons.) degree in the discipline. The admission in the 4th year shall depend on the intake capacity of a college where it is being sought.

Exit 4: On successful completion of the fourth year, a student shall be awarded a bachelor's (Hons. /Hons. with Research) degree. A bachelor's (Hons. /Hons. with Research) degree requires completion of courses equal to a minimum of 168 credits from Level 5 to Level 8.

10. Awarding UG Certificate, UG Diploma, and Degree:

UG Certificate: Students who opt to exit after completion of the first year and have secured 44 credits shall be awarded a UG certificate in Life Sciences. These students are allowed to re-enter the degree programme within and complete the degree programme within the stipulated maximum period of 7 years.

UG Diploma: Students who opts to exit after completion of the second year and have secured 88 credits shall be awarded with UG diploma in Biomedical Sciences. These students are allowed to re-enter within a period of three years and complete the degree programme within the maximum period of 7 years.

3-year UG Degree: Students who wish to undergo a 3-year UG programme shall be awarded UG Degree in the Major discipline (Medical Biotechnology) after successful completion of three years, securing 128 credits and satisfying the minimum credit requirement as given in table below.

4-year UG Degree (Honours): A four-year UG Honours degree in the major discipline (Medical Biotechnology) shall be awarded to those who complete a four-year degree programme with 168 credits and have satisfied the credit requirements as given in table below.

No	Broad Category of Course	Minimum Credit Requirement									
		1-Year Certificate		2-Year Diploma		3-Year UG		4-Year UG (Hons.)		4-Year UG (Hons. with Research)	
		I	II	III	IV	V	VI	VII	VIII	VII	VIII
1	Discipline Specific Core (DSC)	8	8	4	4	4	4	6	12	6	8
2	Discipline Specific Practical's (DSP)	4	4	2	2	2	-	2	-	2	-
3	Discipline Specific Elective (DSE)	-	-	-	-	4	4	4	4	4	4
4	Minor/RM	-	2	4	4	4	4	4	-	4	-
5	Open Elective (OE)	4	2	2	2	-	-	-	-	-	-
6	VSC and SEC (VSEC)	2	-	4	4	2	4	-	-	-	-
7	AEC, VEC and IKS	2	4	4	2	-	-	-	-	-	-
8	OJT, FP/IN, CEP, CC, and RP	2	2	2	4	4	4	4	4	4	8
		22	22	22	22	20	20	20	20	20	20
	Total	44		88		128		168		168	

11. Attendance Required for Admission to Semester End Examinations:

- 11.1. A student must attend 75 % of the classes held during a semester for the particular course prescribed to be eligible for appearing in SEE.
- 11.2. Classes (theory, practicals, tutorial, field work, etc.) conducted during a semester for all the prescribed courses of a given semester of a programme constitute the basis for calculating the minimum of 75% of attendance requirement.
- 11.3. A student who does not get satisfactory requirement of attendance of a semester shall repeat that semester as a regular student as and when offered by the University. However, he/she shall be eligible to move over to the next semester, subject to other conditions specified.
- 11.4. Shortage of attendance to an extent of 20% may be condoned by the Vice Chancellor based on valid reasons and justification (participation in National /State Camps of NCC, NSS/National or State level sports participation or any other activities sponsored by the government or on medical grounds based on certification by a District Surgeon/District Medical Officer). However, he/she shall attend special classes organized by the Department for students with shortage of attendance.
- 11.5. The University shall announce the academic and administrative calendar of events regarding the admission process, fee structure, teaching-learning – evaluation process and other aspects concerned to the semester end programme.

12. Curriculum:

- 12.1. The curriculum and the syllabus for the **full-time/regular** eight semesters of study programme shall be as prescribed by the Academic Council of the University on the recommendations of Board of Studies and as may be modified from time to time.
- 12.2. The minimum credit requirement for the four-year **B.Sc. (Hons. /Hons. with Research) Medical Biotechnology** programme is 168 credits. Both in-person (more than 60%) and e-learning (up to 40% by MOOCs/SWAYAM/NPTEL/Any other relevant methodology adopted by the university/UGC) teaching shall be adopted as per NEP 2020. Both learning and assessments shall be designed to motivate learning among students.

13. Credits:

- 13.1. The term credit is used to describe the quantum of syllabus for various programmes in terms of hours of study. It indicates differential weightage given according to the contents and duration of the courses in the curriculum design.
- 13.2. The minimum credits requirement for the four-year **B.Sc. (Hons. /Hons. with Research) Medical Biotechnology** programme is 168 credits.
- 13.3. Credits shall be assigned on the basis of the Lectures (L), Practical's (P), Research Project (RP), Field Project (FP), Internship (IN), On Job Training (OJT) and other form of learning in a 15-18-week schedule in a semester.
- **L - One credit for one hour** lecture per week (1 credit = 15 hours)
 - **P - One credit for every two hours** of laboratory or practical (1 credit = 30 hours)

	Lecture-L	Practical –P	Research Project /Internship/ Community Engagement Program / Field Project/On Job Training
1 Credit	1 Hour	2 Hours	2 Hour
	15 Hours	30 Hours	30 Hours

14. Credit, Units per Course and Structure of Syllabus:

For UG Programme each course shall be provided with a structured syllabus in the following style:

Category	Credits	Syllabus Units
Discipline Specific Core (DSC)	2-4	Minimum 5
Discipline Specific Practical (DSP)	2	10- 15 Experiments
Discipline Specific Elective (DSE)	4	Minimum 5
Minor (MI)	2- 4	Minimum 5
Open Elective (OE)	2- 4	Minimum 5
Ability Enhancement Course (AEC), Value Education Course (VEC) and Indian Knowledge System (IKS)	2	-
Vocational Skill Course (VSC)	2	10- 15 Experiments
Skill Enhancement Course (SEC)	2	-

Community Engagement Program (CEP)	2	-
Co-Curricular (CC)	2	-
Field Project (FP)	4	-
Research Methodology (RM)	4	Minimum 5
Research Project (RP)	4 - 12	Individual/Group Projects; Structured monitoring and assessment of CIA and SEE.
Internship Training (IN)	4	Allowed to undertake the internship training outside/within their contact hours e.g., 15- 20 days within the university or outside.
On Job Training (OJT)	4	Allowed to undertake the On Job Training outside the CBT for minimum 15 working days or as per regulation.

15. Course Code and Numbering Pattern:

The course code explains the level, the department where the course is offered and the year of implementation, course number and course category in which it is offered. Each course shall be numbered as given below:

B.Sc. (Hons. /Hons. with Research) Medical Biotechnology										
No	Course Code	Category	Course Title	Credits/Week				Hours / Semester		
				Lecture (L)	Tutorial (T)	Practical/ Research Project	Credits (C)	Lecture/ Tutorial	Practical	Total Hours
1	BT 24101DSC	DSC1	Biochemistry	4	-	-	4	60	-	60
2	BT 24102DSC	DSC2	Cell Biology	4	-	-	4	60	-	60
3	BT 24101OE	OE1	Introduction to Biotechnology	2	-	-	2	30	-	30
4	BT 24102OE	OE2	Cancer Biology							
5	BT 24103OE	OE3	Calculations in Biotechnology							
6	BT 24104OE	OE4	Immunodiagnosics	2	-	-	2	30	-	30
7	BT 24101SEC	SEC1	To be chosen from basket	2	-	-	2	30	-	30
8	BT 24101IKS	IKS1	Introduction to IKS	2	-	-	2	30	-	30
9	BT 24101CC	CC1	To be chosen from basket	-	-	2	2	-	60	60
10	BT 24101DSP	DSP1	Biochemistry (Practical)	-	-	2	2	-	60	60
11	BT 24102DSP	DSP2	Cell Biology (Practical)	-	-	2	2	-	60	60
Semester- I Total				16		6	22	240	180	420

The above mentioned ten-digit course code defines the following in detail:

No	Code	Details
1.	BT Denotes	Unique Two Digit Code program specific – Medical Biotechnology
2.	24	Year of Implementation
3.	1, 2, 3 and 4 Denotes	The first digit 1 – for the First Year; 2 – for the Second Year; 3 – for the Third Year; 4 – for the Fourth Year
4.	01, 02, 03, 04 and so on	The last two digits indicate the course number.
5.	DSC, DSP, DSE, MI, OE, AEC, VEC, IKS, VSC, SEC, CEP, CC, FP, RM, RP, OJT and IN	Discipline Specific Core (DSC), Discipline Specific Practical (DSP), Discipline Specific Elective (DSE), Minor (MI), Open Elective (OE), Ability Enhancement Course (AEC), Value Education Course (VEC), Indian Knowledge System (IKS), Vocational Skill Course (VSC), Skill Enhancement Course (SEC), Community Engagement Program (CEP), Co-Curricular (CC), Field Project (FP), Research Methodology (RM), Research Project (RP), On Job Training (OJT) and Internship Training (IN)
6.	Biochemistry	Course Title
7.	L-T-P-C Denotes	Lecture (L), Tutorial (T), Practical (P) and Total Credits (C)

16. Examination for Course:

The performance of the student of a semester for each course shall be evaluated as under.

- 16.1. For the theory and practical courses, there shall be two components of examination except co-curricular (CC) and Community Engagement Program (CEP) courses.
- 16.2. Continuous Internal Assessment (Theory) for a maximum of 30% of total marks of a course comprising of two exams (Mid-term and Preliminary Examinations), seminars and attendance.
- 16.3. Internal Assessment (Practical) for a maximum of 30% of total marks of a course shall be evaluated by conducting practical exam/practical attendance/practical record book etc.
- 16.4. The College shall conduct written Continuous Internal Assessment examination for project work /dissertation for 30% of maximum marks allotted for each project work /dissertation and attendance before the Semester End Examination.
- 16.5. There shall not be any provision for improvement of CIA marks or for remaining absent. However, CIA shall be conducted for students who remained absent due to medical emergencies and participation in the events related to co-curricular / curricular activities conducted by recognized organizations/institutions.
- 16.6. SEE for each course for a maximum of 70% of total marks. The duration of the theory examination shall be 3 hours.

- 16.7. For the practical courses, there shall be SEE for the entire 70% marks allotted to the course as per course structure and matrix. The practical examinations shall be completed within 6 hours.
- 16.8. The statement of marks for Continuous Internal Assessment shall be submitted to the office of the Controller of Examinations at least one week before the commencement of SEE as per existing university rules.

17. Conduction of Semester End Examination and Evaluation:

- 17.1. The Office of the Controller of Examinations shall arrange to conduct the Semester End Examination for Discipline Specific Core (DSC), Discipline Specific Practical (DSP), Discipline Specific Elective (DSE), Minor (MI), Open Elective (OE), Vocational Skill Course (VSC), Field Project (FP), Internship (IN), On Job Training (OJT), Research Methodology (RM) and Research Project (RP) courses.
- 17.2. The Controller of Examinations shall announce the calendar of examination specifying the aspects regarding the registration of candidates, list of eligible candidates, payment of fees prescribed and tentative schedule of examination.
- 17.3. The Controller of Examinations shall announce the detailed 'Timetable' and arrange to conduct the examination as per the prescribed rules and procedures specified in Examination Manual.
- 17.4. The Controller of Examinations shall arrange to assign the seat numbers and issue of 'Hall Tickets' through the college to the certified eligible students by the HoI.
- 17.5. The Board of Studies of each course shall submit the approved list of examiners to the concerned office well in time based on seniority, specialization and other details.
- 17.6. The Board of Appointment of Examiners (BoAE) would constitute Board of Examiners (BoE) for each course.
- 17.7. The Board of Examiners shall prepare 2 sets of question paper each by both internal and external examiner for DSC, DSE, MI, OE and RM Courses. The moderator shall prepare 3 sets of question papers from the 4 question papers set by internal and external examiners for each of the assigned courses based on the syllabi, which shall cover the entire syllabi of a particular course in each set. It shall set separate sets of question papers for repeaters, in case of change in the syllabi. It shall follow the model question paper approved by the Board of Studies.

- 17.8. The Board of Examiners shall prepare 2 sets of question paper for SEE either by an internal or external examiner for IKS, AEC, SEC, and VEC Courses undertaken through MOOCs/SWAYAM/NPTEL/any other platforms.
- 17.9. There shall be Central Evaluation of the theory answer scripts for different courses. The University adopted mixing and coding of answer books. There shall be double evaluation (internal as well as external), difference of 15% and above shall lead to third evaluation. The average of nearest two shall be taken after the third evaluation.
- 17.10. The Semester End Practical Examination for each course shall be conducted by two examiners: preferably one internal and one external examiner.
- 17.11. The Office of the Registrar (Evaluation)/ Controller of Examinations shall arrange for tabulation of marks awarded and determine the results. The final result shall be declared upon approval by the Vice Chancellor, Registrar (Evaluation)/Controller of Examinations and Dean of Faculty.

18. The Detailed Schematic of the Formative and Summative Assessments:

18.1 Schema for Continuous Internal Assessment (CIA)

For DSC, DSE, MI, OE, RM and Functional Marathi Theory Courses		
Average of two examinations (Mid –Term and Preliminary) per semester		
For IKS, AEC except Functional Marathi, SEC, and VEC Courses		
The College/SWAYAM Course Nodal Officer/Coordinator shall submit the CIA marks reflected on the SWAYAM/ any other platform of each course to the Office of the Controller of Examinations before the Semester End Examination.		
or		
The CIA marks shall be directly transferred from the respective online platforms to the PIMS-DU Academic Bank of Credit (ABC).		
For CC and CEP Courses		
There shall be no CIA requirements for CC and CEP courses.		
For DSP and VSC Practical Courses		
Spotters/Write up, Practical Performance, Viva	Portfolio/ Seminar/ Case Study	Record Book

18.2 Theory Question Paper Pattern for CIA under CBCS - Weightage (30%)

Theory Question Paper Pattern for CIA under CBCS			
Continuous Internal Assessment (CIA) for All Theory Courses			
Section A: (05 marks)			
Pattern and Choices	Marks	Total Marks	Time (min)
Open Book Exam/Assignment	1 x 5 marks	05	15
Section B: (35 marks)			
MCQs	5 x 1 marks	05	90
Short Answer Questions 2 out of 3	2 x 5 marks	10	
Long Answer questions 1 out of 2	1 x 10 marks	10	
Total		30	105

18.3 Practical Question Paper Pattern for CIA under CBCS - Weightage (30%)

Practical Question Paper Pattern for CIA under CBCS			
Continuous Internal Assessment (CIA) for All Practical (DSP and VSC) Courses			
Pattern and Choices	Marks	Total Marks	Time
Spotters/Write up	2 x 2.5 marks	05	30 min
Experiments – Performance	1 x 10 marks	10	20 min -Principle and Requirements 60 min -Performance
Viva Voce	1 x 5 marks	05	-
The practical examination shall be conducted for 20 marks. The following other components shall be included along with the total marks obtained in Practical Examination.			
Portfolio/ Seminar/Case Study	5 marks	05	-
Record Book	5 marks	05	-
Total Marks		30	-

18.4 Theory Question Paper Pattern for SEE under CBCS -Weightage (70%)

Theory Question Paper Pattern for University Examinations under CBCS		
Semester End Examination (SEE) for Theory Courses		
Section A: (10 marks)		
Pattern and Choices	Marks	Total Marks
MCQs	10 x 1 marks	10
Section B: (50 marks)		
Short Answer Questions 6 out of 7	6 x 5 marks	30
Long Answer Questions 3 out of 4	3 x 10 marks	30
Total		70

18.5 Practical Question Paper Pattern for SEE under CBCS -Weightage (70%)

Practical Question Paper Pattern for University Examinations under CBCS		
Semester End Examination (SEE) for All Practical (DSP/VSC) Courses		
Pattern and Choices	Marks	Total Marks
Spotters/Write up	4 x 5 marks	20
Experiments -Performance	2 x 20 marks	40
Viva Voce	1 x 10 marks	10
Total		70

18.6 Allotment of Marks for Attendance of Theory and Practical Courses (if applicable)

Marks for Attendance of Theory, Practical and Research Project - Internal Assessment (if applicable)				
S. No.	Attendance Percentage			
	Theory	Marks	Practical/ Research Project	Marks
1	<75	0	<80	0
2	>75-80	1	>80-83	2
3	>81-85	2	>84-87	4
4	>86-90	3	>88-91	6
5	>91-95	4	>92-95	8
6	>96-100	5	>96-100	10

19. Research Project, Assessment Pattern and Viva-Voce:

1. All candidates registered for B.Sc. (Hons. /Hons. with Research) Medical Biotechnology degree shall undertake group or individual research project in the 7th semester. The candidates who registered for B.Sc. (Hons. with Research) Medical Biotechnology degree shall undertake individual research project in the 8th semester.
2. Each candidate shall be assigned a recognized guide at the end of 6th and 7th semester.

The assessment of the project shall comprise of CIA and the SEE. A total of 100% per course is determined from the CIA (30%) and the SEE (70%) evaluation.

- (a) The performance in the CIA (30%) of the student is evaluated by the Research Coordination Committee of the Department/College. This includes series of seminars, presentations, monthly progress reports, attendance, software demonstrations and others such as logbook.
- (b) During the SEE (70%), the external and internal examiners shall evaluate the project copy independently. The viva-voce is evaluated for 10% by the examiners. This evaluation would reflect the quality of work put into the project.

Project Assessment Pattern	
Pattern	Percentage (%)
a. Continuous Internal Assessment for Research Project (30%)	
1. Synopsis Preparation and Presentation	10
2. Laboratory Work/ Log Notebook/ Software Demonstration	10
3. Attendance	10
b. Semester End Exam for Research Project (70%)	
1. Project print copy	20
2. Presentation/Scientific Aptitude	10
3. Understanding	10
4. Scientific Quality of Research	20
5. Viva-voce	10
Grand Total (a + b) (%)	100

20. Teaching-Learning Process and Conduction of Examination and Evaluation for AEC except Functional Marathi, VEC, IKS and SEC Courses:

- 20.1. The AEC, VEC, IKS and SEC courses carry 2 credits each shall be taught through MOOCs/SWAYAM/NPTEL except Functional Marathi course.
- 20.2. The SWAYAM mentors shall facilitate timely registration of students for the SWAYAM course(s) approved by the University.
- 20.3. The SWAYAM Mentors shall ensure that students who have registered in the SWAYAM courses participate in discussion forums, quizzes and assignments conducted by the SWAYAM Course Coordinator.
- 20.4. SWAYAM examinations shall be conducted in two different ways: -
 - a) The PIMS-DU shall conduct the semester end term SWAYAM Examination.
 - b) National Testing Agency (NTA) and National Programme on Technology Enhanced Learning (NPTEL) shall conduct the end term SWAYAM Examination.
- 20.5. The MOOCs/SWAYAM/ NPTEL Course Coordinator shall evaluate the assessments and quizzes submitted by students.
- 20.6. The College/SWAYAM nodal officer of the university shall submit the CIA marks (30%) reflected in the SWAYAM/ any other platform of each course to the Office of the Controller of Examinations.
- 20.7. To pass in a MOOCs/SWAYAM/NPTEL Course, a minimum of 40% passing marks (i.e., minimum 12/30 marks in Assessments/Quizzes and 28/70 Marks in the semester end term examination) is required.
- 20.8. The CIA marks shall be directly transferred from the respective online platforms to the PIMS-DU Academic Bank of Credit (ABC) in case of exam conducted by MOOCs/SWAYAM/NPTEL/Any other relevant methodology adopted by the university/UGC.
- 20.9. PIMS-DU shall conduct the semester end examinations for SWAYAM courses by referring Framework for Universities to conduct Examinations for SWAYAM Courses.
- 20.10. Semester end examinations for SWAYAM courses shall be conducted by PIMS-DU and the question paper pattern and evaluation scheme for SEE are provided in **Section 17**.
- 20.11. Functional Marathi course shall be taught at the college level and the question paper pattern and evaluation scheme are provided in **Section 17**.

20.12. The SWAYAM Nodal Officer of the University/College shall submit the total marks (out of 100) obtained by students from the SWAYAM platform (30%) and semester end examinations (70%) to Controller of Examinations (CoE) and the same shall be reflected in the students' University Mark-sheet /Transcript.

21. Evaluation Scheme for FP, IN and OJT Courses:

- 21.1. The Field Project (FP), Internship (IN) and On Job Training (OJT) courses carry 4 credits each shall be undertaken externally.
- 21.2. Students must earn four credits towards completing mandatory FP, IN and OJT requirement.
- 21.3. The students shall be evaluated for the FP, IN and OJT courses as per the below given scheme.

S. No.	Activity	Marks Assigned (%)
Continuous Internal Assessment (30%)		
1.	Attendance and Activity Logbook	10
2.	Feedback/Evaluation Report of Internship/ Field Project/ OJT Supervisor	20
Semester End Examination Scheme for Evaluation (70%)		
3.	Preparation and Submission of Detailed Reports	30
4.	Presentation	30
5.	Viva-Voce	10
	Total	100

21.4. The statement of marks of Continuous Internal Assessment shall be submitted to the Office of the Controller of Examinations at least one week before the commencement of SEE as per existing university rules.

22. Evaluation Scheme for CC Courses/Activity:

- 22.1. The Co-Curricular (CC) courses carry 2 credits each through co-curricular courses/activity such as Health and Wellness, Yoga Education, Sports and Fitness, Cultural Activities, NSS, NCC, Fine Arts, Applied Arts, Visual Arts, etc., conducted by College/Higher Education Institution.
- 22.2. Students must earn two credits towards completing mandatory Co-curricular requirement.
- 22.3. Students are expected to report the activities to the respective faculty in charge of that activity.

- 22.4. Activities conducted by recognized institutions shall be considered for allotment of marks/credits.
- 22.5. Minimum 10 hours of participation is necessary in the NCC, NSS, Yoga etc., activities.
- 22.6. The students shall be evaluated for the CC activities as per the below given scheme.

Sl. No.	Name of the Activity	Marks	Evidence
1	Webinars related to the specialization of the student/ program.	10	Attendance certificate issued by the organizers
2	Participation in Seminar/Conference/Workshop /Symposium / Training Programs (related to the specialization of the student)	10	Participation certificate issued by the organizers
3	Presentation of papers/posters in Conference/ Workshop/ Symposium (related to the specialization of the student)	10	Participation certificate issued by the organizers
4	Publication of research paper in indexed (Scopus or Web of Science) journals as first author	20	Acceptance letter from the journal
5	Publication of research paper in indexed (Scopus or Web of Science) journals as Co-author	10	Acceptance letter from the journal
6	Publication of popular articles in college magazines/ newspapers/ bulletins/wall magazines	05	Proof of publication
7	Participation in Sports/Cultural/Yoga Activities Conducted by National/ State/Regional/Local Agencies	10	Participation Certificate
8	Academic/Research/Cultural/Sports Award from National/ State/Regional/Local Agencies	10	Award certificate
9	Academic Award/Research Award from International Agencies	20	Award certificate
10	Participation in NSS/NCC activities of the Institute/ university	05	Certification by NCC/NSS coordinator
11	Participation in Swachh Bharat Internship	05	Participation certificate
12	Participation in Health and Wellness Programme	10	Participation certificate

- 22.7. A student shall participate in a minimum of 3 types of activities, which shall be evaluated for 50 marks.
- 22.8. If a student fails to secure minimum required marks, the result shall be declared as fail in CC and shall not be awarded any credits in the course.

23. Evaluation Scheme for Community Engagement Program (CEP):

- 23.1. Students must earn two credits towards completing mandatory Community Engagement Program (CEP) requirement.
- 23.2. Students are expected to report the activities to the respective faculty in charge of that activity.

23.3. The students shall be evaluated for the CEP as per the below given scheme.

S. No.	Activities	Marks	Evidence
1	Community Outreach Programs, Health Education and Healthcare Support, Educational Initiatives, Environmental Conservation Projects, Social Welfare Campaigns, Disaster Relief and Preparedness, Adopt-a-School Programs, Elderly Care and Support, Animal Welfare Projects, Cultural Exchange Programs, Digital Literacy Initiatives, Legal Aid Clinics, Cultural and Art Organization etc.	60	Attendance and participation certificate issued by the organizations
2	Experience Sharing, Seminar, Report, Group Discussion, Viva- Voce, etc.	40	

23.4. If a student fails to secure minimum required marks, the result shall be declared as fail in CEP and shall not be awarded any credits in the course.

24. Standard of Passing:

- 24.1. A candidate securing a minimum mark of 40% and above in Continuous Internal Assessment as well as in Semester End Examination for each of the courses in a semester shall be declared to have passed in the said course.
- 24.2. There shall be minimum passing of 40% and above in CIA in each course. If a candidate remains absent for a CIA shall be marked as **absent** and shall not be allowed to appear for SEE. The marks secured in CIA once are final.
- 24.3. The minimum percentage of marks for passing in SEE of any course is 40% of the maximum marks, wherever there is a Continuous Internal Assessment.
- 24.4. Candidates who had failed in any of the theory or practical or both in theory and practical courses and project/dissertations of a particular semester are eligible to reappear for the supplementary examination.

25. Computation of SGPA and CGPA:

The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

- i. The SGPA is the ratio of the sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.

$$\text{SGPA (Si)} = \frac{\sum(C_i \times G_i)}{\sum C_i}$$

Where C_i is the number of credits of the i^{th} course and G_i is the grade point scored by student in i^{th} course.

Example for Computation of SGPA

Semester	Course	Credit	Grade	Grade point	Credit Point (Credit x Grade)
I	Course 1	3	A	8	3 X 08 = 24
I	Course 2	4	B ⁺	7	4 X 07 = 28
I	Course 3	3	B	6	3 X 06 = 18
I	Course 4	3	O	10	3 X 10 = 30
I	Course 5	3	C	5	3 X 05 = 15
I	Course 6	4	B	6	4 X 06 = 24
		20			139
		SGPA			139/20=6.95

- ii. The Cumulative Grade Point Average (CGPA) is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

$$\text{CGPA} = \frac{\sum(C_i \times S_i)}{\sum C_i}$$

where S_i is the SGPA of the i^{th} semester and C_i is the total number of credits in that semester.

Example for Computation of CGPA

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
Credit: 22 SGPA: 6.9	Credit: 22 SGPA: 7.8	Credit: 22 SGPA: 5.6	Credit: 22 SGPA: 6.0	Credit: 20 SGPA: 6.3	Credit 20 SGPA: 8.0
CGPA= 6.76 (22 x 6.9 + 22 x 7.8 + 22 x 5.6 + 22 x 6.0 + 20 x 6.3 + 20 x 8.0)/128					

The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

Based on the above recommendations on letter grades, grade points, SGPA and CGPA, the transcript for each semester and a consolidated transcript indicating the performance in all semesters shall be issued.

26. Study Break from a Programme:

The University regulations for readmission are applicable for a candidate seeking re-entry to a programme.

- a) Students admitted to a program who are absent for three months or more must seek permission for readmission from the university designated authorities through HOI.
- b) Candidates with six months or more break in study but less than one year must apply for re-admission through the prescribed application form to the HOI by paying the readmission fee at the beginning of the academic year upon approval by the university designated authorities.
- c) Students shall be allowed to rejoin a program after a break in study due to lack of attendance should follow the curriculum and regulations in effect at the time of rejoining.

27. Migration/ Transfer of Candidates:

Application seeking migration/transfer of a candidate from any recognized institution to the University shall be considered subject to the condition that:

- a) There must be vacant seat against the intake capacity in the particular year of study.
- b) Transfer shall be effective only at the beginning of an academic year and
- c) Upon approval of the Registrar and Vice-Chancellor through proper channel.

Students shall be allowed to transfer credits earned from other institutions and vice-versa under CBCS/SGPA/CGPA as per UGC norms.

28. Declaration of Results and Award of Degree:

28.1. Students who opt to exit shall be awarded with UG certificate, UG diploma and UG degree and the outgoing students shall be awarded with Hons. /Hons. with Research degree. The criteria for declaration of results and award of degree are as follows:

1. **UG Certificate in Life Sciences:** Upon securing minimum 44 credits with 40% marks and above.
2. **UG Diploma in Biomedical Sciences:** Upon securing minimum 88 credits with 40% marks and above.
3. **UG Degree in Medical Biotechnology:** Upon securing minimum 128 credits with 40% marks and above.
4. **UG (Hons. / Hons. with Research) in Medical Biotechnology:** Upon securing minimum 168 credits with 40% marks and above.

- 28.2. After the completion of tabulation of marks for each course Grade Points, Credit Points and Letter Grade for each course is calculated, only in case of successful candidates.
- 28.3. Then the SGPA of the semester and CGPA of the semesters are calculated. The procedure for the calculation of CP, GP, SGPA and CGPA are given in the **Annexure -11 and 12**. The specimen of the marks card is given in the **Annexure – 1 to 10**.
- 28.4. Letter grade and grade point shall be awarded to the successful candidates considering the total marks secured in the courses during I to VIII semesters.
- 28.5. The classification of successful candidates for the award of classes and CGPA, letter grade for the Programme is as follows:

% of Marks	CGPA	Grade Point	Description of the Class to be Awarded	Letter Grade Result
90.0 - 100.0	9.00 - < 10.00	10	Outstanding	O
80.0 - <90.0	8.00 - < 9.00	9	Excellent	A+
70.0 - < 80.0	7.00 - < 8.00	8	Very Good	A
60.0 - < 70.0	6.00 - < 7.00	7	Good	B +
55.0 - < 60.0	5.50 - < 6.00	6	Above Average	B
50.0 - < 55.0	5.00 - < 5.50	5	Average	C
40.0 - < 50.0	4.00 - < 5.00	4	Pass	P
Below 40	Below 04.00	0	Fail (Re-appear)	F
-	Absent	0	Absent	Ab

- 28.6. The COE / Registrar (Evaluation) shall arrange to issue the statement of marks for all the semesters and for overall passes of all semesters indicating both marks system with class system as well CGPA with letter grade. Only the grades and class shall be used for the declaration of final /overall results. On other semester examination, it is with pass or fail remark.
- 28.7. The University shall announce the first three top scorers as rank holders (if approved by the BoM), provided they have secured first class and without any gracing of marks at any stage and passing all the semester examinations at first attempt with more than 75% attendance in theory and more than 80% attendance in practical.

29. Improvement of Results:

- 29.1. A student is entitled to improve the performance by rejecting the results of whole SEE of preceding semester (first/second/third/ fourth/fifth/sixth/seventh/eighth). Course wise rejection of results shall not be permitted. The provision for rejection shall be exercised only once for each semester, during the 4 years programme.
- 29.2. A student who has successfully passed the entire programme of eight semesters, desires to improve the performance and percentage of marks, is eligible to do so by rejecting the performance of any of the whole SEE of semesters. Course wise rejection and improvement of results shall not be permitted. The candidates shall exercise this option only once.
- 29.3. A candidate desirous of improvement of results shall do so by submitting a duly filled in application and by paying the prescribed fees as per the Calendar of Examinations announced by the University. The student shall surrender the marks card of the said semester for which he/she is seeking improvement.
- 29.4. In case of no improvement in the results of the examination (after reappearance), the candidate is entitled to retain the original results.

30. Examinations Grievance Redress and Reforms:

- 30.1. A student is entitled to seek retotalling of marks scored and obtain photocopy of answer script, subject to the submission of application and payment of the prescribed fee as per the time schedule announced.
- 30.2. There shall be a Committee appointed by the University to deal with grievances related to examination matter.
- 30.3. There shall be a Committee appointed by the University to deal with malpractice cases and award of penalties as per adopted standard procedures and scale of penalties.
- 30.4. The university BOS and BOE shall review the performance of the students after the completion of each semester and make suitable recommendations to the university.
- 30.5. There shall be an approved examination manual.
- 30.6. The Vice-chancellor and the authorities may initiate any action as they deem it fit to implement the provision of these regulations in order to maintain academic standards.

31. Removal of Difficulties:

31.1. If any difficulty arises in implementing the provision of these regulations, the vice-chancellor may take appropriate decision, by order, make such provisions not inconsistent with the Act, Statutes, Ordinances, or other Regulations, as appears to be necessary or expedient to remove the difficulty and inform the authorities of the University in their next Academic Council meeting on the action taken. Every order made under this rule shall be subject to ratification by the appropriate university authorities.

32. Repeal and Savings Clause:

32.1. All the existing regulations governing bachelor degree programme in Medical Biotechnology under the semester schemes or any ordinances or regulations or guidelines issued or adopted earlier by the university in this matter are hereby repealed from the date of implementation of these new regulations.

32.2. Not with standing anything contained in these regulations, any order or instructions which are in vogue shall continue to be effective to the extent of their consistency with the provisions of these Regulations.

32.3. Provided that the said repeal shall not affect the previous operation of the said regulations / ordinances, or anything duly done or suffered there under or affect any right, liability or obligation acquired, accrued, or incurred under the said regulations.

32.4. The university may issue such orders, instructions, procedures, formats and any other circulars, office memorandum as it may deem it fit to implement the provisions of these Regulations.

32.5. The modifications made by the UGC/MHRD/ State Government/ Regulatory Authorities from time to time in its regulations shall also be applicable to these regulations.

The Director
College of Biosciences and Technology
PIMS-DU, Loni.

The Dean
Allied Health Sciences
PIMS-DU, Loni.

The Registrar
PIMS-DU, Loni.



PRAVARA INSTITUTE OF MEDICAL SCIENCES

(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India

Annexure - 1

Four Year Undergraduate Programme in B. Sc. (Hons.) Medical Biotechnology

Pattern of Statement of Marks

[8 Semesters + Credit and Grade Based System] Semester: I

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		Semester End Assessment			Grand Total Theory: a+b =100 Practical: a+c=100	Grade Point	Grade Letter	Credit Point
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/ Practical (a)	Min. Passing CIA (%)	Theory (b)	Practical/ Viva Voce (C)	Min. Passing				
1	BT 24101DSC	DSC	Biochemistry	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
2	BT 24102DSC	DSC	Cell Biology	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
3	BT 24101OE	OE	Introduction to Biotechnology	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
4	BT 24102OE	OE	Cancer Biology																	
5	BT 24103OE	OE	Calculations in Biotechnology																	
6	BT 24104OE	OE	Immunodiagnosics	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
7	BT 24101SEC	SEC	To be chosen from basket	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
8	BT 24101IKS	IKS	Introduction to IKS	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
9	BT 24101CC	CC	To be chosen from basket	-	-	2	2	-	60	60	80	-	-	-	50	40	50			
10	BT 24101DSP	DSP	Biochemistry (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100			
11	BT 24102DSP	DSP	Cell Biology (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100			
			Total (I Year-Semester I)	16	-	6	22	240	180	420	-	240	-	420	190	-	850			



PRAVARA INSTITUTE OF MEDICAL SCIENCES

(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India

Annexure - 2

Four Year Undergraduate Programme in B. Sc. (Hons.) Medical Biotechnology

Pattern of Statement of Marks

[8 Semesters + Credit and Grade Based System] Semester: II

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		End Semester Assessment			Grand Total			
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/ Practical (a)	Min. Passing CIA (%)	Theory (b)	Practical/ Viva Voce ©	Min. Passing SEE (%)	Theory: a+b =100	Practical: a+c =100	Grade Point	Grade Letter
1	BT 24111DSC	DSC	Microbiology	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
2	BT 24112DSC	DSC	Bioenergetics and Metabolism	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
3	BT 24111MI	MI	Human Physiology	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
4	BT 24111OE	OE	Bioethics and Biosafety	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
5	BT 24112OE	OE	Marine Bioprospecting																	
6	BT 24111AEC	AEC	Communicative English	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
7	BT 24111VEC	VEC	Constitutional Government and Democracy in India	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
8	BT 24111CC	CC	To be chosen from basket	-	-	2	2	-	60	60	80	-	-	-	50	40	50			
9	BT 24111DSP	DSP	Microbiology (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100			
10	BT 24112DSP	DSP	Bioenergetics and Metabolism (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100			
Total (I Year-Semester II)				16	-	6	22	240	180	420	-	240	-	420	190	-	850			



PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India

Annexure - 3

Four Year Undergraduate Programme in B. Sc. (Hons.) Medical Biotechnology
Pattern of Statement of Marks
[8 Semesters + Credit and Grade Based System] Semester: III

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		Semester End Assessment			Grand Total		Grade Point	Grade Letter	Credit Point
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/ Practical (a)	Min. Passing CIA (%)	Theory (b)	Practical/ Viva Voce ©	Min. Passing SEE (%)	Theory: a+b =100	Practical: a+c=100			
1	BT 24201DSC	DSC	Genetics and Molecular Biology	4	-	-	4	60	-	60	75	30	40	70	-	40	100				
2	BT 24201MI	MI	Bioanalytical Techniques and Instrumentation	4	-	-	4	60	-	60	75	30	40	70	-	40	100				
3	BT 24201OE	OE	Biomembranes	2	-	-	2	30	-	30	75	30	40	70	-	40	100				
4	BT 24202OE	OE	Drug Delivery System																		
5	BT 24201VEC	VEC	Environmental Science	2	-	-	2	30	-	30	75	30	40	70	-	40	100				
6	BT 24201SEC	SEC	To be chosen from basket	2	-	-	2	30	-	30	75	30	40	70	-	40	100				
7	BT 24201AEC	AEC	Functional Marathi	2	-	-	2	30	-	30	75	30	40	70	-	40	100				
8	BT 24201CC	CC	To be chosen from basket	-	-	2	2	-	60	60	80	-	-	-	50	40	50				
9	BT 24201DSP	DSP	Genetics and Molecular Biology (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100				
10	BT 24201VSC	VSC	Bioanalytical Techniques (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100				
			Total (II Year-Semester III)	16	-	6	22	240	180	420	-	240	-	420	190	-	850				



PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India

Annexure - 4

Four Year Undergraduate Programme in B. Sc. (Hons.) Medical Biotechnology
Pattern of Statement of Marks
[8 Semesters + Credit and Grade Based System] Semester: IV

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		Semester End Assessment			Grand Total		Grade Point	Grade Letter	Credit Point
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/ Practical (a)	Min. Passing CIA (%)	Theory (b)	Practical/ Viva Voce ©	Min. Passing SEE (%)	Theory: a+b =100 Practical: a+c=100				
1	BT 24211DSC	DSC	Immunology	4	-	-	4	60	-	60	75	30	40	70	-	40	100				
2	BT 24211MI	MI	Enzymology and Enzyme Technology	4	-	-	4	60	-	60	75	30	40	70	-	40	100				
3	BT 24211OE	OE	Plant Tissue Culture	2	-	-	2	30	-	30	75	30	40	70	-	40	100				
4	BT 24212OE	OE	Omics Technology																		
5	BT 24211SEC	SEC	To be chosen from basket	2	-	-	2	30	-	30	75	30	40	70	-	40	100				
6	BT 24211CC	CC	To be chosen from basket	-	-	2	2	-	60	60	80	-	-	-	50	40	50				
7	BT 24211AEC	AEC	Scientific Writing	2	-	-	2	30	-	30	75	30	40	70	-	40	100				
8	BT 24211CEP	CEP	To be chosen from basket	-	-	2	2	-	120	120	80	-	-	-	100	40	100				
9	BT 24211VSC	VSC	Immunology and Immunodiagnosics (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100				
10	BT 24211DSP	DSP	Enzymology and Enzyme Technology (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100				
			Total (II Year-Semester IV)	14	-	8	22	210	300	510	-	210	-	350	290	-	850				



PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India

Annexure - 5

Four Year Undergraduate Programme in B. Sc. (Hons.) Medical Biotechnology
Pattern of Statement of Marks
[8 Semesters + Credit and Grade Based System] Semester: V

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		Semester End Assessment			Grand Total Theory: a+b =100 Practical: a+c=100	Grade Point	Grade Letter	Credit Point
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/ Practical (a)	Min. Passing CIA	Theory (b)	Practical/ Viva Voce ©	Min. Passing SEE				
1	BT 24301DSC	DSC	Genetic Engineering	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
2	BT 24301 DSE	DSE	Gene Regulation	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
3	BT 24301MI	MI	Developmental Biology	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
4	BT 24301FP	FP	Field Project	-	-	4	4	-	120	120	80	30	40	-	70	40	100			
5	BT 24301VSC	VSC	Genetic Engineering (Practical)	-	-	2	2	-	60	60	75	30	40	-	70	40	100			
6	BT 24301DSP	DSP	Plant Tissue Culture (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100			
			Total (III Year-Semester V)	12	-	8	20	180	240	420	-	180	-	210	210	-	600			



PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India.

Annexure - 6

Four Year Undergraduate Programme in B. Sc. (Hons.) Medical Biotechnology
Pattern of Statement of Marks
[8 Semesters + Credit and Grade Based System] Semester: VI

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		End Semester Assessment			Grand Total Theory: a+b =100 Practical: a+c=100	Grade Point	Grade Letter	Credit Point
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/Practical (a)	Min. Passing CIA (%)	Theory (b)	Practical/ Viva Voce ©	Min. Passing SEE (%)				
1	BT 24311DSC	DSC	Animal Tissue Culture	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
2	BT 24311DSE	DSE	Bioinformatics	4	-	-	4	60	-	60	75	30	40	70		40	100			
3	BT 24311MI	MI	Molecular Biophysics	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
4	BT 24311IN	IN	Internship Training	-	-	4	4	-	120	120	80	30	40	70	-	40	100			
5	BT 24311VSC	VSC	Animal Tissue Culture (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100			
6	BT 24312VSC	VSC	Bioinformatics (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100			
			Total (III Year-Semester VI)	12	-	8	20	180	240	420	-	180	-	280	140	-	600			



PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India

Annexure - 7

Four Year Undergraduate Programme in B. Sc. (Hons.) Medical Biotechnology
Pattern of Statement of Marks
[8 Semesters + Credit and Grade Based System] Semester: VII

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		Semester End Assessment			Grand Total Theory: a+b =100 Practical: a+c=100	Grade Point	Grade Letter	Credit Point
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/Practical (a)	Min. Passing CIA (%)	Theory (b)	Practical/Viva Voce (c)	Min. Passing SEE (%)				
1	BT 24401DSC	DSC	Molecular Diagnostics	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
2	BT 24402DSC	DSC	Industrial Biotechnology	2	-	-	2	60	-	60	75	30	40	70	-	40	100			
3	BT 24401DSE	DSE	Forensic Science and Biotechnology	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
4	BT 24401RM	RM	Research Methodology, Biostatistics and IPR	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
5	BT 24401RP	RP	Internal Project/Dissertation	-	-	4	4	-	120	120	80	30	40	70	40	100				
6	BT 24401DSP	DSP	Molecular Diagnostics and Forensic Science and Biotechnology (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100			
			Total (IV Year-Semester VII)	14	-	6	20	240	180	420	-	180	-	280	140	-	600			



PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India

Annexure - 8

Four Year Undergraduate Programme in B. Sc. (Hons.) Medical Biotechnology
Pattern of Statement of Marks
[8 Semesters + Credit and Grade Based System] Semester: VIII

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		Semester End Assessment			Grand Total Theory: a+b =100 Practical: a+c=100	Grade Point	Grade Letter	Credit Point
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/ Practical (a)	Min. Passing CIA (%)	Theory (b)	Practical/ Viva Voce (%)	Min. Passing SEE (%)				
1	BT 24411DSC	DSC	Gene Therapy	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
2	BT 24412DSC	DSC	Data Science in Healthcare	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
3	BT 24413DSC	DSC	Nanobiotechnology	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
4	BT 24414DSC	DSC	Clinical Research, Pharmacovigilance and Healthcare Analytics	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
5	BT 24411DSE	DSE	Bioentrepreneurship	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
6	BT 24411OJT	OJT	On Job Training (External)	-	-	4	4	-	120	120	75	30	40	-	70	40	100			
			Total (IV Year-Semester VIII)	16	-	4	20	240	120	360	-	180	-	350	70	-	600			
			Grand Total (from I to VIII Semester)	116	-	52	168	1770	1620	3390	-	1650	-	2730	1420	-	5800			



PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India

Annexure - 9

Four Year Undergraduate Programme in B. Sc. (Hons. with Research) Medical Biotechnology
Pattern of Statement of Marks
[8 Semesters + Credit and Grade Based System] Semester: VII

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		Semester End Assessment			Grand Total Theory: a+b =100 Practical: a+c=100	Grade Point	Grade Letter	Credit Point
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/Practical (a)	Min. Passing CIA (%)	Theory (b)	Practical/Viva Voce (c)	Min. Passing SEE (%)				
1	BT 24401DSC	DSC	Molecular Diagnostics	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
2	BT 24402DSC	DSC	Industrial Biotechnology	2	-	-	2	60	-	60	75	30	40	70	-	40	100			
3	BT 24401DSE	DSE	Forensic Science and Biotechnology	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
4	BT 24401RM	RM	Research Methodology, Biostatistics and IPR	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
5	BT 24401RP	RP	Internal Project/Dissertation	-	-	4	4	-	120	120	80	30	40	70	40	100				
6	BT 24401DSP	DSP	Molecular Diagnostics and Forensic Science and Biotechnology (Practical)	-	-	2	2	-	60	60	80	30	40	-	70	40	100			
			Total (IV Year-Semester VII)	14	-	6	20	240	180	420	-	180	-	280	140	-	600			



PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY)

College of Biosciences and Technology

Loni 413736, Ahmednagar District, Maharashtra State, India

Annexure - 10

Four Year Undergraduate Programme in B. Sc. (Hons. with Research) Medical Biotechnology
Pattern of Statement of Marks
[8 Semesters + Credit and Grade Based System] Semester: VIII

Month and Year: _____ Name of the Student: _____ Reg. No: _____

Number	Course Code	Category	Course Title	Credits/ Week				Hours / Semester (Credits x 15 weeks)			Min. Attendance (%)	Continuous Internal Assessment		Semester End Assessment			Grand Total Theory: a+b =100 Practical: a+c=100	Grade Point	Grade Letter	Credit Point
				Lecture (L)	Tutorial (T)	Practical (P)	Credits (C)	Lect./Tut.	Practical	Total Hours		CIA - Theory/ Practical (a)	Min. Passing CIA (%)	Theory (b)	Practical/ Viva Voce (%)	Min. Passing SEE (%)				
1	BT 24411DSC	DSC	Gene Therapy	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
2	BT 24412DSC	DSC	Data Science in Healthcare	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
3	BT 24413DSC	DSC	Nanobiotechnology	2	-	-	2	30	-	30	75	30	40	70	-	40	100			
5	BT 24411DSE	DSE	Clinical Research and Bioentrepreneurship	4	-	-	4	60	-	60	75	30	40	70	-	40	100			
6	BT 24411RP	RP	Research Project	-	-	8	8	-	240	240	75	60	40	-	140	40	200			
			Total (IV Year-Semester VIII)	12	-	8	20	180	240	420	-	180	-	280	140	-	600			
			Grand Total (from I to VIII Semester)	112	-	56	168	1710	1740	3450	-	1650	-	2660	1490	-	5800			

Calculation of SGPA and CGPA:

$$\text{S.G.P.A of VI Semester} = \frac{\text{CP of VI Semester}}{\text{Total Credits of VI Semester}}$$

$$\text{CGPA of I, II, III, IV, V, VI, VII and VIII Semester} = \frac{\text{CP of I} + \text{CP of II} + \text{CP of III} + \text{CP of IV} + \text{CP of V} + \text{CP of VI} + \text{CP of VII} + \text{CP of VIII}}{\text{Credit of I} + \text{II} + \text{III} + \text{IV} + \text{V} + \text{VI} + \text{VII} + \text{VIII Sem}}$$

Class Awarded = _____

Calculation of SGPA and CGPA

SGPA for I Semester	=	$\frac{\text{CP (I Sem)}}{\text{Credits (I Sem)}}$
SGPA for I Semester	=	SGPA for I Semester
CGPA for I and II Sem	=	$\frac{\text{CP(I Sem)} + \text{CP(II Sem)}}{\text{Credits(I Sem)} + \text{Credits(II Sem)}}$
CGPA for I,II and III Sem	=	$\frac{\text{CP(I Sem)} + \text{CP(II Sem)} + \text{CP(III Sem)}}{\text{Credits (I Sem)} + \text{Credits (II Sem)} + \text{Credits (III Sem)}}$
CGPA for I,II,III and IV Sem	=	$\frac{\text{CP(I Sem)} + \text{CP(II Sem)} + \text{CP(III Sem)} + \text{CP(IV Sem)}}{\text{Credits(I Sem)} + \text{Credits(II Sem)} + \text{Credits(III Sem)} + \text{Credits(IV Sem)}}$
CGPA for I,II,III,IV and V Sem	=	$\frac{\text{CP(I Sem)} + \text{CP(II Sem)} + \text{CP(III Sem)} + \text{CP(IV Sem)} + \text{CP(V Sem)}}{\text{Credits(I Sem)} + \text{Credits(II Sem)} + \text{Credits(III Sem)} + \text{Credits(IV Sem)} + \text{Credits (V Sem)}}$
CGPA for I,II,III,IV,V and VI Sem	=	$\frac{\text{CP(I Sem)} + \text{CP(II Sem)} + \text{CP(III Sem)} + \text{CP(IV Sem)} + \text{CP(V Sem)} + \text{CP(VI Sem)}}{\text{Credits(I Sem)} + \text{Credits(II Sem)} + \text{Credits(III Sem)} + \text{Credits(IV Sem)} + \text{Credits (V Sem)} + \text{Credits(VI Sem)}}$
CGPA for I,II,III,IV,V,VI and VII Sem	=	$\frac{\text{CP(I Sem)} + \text{CP(II Sem)} + \text{CP(III Sem)} + \text{CP(IV Sem)} + \text{CP(V Sem)} + \text{CP(VI Sem)} + \text{CP(VII Sem)}}{\text{Credits(I Sem)} + \text{Credits(II Sem)} + \text{Credits(III Sem)} + \text{Credits(IV Sem)} + \text{Credits (V Sem)} + \text{Credits (VI Sem)} + \text{Credits (VII Sem)}}$
CGPA for I,II,III,IV,V,VI,VII and VIII Sem	=	$\frac{\text{CP(I Sem)} + \text{CP(II Sem)} + \text{CP(III Sem)} + \text{CP(IV Sem)} + \text{CP(V Sem)} + \text{CP(VI Sem)} + \text{CP(VII Sem)} + \text{CP(VIII Sem)}}{\text{Credits(I Sem)} + \text{Credits(II Sem)} + \text{Credits(III Sem)} + \text{Credits(IV Sem)} + \text{Credits (V Sem)} + \text{Credits (VI Sem)} + \text{Credits (VII Sem)} + \text{Credits (VIII Sem)}}$

SUMMARY SCHEME FOR CHOICE BASED CREDIT SYSTEM**Category of Courses****B. Sc. (Hons.) Medical Biotechnology**

Semester	Discipline Specific Core (DSC)	Discipline Specific Practical's (DSP)	Discipline Specific Elective (DSE)	Minor	Open Elective (OE)	VSC and SEC (VSEC)	AEC, VEC and IKS	OJT, FP, CEP, CC, and RP	Credits
I	DSC 1	DSP 1	-	-	OE 1	SEC 1	IKS 1	CC 1	22
	DSC 2	DSP 2			OE 2				
II	DSC 3	DSP 3	-	MI 1	OE 3	-	AEC 1	CC 2	22
	DSC 4	DSP 4			VEC 1				
III	DSC 5	DSP 5	-	MI 2	OE 4	SEC 2	AEC 2	CC 3	22
					VSC 1	VEC 2			
IV	DSC 6	DSP 6	-	MI 3	OE 5	SEC 3	AEC 3	CC 4	22
					VSC 2				
V	DSC 7	DSP 7	DSE 1	MI 4	-	VSC 3	-	FP 1	20
VI	DSC 8		DSE 2	MI 5	-	VSC 4	-	IN 1	20
					VSC 5				
VII	DSC 9	DSP 8	DSE 3	RM 1	-	-	-	RP 1	20
	DSC 10								
VIII	DSC 11		DSE 4	-	-	-	-	OJT 1	20
	DSC 12								
	DSC 13								
	DSC 14								

SUMMARY SCHEME FOR CHOICE BASED CREDIT SYSTEM

Category of Courses

B. Sc. (Hons. with Research) Medical Biotechnology

Semester	Discipline Specific Core (DSC)	Discipline Specific Practical's (DSP)	Discipline Specific Elective (DSE)	Minor	Open Elective (OE)	VSC and SEC (VSEC)	AEC, VEC and IKS	OJT, FP, CEP, CC, and RP	Credits
I	DSC 1 DSC 2	DSP 1 DSP 2	-	-	OE 1 OE 2	SEC 1	IKS 1	CC 1	22
II	DSC 3 DSC 4	DSP 3 DSP 4	-	MI 1	OE 3	-	AEC 1 VEC 1	CC 2	22
III	DSC 5	DSP 5	-	MI 2	OE 4	SEC 2 VSC 1	AEC 2 VEC 2	CC 3	22
IV	DSC 6	DSP 6	-	MI 3	OE 5	SEC 3 VSC 2	AEC 3	CC 4	22
V	DSC 7	DSP 7	DSE 1	MI 4	-	VSC 3	-	FP 1	20
VI	DSC 8		DSE 2	MI 5	-	VSC 4 VSC 5	-	IN 1	20
VII	DSC 9 DSC 10	DSP 8	DSE 3	RM 1	-	-	-	RP 1	20
VIII	DSC 11 DSC 12 DSC 13		DSE 4	-	-	-	-	RP 2	20

References

1. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
2. https://www.ugc.gov.in/pdfnews/9028476_Report-of-National-Credit-Framework.pdf
3. <https://www.ugc.gov.in/e-book/FYUGP/mobile/index.html>
4. <https://htedu.maharashtra.gov.in/Main/DocMasters/Website/Media/1/NEP%20Task%20Force%20Report.pdf>
5. https://htedu.maharashtra.gov.in/Main/DocMasters/Website/Media/1/NEP-2020-Task-Force-Detailed-Annexures-30-June-2021_0.pdf
6. <https://gr.maharashtra.gov.in/Site/Upload/Government%20Resolutions/Marathi/202212061843114008.pdf>
7. <https://htedu.maharashtra.gov.in/Main/DocMasters/Website/Media/1/NEP%20Committee-1%20Revised%20Report.pdf>
8. <https://htedu.maharashtra.gov.in/Main/DocMasters/Website/Media/1/202304201925266908.....pdf>
9. https://www.ugc.gov.in/pdfnews/2727945_SWAYAM-Regulations-2021.pdf
10. https://www.ugc.gov.in/pdfnews/4040078_FRAMEWORK-FOR-UNIVERSITIES-TO-CONDUCT-EXAMINATIONS-FOR-SWAYAM-COURSES-1_0001.pdf



Registrar

Pravara Institute of Medical Sciences
(Deemed to be University)
Loni-413736, Tal Rahata, Dist. Ahmednagar
(M.S. India)