CHARUSAT

CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY

FEEDBACK ANALYSIS REPORT OF STAKEHOLDERS (2021-22)

FEEDBACK SUMMARY AND ACTIONS TAKEN/RECOMMENDED AT 19TH BoS

Department of Biological Sciences, Faculty of Science

Total 195 feedback inputs were obtained from various stake holders like BSc and MSc exit batch students, teachers, academic peers, industry associates as well as alumni, regarding curriculum and pedagogy adopted at Department of Biological Sciences, PDPIAS. Feedback from the academic peers and industry experts shall be further emphasized upon at the time of the upcoming syllabus revision

Outline and Summary:

1. Majority of the students are satisfied and appreciative of the curriculum, teaching-learning experience and counselling process.

2. The students have also appreciated the opportunities and facilities for sports and extra-curricular activities and expressed their satisfaction over the same.

3. Alumni feedback is largely encouraging; mainly suggesting increased focus on fundamental practicals in the curriculum.

4. Most faculty members are appreciative of the UG and PG syllabus. Enhanced incorporation of industrial visits or industry-oriented components has been suggested.

Sr No	Feedback	Actions suggested/taken at 19th BoS meeting
Feedback from BSc students		
1	Infrastructure related issues: Need to keep neat and hygienic girls common room and washroom and handwash in every washroom. Also need to keep classrooms clean and sweep regularly.	A dedicated housekeeping team is already appointed for the routine upkeep of the utilities. The same has been informed to the concerned in-charges and the Principal's office.
2	Network issues on campus need to be addressed Better facilities at computer lab are requested	The matter has been conveyed to concerned in-charges as well as the Principal's office. A follow-up for the improvement of the same shall be taken. BoS members were updated about it
3	Study material for every subject to be provided	The study material for most subjects are provided by the teachers in terms of hand-outs, ppt files or other lecture notes through MS Teams. Several faculty members also consider uploading recorded lectures. The emphasis is on usage of the library for obtaining more reading material, as this is considered to be the interest of the students' development. The BoS members were updated about the same
4	Examinations test only remembering and does not focus on understanding concepts.	The question papers for both internal and external exams are set to ensure a balance between the elements of Bloom's taxonomy where remembering and hence the memory-based questions are balanced with analytical or logical questions. However, this

		practice would be further consolidated based on the feedback
5	Most other feedbacks largely express satisfaction and appreciation over the academics, curriculum, teaching-learning experience and avenues for co- and extra-curricular activities	The BoS noted the overall appreciation received from the BSc students
Feedback for MSc students		
6	Other activities should be included in the department. And other festivals or event should be organized for the students for environmental change.	A range of opportunities are already available on campus for pursuing the extracurricular component. Further enhancement in the same has been considered while devising the new teaching schemes.
7	There should be practical sessions if elective subjects are practical based.	This suggestion would be considered while designing the new curriculum. Attempt shall be further made to improve lab exposure in practical-based subjects.
8	Wifi and internet facility needs improvement	The matter has been conveyed to concerned in-charges as well as the Principal's office. A follow-up for the improvement of the same shall be taken.
9	Non-teaching staff needs to be more professional in terms of communication with students.	This aspect shall be addressed while designing training sessions for the non-teaching staff
10	Industrial visit & trips should be organized	This aspect has been considered well while designing the new curriculum and the same has been discussed with the BoS members.
Feedback from Teachers/Industry/Academic Peers		
11	Prepare the syllabus to give them a holistic view about science. Which can make them think logically. Question paper should have more concept-based questions	The syllabus for UG and PG are largely evolved to include scientific advancements, skill development as well as holistic aspects. The Foundation Course is an attempt to impart some holistic view about science. Besides, case studies and presentations also cover such aspects. The question papers for both internal and external exams are set to ensure a balance between the elements of Bloom's taxonomy. Thus, memory-based questions are balanced with analytical/concept-based questions. However, this practice would be further consolidated based on the feedback
12	Commercial mathematics and statistics in the curriculum to be included and enhanced	This suggestion has been duly discussed in BoS. The newly designed curriculum has proposed inclusion of courses like Essential Skills in Mathematics and Biostatistics, which could be further enhanced as suggested.
13	In the last Semester component of industrial training/ project can be included.	Existing and newly proposed syllabi for PG programs have a compulsory dissertation component. Industrial tour, field-visits and research projects have been introduced in UG curriculum, in lines with NEP recommendations

14	Faculties of Biological Science Department are good at evidence based teaching practices which motivate students.	The BoS noted the acknowledgement and appreciation received
15	Add new courses in MSc Microbiology	New curricula for UG and PG programs in Microbiology have introduced several newer courses to enrich the subject diversity covered. This was discussed in the BoS
16	Industrial Microbiology and Bioprocess engineering appropriately includes fermentative production of primary as well as secondary metabolites. This course also addresses recent advancement in the field including use of Recombinant DNA technology for the commercial production of various metabolites. It also includes basic aspects on IPR and Patenting. The course is very meticulously designed by incorporating all the aspects related to this course	The BoS noted the acknowledgement and appreciation received
Feedback from Alumni		
17	The course should focus onto improvising logical reasoning and analogy questions in the subject.	The continuous evaluation components as well as external examination include a balance between the elements of Bloom's taxonomy. Thus, memory-based questions are balanced with analytical/logical questions. Several components like seminars, case-studies and dissertation further allow analogy-based study. Revision of the curricula undertaken has considered this aspect more emphatically
18	It is great that powerpoint presentations are provided for the topics, in that way one can follow in the class and not worry about missing out some important points but reading subject related books should be emphasized for in depth knowledge of the subject.	This feedback was well-noted. The BoS members also resonated with the same. Efforts are already made to encourage use of books by sharing concise and selected course materials. The pedagogical changes shall be planned to enhance the usage of books for better knowledge.
19	Can we please add more detailed molecular biology. In the subject where we teach different methods like SDS page, we should also include cloning in detail and also new and advanced technique should be made known like CRISPR/Cas9. There should also be practicals involving tissue culture techniques of both plants and animals.	The curriculum has included the suggested technique of cloning in the Genetic Engineering practicals. The recent advances of CRISPR/Cas9 and equivalent developments are discussed through theory subject like Omics Technologies and Bioinformatics in MSc programs. Newly revised curriculum has taken this aspect into consideration
20	Need to increase the industrial visits and trainings to gain the actual working knowledge in the industries. Can invite some industrial senior people as guest lecturer.	Industrial tour, field-visits and research projects have been introduced in UG curriculum, in lines with NEP recommendations

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ACADEMIC YEAR 2021-22

FEEDBACK ANALYSIS (%) - BSc EXIT SURVEY - 2022

Parameter	Excellent	Very Good	Good	Average	Below Average
Curriculum developed and implemented has relevance to local, national, regional and global development needs.	36	30	34	1	0
Curriculum was broad enough to prepare you for career of choice.	35	33	26	7	0
Curriculum integrates crosscutting issues relevant to processional ethics, gender, human values, environment and sustainability.	37	34	28	2	0
The learning was supplemented by co-curricular activities such as course work outside the curriculum, project work, internships, workshops, conference, symposia etc.	29	30	31	8	3
Audiovisual learning resources provided by teachers facilitated you to improve learning.	35	35	27	3	1
Reading material and other learning resources provided by teachers facilitated you to improve learning.	32	34	30	5	0
Hands-on practice in laboratories and project work facilitated in overall development, inculcating skills and time management.	44	30	21	4	1
Academic activities facilitate you to improve experiential learning, participative learning and problem-solving methodology.	38	26	32	4	1
Evaluation pattern (Unit Test, Assignment, and Presentation) made you capable of analyzing your strength & weakness, and empowered you to use resources effectively.	45	27	21	6	1
The overall experience would help you to engage in independent and life-long learning in the broadest context of technological change.	37	34	23	6	0
Institution has an eco-system to promote research and other initiatives for creationand transfer of knowledge.	36	40	21	2	1
Institution has adequate facility to carry out research.	44	32	23	1	0
Workshops/seminars on research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development are organized regularly.	39	28	31	3	0
Activities with social relevance (NCC/ NSS/ CHRF/ CHARUSAT Rural Education etc.) are conducted regularly.	51	22	24	2	0
The institute has adequate facilities for Teaching â€“ learning viz. audiovisual amenities, classrooms, laboratories.	43	36	19	2	0
The institute has adequate facilities for Cultural activities, yoga, games (Indoor and outdoor), sports and gymnasium	37	32	26	5	1
The institute has adequate LAN, WiFi and Internet Facility	18	19	27	27	9
The institute has adequate and hygienic canteen and food facilities.	35	34	26	5	1
Campus Ambience (Greenery, Environment friendly eco system, usage of solar lights, saving of electivity, production of electricity, working space) is pleasant.	59	21	16	3	0
Adequate learning resources are available in library.	45	35	17	3	0

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Active student council exists and students are involved in activities for institutional development and student welfare.	40	32	27	1	1
Institution timely resolves the grievances including sexual harassment and ragging cases	50	30	17	3	0
Counseling helped in assessing learning level of students, leading to customized attention to needy students.	42	33	21	2	2
Institution encourages and provides support to participate in national and international events.	44	30	21	4	1
Capacity development and skills enhancement activities are organized regularly.	41	29	24	5	1
Adequate support is provided by Career Development and Placement Cell (CDPC).	32	30	31	8	0
The effective and transparent leadership is reflected in various institutional policies/ practices.	35	34	30	1	1
Management of Institution follows â€œEqual Opportunityâ€ for all	34	33	24	7	2
Institute felicitates achievement of students through various modes.	41	31	26	3	0

*** Total number of feedbacks obtained: 98**

Other Feedback

(1) Infrastructure related issues:
Need to keep neat and hygienic girls common room and washroom and handwash in every washroom.
Also need to keep classrooms clean and sweep regularly.
Network issues on campus need to be addressed

(2) Better facilites at computer lab are requested

(3) Study material for every subject to be provided

(4) Examinations test only remembering and does not focus on understanding concepts.

(5) Most other feedbacks largely express satisfaction and appreciation over the academics, curriculum, teaching-learning experience and avenues for co- and extra-curricular activites

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ACADEMIC YEAR 2021-22

FEEDBACK ANALYSIS (%) - MSc EXIT SURVEY - 2022

Parameter	Percentage				
	Excellent	Very Good	Good	Average	Below Average
Curriculum developed and implemented has relevance to local, national, regional and global development needs.	38	33	28	1	0
Curriculum was broad enough to prepare you for career of choice.	38	33	24	5	0
Curriculum integrates crosscutting issues relevant to processional ethics, gender, human values, environment and sustainability.	41	33	25	1	0
The learning was supplemented by co-curricular activities such as course work outside the curriculum, project work, internships, workshops, conference, symposia etc.	39	30	27	4	0
Audiovisual learning resources provided by teachers facilitated you to improve learning.	34	43	20	3	0
Reading material and other learning resources provided by teachers facilitated you to improve learning.	35	39	22	4	0
Hands-on practice in laboratories and project work facilitated in overall development, inculcating skills and time management.	49	34	15	1	0
Academic activities facilitate you to improve experiential learning, participative learning and problem-solving methodology.	37	39	23	1	0
Evaluation pattern (Unit Test, Assignment, and Presentation) made you capable of analyzing your strength & weakness, and empowered you to use resources effectively.	39	39	19	3	0
and life-long learning in the broadest context of technological change.	33	46	19	3	0
Institution has an eco-system to promote research and other initiatives for creationand transfer of knowledge.	41	41	19	0	0
Institution has adequate facility to carry out research.	39	33	28	0	0
Property Rights (IPR), entrepreneurship, skill development are organized regularly.	33	32	33	3	0
Activities with social relevance (NCC/ NSS/ CHRF/ CHARUSAT Rural Education etc.) are conducted regularly.	35	34	27	4	0
The institute has adequate facilities for Teaching â€“ learning viz. audiovisual amenities, classrooms, laboratories.	44	37	18	1	0
The institute has adequate facilities for Cultural activities, yoga, games (Indoor and outdoor), sports and gymnasium	38	28	25	8	1
The institute has adequate LAN, WiFi and Internet Facility	27	20	27	16	10
The institute has adequate and hygienic canteen and food facilities.	35	29	30	4	1
Campus Ambience (Greenery, Environment friendly eco system, usage of solar lights, saving of electivity, production of electricity, working space) is pleasant.	49	33	16	1	0
Adequate learning resources are available in library.	35	29	30	5	0
Active student council exists and students are involved in activities for institutional development and student welfare.	41	30	25	4	0
Institution timely resolves the grievances including sexual harassment and ragging cases	35	35	29	0	0

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Counseling helped in assessing learning level of students, leading to customized attention to needy students.	38	33	28	1	0
Institution encourages and provides support to participate in national and international events.	38	33	27	3	0
Capacity development and skills enhancement activities are organized regularly.	32	34	30	3	1
Adequate support is provided by Career Development and Placement Cell (CDPC).	39	33	24	3	1
The effective and transparent leadership is reflected in various institutional policies/ practices.	37	34	27	3	0
Management of Institution follows â€œEqual Opportunityâ€ for all	37	33	28	3	0
Institute felicitates achievement of students through various modes	41	33	25	1	0

*** Total number of feedbacks obtained: 79**

Other Feedback

(1) Other activities should be included in the department. And other festivals or event should be organized for the students for environmental change.

(2) There should be practical sessions if elective subjects are practical based.

(3) Wifi and internet facility needs improvement

(4) Industrial visit & trips should be organized

INSTITUTE OF APPLIED SCIENCES CHARUSAT P. D. PATEL

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ACADEMIC YEAR 2021-22

FACULTY OF SCIENCE

P D PATEL INSTITUTE OF APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

ANALYSIS OF FEEDBACK ON CURRICULUM (INDUSTRY/ACADEMIC PEERS/TEACHERS)

No	Parameter	Level (UG/PG)	Excellent	Very Good	Good	Satisfactory	Needs Improvement	Not applicable
1	Content of syllabus	B Sc	2 of 3					
		MSc	1 of 6	4 of 6	1 of 6			
2	Relevance of syllabus to industry/research requirements	B Sc		2 of 3				
		MSc	1 of 6	5 of 6				
3	Course outcomes are well defined	B Sc	3 of 3					
		MSc	1 of 6	5 of 6				
4	Sufficient reading materials and digital resources provided	B Sc	2 of 3					
		MSc	1 of 6	3 of 6	2 of 6			
5	Incorporation of advanced topics	B Sc	2 of 3					
		MSc		3 of 6	2 of 6	1 of 6		
6	Pedagogy proposed	B Sc	2 of 3					
		MSc		5 of 6		1 of 6		
7	Have a desired balance between theory and practical	B Sc		2 of 3				
		MSc	1 of 6	4 of 6		1 of 6		
8	Assessment methods are fair, measuring the outcomes	B Sc	3 of 3					
		MSc		5 of 6	1 of 6			
9	Project component in the course, if applicable:	B Sc						3 of 3
		MSc	1 of 6	2 of 6	1 of 6	1 of 6		1 of 6
10	Industrial training/practical exposure in the course, if applicable:	B Sc	2 of 3					
		MSc		1 of 6	3 of 6	1 of 6	1 of 6	

*** Total number of feedbacks obtained: 9**

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Subject Key and Other Feedback

1	Prepare the syllabus to give them a holistic view about science. Which can make them think logically. Question paper should have more concept based questions
2	Commercial mathematics and statistics in the curriculum to be included and enhanced
3	In the last Semester component of industrial training/ project can be included.
4	Faculties of Biological Science Department are good at evidence based teaching practices which motivate students.
5	Add new courses in MSc Microbiology
6	Industrial Microbiology and Bioprocess engineering appropriately includes fermentative production of primary as well as secondary metabolites. This course also addresses recent advancement in the field including use of Recombinant DNA technology for the commercial production of various metabolites. It also include basic aspects on IPR and Patenting. The course is very meticulously designed by incorporating all the aspects related to this course.

FACULTY OF SCIENCE
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DEPARTMENT OF BIOLOGICAL SCIENCES

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SUMMARY OF ALUMNI FEEDBACK - ACADEMIC YEAR 2021-22

Username	**khushburathod.1210@gmail.com**	**charuchavda17@gmail.com**	**patelkashyap721@gmail.com**	**henipatel1812hd@gmail.com**	**vidhibhatt802@gmail.com**
Name	**Khushbu Rathod**	**Chandni Chavda**	**patel kashyap**	**Heni Patel**	**Vidhi Bhatt**
Mobile Number	9724904989	6356281193	7016742095	9825227575	8460141825
Designation	Research Scholar	Junior Embryologist	Officer	Student	Research Scholar
Institute/Organisation	PDPIAS, CHARUSAT	Morpheus life sciences Pvt Ltd	Sun Pharmaceutical ltd	PDPIAS	P. D. Patel Institute of Applied Sciences, CHARUSAT
Feedback for the department	Department of Biological Sciences	Department of Biological Sciences	Department of Biological Sciences	Department of Biological	Department of Biological Sciences
Feedback for the Program	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)
Feedback for the course	All	Microbiology	Good Course	Microbiology	The course should focus onto improvising logical reasoning and analogy questions in the subject.
1. Content of syllabus	Very good	Very good	Very good	Good	Very good
2. Relevance of	Good	Very good	Very good	Very good	Very good
3. Course outcomes	Very good	Very good	Very good	Very good	Very good
4. Sufficient reading	Very good	Good	Very good	Very good	Satisfactory
5. Incorporation of	Good	Satisfactory	Very good	Very good	Good
6. Pedagogy proposed	Very good	Satisfactory	Very good	Very good	Good
7. Have a desired	Excellent	Satisfactory	Very good	Very good	Good
8. Assessment	Excellent	Very good	Very good	Very good	Very good
9. Project component	Very good	Satisfactory	Very good	Very good	Good
10. Industrial training/	Good	Needs Improvements	Good	Good	Good
Additional suggestions and remarks, if any:	None	And new course	Good	No	It is great that powerpoint presentations are provided for the topics, in that way one can follow in the class and not worry about missing out some important points but reading subject related books should be emphasized for in depth knowledge of the subject.

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Username	sagarsharma.ss376@gmail.com	divya2830patel@gmail.com	prashantkshatriya7@gmail	ptanvi200@gmail.com
Name	**Sagar Sharma**	**DIVYA PATEL**	**Prashant Kshatriya**	**Tanvi Patel**
Mobile Number	-729689716	+1 9202690438	9724739794	6353405714
Designation	P.hD. student	MASTER'S OF MICROBIOGY	Research Scientist	BIOTECHNOLOGY
Institute/Organisation	University of Silesia	P D PATEL INSTITUTE OF APPLIED SCIENCES	GIOSTAR Research Pvt. Ltd	PDPIAS
Feedback for the department	Department of Biological Sciences	Department of Biological Sciences	Department of Biological Sciences	Department of Biological Sciences
Feedback for the Program	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)
Feedback for the course	Can we please add more detailed molecular biology. In the subject where we teach different methods like SDS page, we should also inclide clonning in detail and also new and advanced techique should be made known like CRISPR/Cas9. There should also be practicles involving tissue culture techniques of both plants and animals.	MICCROBIOLOGY	BioChemistry	Course taught in the college is excellent,there is no need to do the changes. Thank you.
1. Content of syllabus	Satisfactory	Excellent	Very good	Excellent
2. Relevance of syllabus to	Needs Improvements	Excellent	Good	Excellent
3. Course outcomes are well	Good	Excellent	Good	Excellent
4. Sufficient reading materials	Very good	Excellent	Very good	Excellent
5. Incorporation of advanced	Needs Improvements	Excellent	Satisfactory	Excellent
6. Pedagogy proposed	Good	Excellent	Good	Excellent
7. Have a desired balance	Satisfactory	Excellent	Good	Excellent
8. Assessment methods are	Excellent	Very good	Very good	Excellent
9. Project component in the	Excellent	Excellent	Good	Excellent
10. Industrial training/	Satisfactory	Very good	Good	Excellent
Additional suggestions and remarks, if any:	NA	PDPIAS is the best platform for all of the biological sciences students. I highly recommend PDPIAS if someone wants to pursue the degree of Microbiology or biotechnology or biochemistry. Thank you to the all-faculty members for explaining every single thing in detail and for	Need to increase the industrial visits and trainings to gain the actual working knowledge in the industries. Can invite some industrial senior people as guest lecturer.	No

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FEEDBACK ACTION TAKEN REPORT OF STAKEHOLDERS (2021-22)

Charotar University of Science and Technology
CHARUSAT Campus, Changa
Faculty of Science

19th Meeting of Board of Studies (Department of Biological Sciences)

MINUTES OF THE MEETING

Date: 20/04/2022
Venue: Room No. 102 (Meeting room)
Time: 02.00 pm onwards
P. D. Patel Institute of Applied Sciences,
CHARUSAT, Changa.

The 19th meeting of the Board of Studies (BOS) of Department of Biological Sciences, Faculty of Science, Charotar University of Sciences and Technology, was held on 20th April 2022 at Meeting Room (Room No 102) of PDPIAS Building, from 02.00 pm onward, in offline mode.

The following members were present during the meeting

Sr No	Name of the Member	Role
1.	Dr Aditi Buch	Chairperson, , Board of Studies (Biological Sciences)
2.	Dr Anuradha Nerurkar	External Expert Member, Board of Studies (Biological Sciences)
3.	Prof Datta Madamwar	Invited Expert Member, Board of Studies (Biological Sciences)
4.	Dr Palash Mandal	Member, Board of Studies (Biological Sciences)
5.	Dr Janki Thakker	Member, Board of Studies (Biological Sciences)
6.	Dr Seema Amin	Member, Board of Studies (Biological Sciences)
7.	Dr Gayatri Dave	Member, Board of Studies (Biological Sciences)

The proceedings of the meeting are as under:

Agenda Item No. 19.1 Approval of the minutes of 18th BoS meeting
The BoS chairperson briefed the members about the 18th BoS proceedings, subsequent actions taken and the members approved the minutes of 18th BoS meeting.

Agenda Item No. 19.2: Syllabi for Academic Year 2022-23

Proceedings
The existing curricula for the UG and PG programs offered by Department of Biological Sciences have been implemented since AY2017-18. In view of this, the syllabi for BSc and MSc programs in Biotechnology/Microbiology/Biochemistry were considered for revision with respect to introduction of new courses, course content as well as restructuring of the teaching scheme.

The BoS chairperson briefed about the curriculum structure and its attempted alignment with NEP guidelines as well as the local/national/international needs

The highlights/summary of the discussions and deliberations is as follows:

1. With reference to the NEP guidelines, the Department of Biological Sciences proposed to adopt 4-year UG program (3+1 years) with an exit option after 3 years.

It was also brought to the notice of the experts that the curriculum structure was designed to accommodate the other NEP-recommended exit options like certificate course and diploma; however, their implementation was discussed to be subject to policy decisions that could be later introduced.

2. Successful completion of 3-years of study shall yield a regular BSc degree while with the 4th year of study; the student shall obtain a BSc (Honrs) degree. Progression of the student from 3rd to 4th year shall be subject to qualification of the underlying minimum criteria (to be drafted subsequently).

3. The program is proposed to be implemented from AY 2022-23. However, the students enrolled in existing BSc program until AY2021-22 shall continue pursuing the old syllabus until they obtain their degree. Then onward the old syllabus (AY 2017-18 design) shall be discontinued. The regulations and curriculum shall apply to all students enrolling from AY2022 onwards. All other previously implemented curriculum shall cease to exist when all the students enrolled under said previous regulations, curriculum structure have passed out.

4. The 4-year curriculum skeleton was proposed to include the tentative course titles and corresponding credits **(Annexure-I)**. Accordingly,

Program	**Credits**
4 Years BSc (Honrs)	**176 (minimum)**
3 Years BSc (Exit option)	**138 (minimum)**
Additional Value-Added Credits	**01 (Min)-05 (Max)**

5. Introduction of new courses and improvisation in course content to augment the curriculum with aspects like (i) Scientific and technological advances (ii) Skill development (iii) Holistic development (iv) vocational inclination (v) interdisciplinary components (vi) alignment with syllabi for various competitive exams (vi) progression into higher studies (vi) entrepreneurship was discussed and reviewed.

6. Broadly, **26 courses** of the proposed curriculum of BSc (BT/MI/BC) worth 71 credits were newly introduced, of which the 1st year courses shall be commonly offered irrespective of the discipline. The discipline selection shall be enabled after successful completion of 1st year; thus, the discipline-specific courses shall be subsequently included 3rd semester onward.

7. The teaching scheme and detailed syllabi (designed by departmental subject experts/teachers) for the courses including the list of experiments for 1st semester BSc were discussed with the experts to obtain inputs for improvisation. The chairperson also submitted that the content for the proposed course entitled 'Computer Applications' shall be enriched with after discussions with the subject experts.

8. Minor changes in several course titles were suggested by Dr Nerurkar and Dr Datta Madamwar, which were discussed, accepted by the other members and incorporated run-time.

9. Introduction of new courses like Computer Applications, Ecology and Environment, Microbial Taxonomy, Pharmacology and Herbal Medicine, Dietetics was appreciated.

10. The chairperson, representing a collective view of the internal committee members, sought the inputs of the experts regarding a waiver for the course entitled 'Foundation Course on Biology

and Chemistry', with the rationale that the BSc students shall be studying both Biology and Chemistry in detail through the proposed program. Dr Gayatri Dave narrated in detail about the mode of offering the course and its ideology.

11. The chairperson further discussed about the components of the 4th year of the proposed programs including the apprenticeship and research component. The committee experts were updated regarding the MoU signed between PDPIAS and the Board of Apprenticeship and Training (BOAT) and Life Sciences Sector Skill Development Council (LSSSDC) **(Annexure-II)**. The said apprenticeship was discussed as the major component planned for BSc Semester-VII. Inclusion of 'Research Project', course on 'Bioinstrumentation and Bioanalytical Skills' and interdisciplinary courses addressing the technological advances like Artificial Intelligence in Life Science Applications/Data Mining and Machine Learning for Life Sciences/Data Analytics, were discussed with respect to their relevance in augmenting the scientific capacities and skills of the students.

Revisions in PG Programs-MSc (Biotechnology/Microbiology/Biochemistry)

12. The MSc curriculum was revised with respect to both the structure as well as course content. This program could be offered as a 2-year program for the regular UG students in allied disciplines, with effect from AY 2022-23.

13. The 2-year curriculum skeleton was proposed to include the tentative course titles and corresponding credits **(Annexure-I)**. Accordingly, the MSc (Biotechnology/Microbiology/ Biochemistry) program shall comprise of 104 credits

14. Introduction of new courses and improvisation in course content to augment the curriculum with aspects like (i) Scientific and technological advances (ii) Skill development (iii) Creativity and Innovative solutions (v) interdisciplinary components (vi) alignment with syllabi for various competitive exams (vi) progression into higher studies (v) job/employability orientation (vi) entrepreneurship was discussed and reviewed.

15. Total **09 courses worth 19 credits** were newly introduced across MSc (BT/BC/MI) programs.

16. Dr Nerurkar and Dr Datta Madamwar thoroughly reviewed the overall curriculum structure of the PG programs and suggested inclusion of courses like 'Toxicology' (as elective in MSc Biochemistry). The experts further suggested to merge the courses "Bioprocess Engineering" and 'Industrial Microbiology'/'Industrial Biotechnology' into a single course due to some overlapping aspects. As per their suggestion, this would leave room for inclusion of other important papers for enrichment of the course. This suggestion was largely considered positively by the internal BoS members and a need to brainstorm on the same was realised.

17. The experts also suggested some course title improvisations to make it more befitting to the program. For example, instead of the proposed 'DSC-6: Microbial Biochemistry and Bioprocess Engineering' in MSc (Biochemistry), it was suggested that Bioprocess Engineering was poorly suitable in the proposed version and could be offered as an elective course for this program. It was further suggested to brainstorm and reconsider the course title to include more relevant aspects.

18. Dr Palash Mandal suggested considering the Biochemistry course in MSc 1st Semester for 4 credits instead of proposed 3 credits. The experts reviewed its detailed syllabus and suggested brainstorming on the same in view of the overall feasibility

19. It was emphasized that the curriculum was increasingly aligned with UGC-CSIR-NET syllabus. Dr Nerurkar additionally suggested considering referring the DBT-JRF BET before finalizing discipline-specific courses and their content.

20. The teaching scheme and detailed syllabi (designed by departmental subject experts/teachers) for the courses for 1st semester MSc were discussed with the experts to obtain inputs for improvisation.

In general,

A permission was also sought to finalize the structure, course titles and course content in a phase-wise manner considering that this would help improvise and strengthen the curriculum to realise desired outputs and impact. Accordingly, it was proposed that the detailed syllabus for 2nd semester BSc and MSc shall be proposed and reviewed in the forthcoming 20th BoS meeting.

Overall, the feedbacks from students of exiting batches of BSc and MSc, teachers, academic peers, industrial associates and alumni were also considered during curriculum revision as and when suitable. This practice was appreciated by the expert members.

In concurrence with the NEP guidelines, incorporation of value-added activities such as industrial tour, field visit, seminars, community orientation, entrepreneurship and online learning through global platforms has been proposed to enrich both UG and PG curricula

Resolution

- The BoS approved the implementation of revised curriculum for UG and PG with effect from AY2022-23, as proposed and revised.
- The BoS also allowed and encouraged the phase-wise syllabus design and its approvals through subsequent BoS before final implementation.
- The teaching schemes and syllabi for the 1st semesters of BSc and MSc were approved for implementation after incorporating the suggestions from the experts **(Annexure-III & IV).** Accordingly, the suggestions were duly incorporated in the list of practicals and the theory course contents, in consultation with the subject experts and teachers.

  The extent of course content revision proposed and approved for BSc Sem-I and MSc Sem-I courses is as follows

Sr No	Course Code	Course Name	% Revision proposed
BSc Semester-I			
1	BS118	Chemistry	45 %
2	BS119	Animal Biology	20 %
3	BS120	Plant Biology	25 %
4	BS121	Ecology and Environment	100% (Newly Introduced)
5	BS122	Laboratory in Biological Sciences- I	30 %
6	BS123	Computer Applications	100 % (Newly Introduced)
MSc Semester-I			
7	MS721	Microbiology	30 %
8	MS722	Biochemistry	40 %
9	MS723	Cell Biology	25 %

10	MS724	Molecular Biology	35 %
11	MS725	Evolution and Ecology	100 % (Newly Introduced)
12	BT721	Experimental Skills in Biotechnology-I	25 %
13	MI721	Experimental Skills in Microbiology-I	25 %
14	BC721	Experimental Skills in Biochemistry-I	25 %

- The detailed syllabi for 2nd semester of BSc and MSc programs shall be proposed and reviewed in the forthcoming 20th BoS meeting.
- The BoS supported and recommended the waiver for course entitled 'Foundation Course on Biology and Chemistry' offered currently to BSc Semester-Students.
- The 4th year BSc components were retained as proposed with an addition of Elective Subject entitled 'Systems Biology Tools' for Semester-VIII students.
- Courses entitled 'Toxicology' and 'Biomolecular Engineering' were introduced as electives in MSc (Biochemistry) Semester-III, based on suggestions received by the experts.
- A proposed course title 'Microbial Biochemistry and Bioprocess Engineering' in MSc (Biochemistry) Semester-III was changed to 'Microbial Biochemistry and Physiology' as per experts' suggestions. Since good majority of our students opt for jobs, industry-oriented courses are emphasized in the curriculum. Accordingly, inclusion of Bioprocess Engineering aspect was proposed in MSc (Biochemistry) curriculum; however, as suggested by the experts it shall be introduced later on after due brainstorming with subject experts.
- After due deliberations with the departmental subject experts, the courses "Bioprocess Engineering" and 'Industrial Microbiology'/'Industrial Biotechnology' were retained as individual courses, considering that 'Bioprocess Engineering' is covered extensively in the DBT-JRF exams
- Incorporation of value-added activities across UG and PG curricula for holistic development has been endorsed
- The course entitled 'Biochemistry' in Semester-I of MSc (Biotechnology/Biochemistry/ Microbiology) shall be of 4 credits, as resolved after due discussions with subject experts and teachers.
- The curriculum was increasingly aligned with the national level competitive exams like UGC-CSIR-NET, ICAR-NET, JGEEBILS, DBT-JRF, ICMR-JRF and other equivalent exams

Agenda Item No. 19.3: Review of the feedback on curriculum from stakeholders
Proceedings

A uniform structure for feedback on curriculum from various stakeholders like alumni, students, teachers, academic peers and employers, as prescribed by the university, was shared with the BoS members.

The chairperson briefed the committee regarding the summary of the feedback obtained. The major points of concern were deliberated upon and due inputs were obtained.

Resolution

The feedback summary and actions taken in the meeting over major points are attached as **Annexure-V**

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Agenda Item No. 19.4: Question Paper & Result analysis of Academic Year 2021-2022
Proceedings
The expert members in the committee thoroughly reviewed the question papers and the paper style. The experts were briefed about the shift to complete offline examination from the online mode. The results of UG and PG programs and grade distribution were also reviewed.

Resolution
The expert members expressed their satisfaction with the style and format of the question paper as well as overall result distribution across UG and PG examinations.

Agenda Item No. 19.5: Review of OBE parameters for Department of Biological Sciences
Proceedings
The chairperson briefed about the process of CO-PO mapping for the department of Biological Science with a reference to the proceedings of 18th BoS meeting. Further it was shared that it depends on the question-wise marks for external examinations; which shall require optimization of university procedures for deriving the marks of exams conducted in offline mode. Additionally, Dr Seema Amin, the OBE coordinator of the department shared that the entire CO-PO attainment framework for the department was expected to be revised.

Resolution
The BoS noted the submission on OBE aspects.

Agenda Item No. 19.6: Amendment of Exam Panel (Winter and Summer Exams AY 2022-23)
On behalf of the department, the chairperson shared the details of two examiners for inclusion in the exam panel of BSc and MSc programs (**Annexure VI**). The same were shared with the committee members and their suggestions were obtained. The examiner panels submitted for the AY2021-22 (even semester) were also shared for reference.

Resolution
The BoS approved the suggested amendment of the exam panel and recommended them as suitable for B Sc and MSc programs.

Agenda Item No. 19.7: To discuss pedagogy and to suggest refinement/amendments
The chairperson discussed the shift of teaching to largely offline mode and the intermittent adoption of the hybrid pedagogy. The possible pedagogical changes required to satisfactorily implement the revised syllabi were also briefly discussed.

Resolution
The BoS noted the change and also encouraged continued use of online tools for teaching-learning.

Agenda Item No. 19.8: Approval of Synopsis, if any
Proceedings
The synopsis submitted by Mr Rohit Rathour and Mr Dishant Patel, pursuing doctoral research under the guideship of Dr Chirayu Desai, was reviewed thoroughly by the BoS members. Further, the thesis referee panel proposed for these students was also examined and discussed.

Resolution
The BoS approved the synopsis submission and the thesis referee panel (**Annexures VII-X**)

Agenda Item No. 19.9: Any other item with the permission of the Chair
Proceedings

1. Possible reforms in internal examination structure were discussed with respect to several alternatives. Dr Janki Thakker and Dr Gayatri Dave shared their concerns regarding the same. Dr Bragadish Iyer, a BoS member (*in absentia*) shared a possibility to innovate the continuous evaluation components to derive internal marks for theory courses. He also suggested to introduce examination reforms in practical exams, wherein the internal component may be continuously evaluated while the external examination may be formally conducted. The chairperson considered this suggestion positively and expressed the need to brainstorm the same at departmental level regarding its possible implementation.

2. The chairperson proposed introducing a certificate course for MSc Semester-IV pass-out students, to formally enable them to continue the research work from dissertation and yield some significant output (possibly a conference paper or a publication). Informal feedback from the existing MSc Semester-IV batch was obtained in prior to understand the acceptance of the proposal at the students' level. The experts and BoS members weighed the proposal with respect to willingness of students, involvement of additional fees, implementation aspects as well as its viability as a stand-alone course. Overall, it was suggested to have a more rigorous feasibility analysis should be carried out before its actual implementation.

3. Students' achievements and outputs in terms of placement, progression to higher studies, clearance of national and international level competitive examinations, receiving university/state/national level fellowships were shared with the BoS **(Annexure-XI)**. The committee members noted and appreciated the same.

FEEDBACK SUMMARY AND ACTIONS TAKEN/RECOMMENDED AT 19TH BoS

Department of Biological Sciences, Faculty of Science

Total 195 feedback inputs were obtained from various stake holders like BSc and MSc exit batch students, teachers, academic peers, industry associates as well as alumni, regarding curriculum and pedagogy adopted at Department of Biological Sciences, PDPIAS. Feedback from the academic peers and industry experts shall be further emphasized upon at the time of the upcoming syllabus revision

Outline and Summary:

1. Majority of the students are satisfied and appreciative of the curriculum, teaching-learning experience and counselling process.

2. The students have also appreciated the opportunities and facilities for sports and extra-curricular activities and expressed their satisfaction over the same.

3. Alumni feedback is largely encouraging; mainly suggesting increased focus on fundamental practicals in the curriculum.

4. Most faculty members are appreciative of the UG and PG syllabus. Enhanced incorporation of industrial visits or industry-oriented components has been suggested.

Sr No	Feedback	Actions suggested/taken at 19th BoS meeting
Feedback from BSc students		
1	Infrastructure related issues: Need to keep neat and hygienic girls common room and washroom and handwash in every washroom. Also need to keep classrooms clean and sweep regularly.	A dedicated housekeeping team is already appointed for the routine upkeep of the utilities. The same has been informed to the concerned in-charges and the Principal's office.
2	Network issues on campus need to be addressed Better facilities at computer lab are requested	The matter has been conveyed to concerned in-charges as well as the Principal's office. A follow-up for the improvement of the same shall be taken. BoS members were updated about it
3	Study material for every subject to be provided	The study material for most subjects are provided by the teachers in terms of hand-outs, ppt files or other lecture notes through MS Teams. Several faculty members also consider uploading recorded lectures. The emphasis is on usage of the library for obtaining more reading material, as this is considered to be the interest of the students' development. The BoS members were updated about the same
4	Examinations test only remembering and does not focus on understanding concepts.	The question papers for both internal and external exams are set to ensure a balance between the elements of Bloom's taxonomy where remembering and hence the memory-based questions are balanced with analytical or logical questions. However, this

		practice would be further consolidated based on the feedback
5	Most other feedbacks largely express satisfaction and appreciation over the academics, curriculum, teaching-learning experience and avenues for co- and extra-curricular activities	The BoS noted the overall appreciation received from the BSc students
Feedback for MSc students		
6	Other activities should be included in the department. And other festivals or event should be organized for the students for environmental change.	A range of opportunities are already available on campus for pursuing the extracurricular component. Further enhancement in the same has been considered while devising the new teaching schemes.
7	There should be practical sessions if elective subjects are practical based.	This suggestion would be considered while designing the new curriculum. Attempt shall be further made to improve lab exposure in practical-based subjects.
8	Wifi and internet facility needs improvement	The matter has been conveyed to concerned in-charges as well as the Principal's office. A follow-up for the improvement of the same shall be taken.
9	Non-teaching staff needs to be more professional in terms of communication with students.	This aspect shall be addressed while designing training sessions for the non-teaching staff
10	Industrial visit & trips should be organized	This aspect has been considered well while designing the new curriculum and the same has been discussed with the BoS members.
Feedback from Teachers/Industry/Academic Peers		
11	Prepare the syllabus to give them a holistic view about science. Which can make them think logically. Question paper should have more concept-based questions	The syllabus for UG and PG are largely evolved to include scientific advancements, skill development as well as holistic aspects. The Foundation Course is an attempt to impart some holistic view about science. Besides, case studies and presentations also cover such aspects. The question papers for both internal and external exams are set to ensure a balance between the elements of Bloom's taxonomy. Thus, memory-based questions are balanced with analytical/concept-based questions. However, this practice would be further consolidated based on the feedback
12	Commercial mathematics and statistics in the curriculum to be included and enhanced	This suggestion has been duly discussed in BoS. The newly designed curriculum has proposed inclusion of courses like Essential Skills in Mathematics and Biostatistics, which could be further enhanced as suggested.
13	In the last Semester component of industrial training/ project can be included.	Existing and newly proposed syllabi for PG programs have a compulsory dissertation component. Industrial tour, field-visits and research projects have been introduced in UG curriculum, in lines with NEP recommendations

14	Faculties of Biological Science Department are good at evidence based teaching practices which motivate students.	The BoS noted the acknowledgement and appreciation received
15	Add new courses in MSc Microbiology	New curricula for UG and PG programs in Microbiology have introduced several newer courses to enrich the subject diversity covered. This was discussed in the BoS
16	Industrial Microbiology and Bioprocess engineering appropriately includes fermentative production of primary as well as secondary metabolites. This course also addresses recent advancement in the field including use of Recombinant DNA technology for the commercial production of various metabolites. It also includes basic aspects on IPR and Patenting. The course is very meticulously designed by incorporating all the aspects related to this course	The BoS noted the acknowledgement and appreciation received
Feedback from Alumni		
17	The course should focus onto improvising logical reasoning and analogy questions in the subject.	The continuous evaluation components as well as external examination include a balance between the elements of Bloom's taxonomy. Thus, memory-based questions are balanced with analytical/logical questions. Several components like seminars, case-studies and dissertation further allow analogy-based study. Revision of the curricula undertaken has considered this aspect more emphatically
18	It is great that powerpoint presentations are provided for the topics, in that way one can follow in the class and not worry about missing out some important points but reading subject related books should be emphasized for in depth knowledge of the subject.	This feedback was well-noted. The BoS members also resonated with the same. Efforts are already made to encourage use of books by sharing concise and selected course materials. The pedagogical changes shall be planned to enhance the usage of books for better knowledge.
19	Can we please add more detailed molecular biology. In the subject where we teach different methods like SDS page, we should also include cloning in detail and also new and advanced technique should be made known like CRISPR/Cas9. There should also be practicals involving tissue culture techniques of both plants and animals.	The curriculum has included the suggested technique of cloning in the Genetic Engineering practicals. The recent advances of CRISPR/Cas9 and equivalent developments are discussed through theory subject like Omics Technologies and Bioinformatics in MSc programs. Newly revised curriculum has taken this aspect into consideration
20	Need to increase the industrial visits and trainings to gain the actual working knowledge in the industries. Can invite some industrial senior people as guest lecturer.	Industrial tour, field-visits and research projects have been introduced in UG curriculum, in lines with NEP recommendations

FEEDBACK ANALYSIS (%) - BSc EXIT SURVEY - 2022

Parameter	Excellent	Very Good	Good	Average	Below Averag
Curriculum developed and implemented has relevance to local, national, regional and global development needs.	36	30	34	1	0
Curriculum was broad enough to prepare you for career of choice.	35	33	26	7	0
Curriculum integrates crosscutting issues relevant to processional ethics, gender, human values, environment and sustainability.	37	34	28	2	0
The learning was supplemented by co-curricular activities such as course work outside the curriculum, project work, internships, workshops, conference, symposia etc.	29	30	31	8	3
Audiovisual learning resources provided by teachers facilitated you to improve learning.	35	35	27	3	1
Reading material and other learning resources provided by teachers facilitated you to improve learning.	32	34	30	5	0
Hands-on practice in laboratories and project work facilitated in overall development, inculcating skills and time management.	44	30	21	4	1
Academic activities facilitate you to improve experiential learning, participative learning and problem-solving methodology.	38	26	32	4	1
Evaluation pattern (Unit Test, Assignment, and Presentation) made you capable of analyzing your strength & weakness, and empowered you to use resources effectively.	45	27	21	6	1
The overall experience would help you to engage in independent and life-long learning in the broadest context of technological change.	37	34	23	6	0
Institution has an eco-system to promote research and other initiatives for creationand transfer of knowledge.	36	40	21	2	1
Institution has adequate facility to carry out research.	44	32	23	1	0
Workshops/seminars on research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development are organized regularly.	39	28	31	3	0
Activities with social relevance (NCC/ NSS/ CHRF/ CHARUSAT Rural Education etc.) are conducted regularly.	51	22	24	2	0
The institute has adequate facilities for Teaching â€“ learning viz. audiovisual amenities, classrooms, laboratories.	43	36	19	2	0
The institute has adequate facilities for Cultural activities, yoga, games (Indoor and outdoor), sports and gymnasium	37	32	26	5	1
The institute has adequate LAN, WiFi and Internet Facility	18	19	27	27	9
The institute has adequate and hygienic canteen and food facilities.	35	34	26	5	1
Campus Ambience (Greenery, Environment friendly eco system, usage of solar lights, saving of electivity, production of electricity, working space) is pleasant.	59	21	16	3	0
Adequate learning resources are available in library.	45	35	17	3	0

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Active student council exists and students are involved in activities for institutional development and student welfare.	40	32	27	1	
Institution timely resolves the grievances including sexual harassment and ragging cases	50	30	17	3	0
Counseling helped in assessing learning level of students, leading to customized attention to needy students.	42	33	21	2	2
Institution encourages and provides support to participate in national and international events.	44	30	21	4	1
Capacity development and skills enhancement activities are organized regularly.	41	29	24	5	1
Adequate support is provided by Career Development and Placement Cell (CDPC).	32	30	31	8	0
The effective and transparent leadership is reflected in various institutional policies/ practices.	35	34	30	1	1
Management of Institution follows â€œEqual Opportunityâ€ for all	34	33	24	7	2
Institute felicitates achievement of students through various modes.	41	31	26	3	0

*** Total number of feedbacks obtained: 98**

Other Feedback

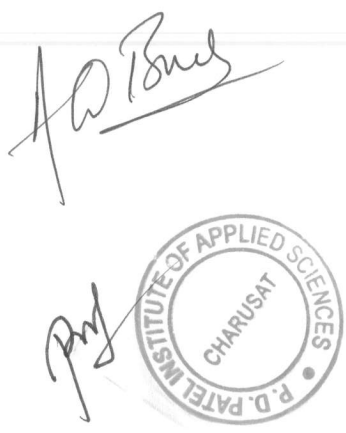
(1) Infrastructure related issues:
Need to keep neat and hygienic girls common room and washroom and handwash in every washroom.
Also need to keep classrooms clean and sweep regularly.
Network issues on campus need to be addressed

(2) Better facilites at computer lab are requested

(3) Study material for every subject to be provided

(4) Examinations test only remembering and does not focus on understanding concepts.

(5) Most other feedbacks largely express satisfaction and appreciation over the academics, curriculum, teaching-learning experience and avenues for co- and extra-curricular activites



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ACADEMIC YEAR 2021-22

FEEDBACK ANALYSIS (%) - MSc EXIT SURVEY - 2022

Parameter	Percentage				
	Excellent	Very Good	Good	Average	Below Average
Curriculum developed and implemented has relevance to local, national, regional and global development needs.	38	33	28	1	0
Curriculum was broad enough to prepare you for career of choice.	38	33	24	5	0
Curriculum integrates crosscutting issues relevant to processional ethics, gender, human values, environment and sustainability.	41	33	25	1	0
The learning was supplemented by co-curricular activities such as course work outside the curriculum, project work, internships, workshops, conference, symposia etc.	39	30	27	4	0
Audiovisual learning resources provided by teachers facilitated you to improve learning.	34	43	20	3	0
Reading material and other learning resources provided by teachers facilitated you to improve learning.	35	39	22	4	0
Hands-on practice in laboratories and project work facilitated in overall development, inculcating skills and time management.	49	34	15	1	0
Academic activities facilitate you to improve experiential learning, participative learning and problem-solving methodology.	37	39	23	1	0
Evaluation pattern (Unit Test, Assignment, and Presentation) made you capable of analyzing your strength & weakness, and empowered you to use resources effectively.	39	39	19	3	0
and life-long learning in the broadest context of technological change.	33	46	19	3	0
Institution has an eco-system to promote research and other initiatives for creationand transfer of knowledge.	41	41	19	0	0
Institution has adequate facility to carry out research.	39	33	28	0	0
Property Rights (IPR), entrepreneurship, skill development are organized regularly.	33	32	33	3	0
Activities with social relevance (NCC/ NSS/ CHRF/ CHARUSAT Rural Education etc.) are conducted regularly.	35	34	27	4	0
The institute has adequate facilities for Teaching â€“ learning viz. audiovisual amenities, classrooms, laboratories.	44	37	18	1	0
The institute has adequate facilities for Cultural activities, yoga, games (Indoor and outdoor), sports and gymnasium	38	28	25	8	1
The institute has adequate LAN, WiFi and Internet Facility	27	20	27	16	10
The institute has adequate and hygienic canteen and food facilities.	35	29	30	4	1
Campus Ambience (Greenery, Environment friendly eco system, usage of solar lights, saving of electivity, production of electricity, working space) is pleasant.	49	33	16	1	0
Adequate learning resources are available in library.	35	29	30	5	0
Active student council exists and students are involved in activities for institutional development and student welfare.	41	30	25	4	0
Institution timely resolves the grievances including sexual harassment and ragging cases	35	35	29	0	0

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Counseling helped in assessing learning level of students, leading to customized attention to needy students.	38	33	28	1	0
Institution encourages and provides support to participate in national and international events.	38	33	27	3	0
Capacity development and skills enhancement activities are organized regularly.	32	34	30	3	1
Adequate support is provided by Career Development and Placement Cell (CDPC).	39	33	24	3	1
The effective and transparent leadership is reflected in various institutional policies/ practices.	37	34	27	3	0
Management of Institution follows â€œEqual Opportunityâ€ for all	37	33	28	3	0
Institute felicitates achievement of students through various modes	41	33	25	1	0

*** Total number of feedbacks obtained: 79**

Other Feedback

(1) Other activities should be included in the department. And other festivals or event should be organized for the students for environmental change.

(2) There should be practical sessions if elective subjects are practical based.

(3) Wifi and internet facility needs improvement

(4) Industrial visit & trips should be organized

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ACADEMIC YEAR 2021-22

FACULTY OF SCIENCE

P D PATEL INSTITUTE OF APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

ANALYSIS OF FEEDBACK ON CURRICULUM (INDUSTRY/ACADEMIC PEERS/TEACHERS)

No	Parameter	Level (UG/PG)	Excellent	Very Good	Good	Satisfactory	Needs Improvement	Not applicable
1	Content of syllabus	B Sc	2 of 3					
		MSc	1 of 6	4 of 6	1 of 6			
2	Relevance of syllabus to industry/research requirements	B Sc		2 of 3				
		MSc	1 of 6	5 of 6				
3	Course outcomes are well defined	B Sc	3 of 3					
		MSc	1 of 6	5 of 6				
4	Sufficient reading materials and digital resources provided	B Sc	2 of 3					
		MSc	1 of 6	3 of 6	2 of 6			
5	Incorporation of advanced topics	B Sc	2 of 3					
		MSc		3 of 6	2 of 6	1 of 6		
6	Pedagogy proposed	B Sc	2 of 3					
		MSc		5 of 6		1 of 6		
7	Have a desired balance between theory and practical	B Sc		2 of 3				
		MSc	1 of 6	4 of 6		1 of 6		
8	Assessment methods are fair, measuring the outcomes	B Sc	3 of 3					
		MSc		5 of 6	1 of 6			
9	Project component in the course, if applicable:	B Sc						3 of 3
		MSc	1 of 6	2 of 6	1 of 6	1 of 6		1 of 6
10	Industrial training/practical exposure in the course, if applicable:	B Sc	2 of 3					
		MSc		1 of 6	3 of 6	1 of 6	1 of 6	

*** Total number of feedbacks obtained: 9**

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Subject Key and Other Feedback

1	Prepare the syllabus to give them a holistic view about science. Which can make them think logically. Question paper should have more concept based questions
2	Commercial mathematics and statistics in the curriculum to be included and enhanced
3	In the last Semester component of industrial training/ project can be included.
4	Faculties of Biological Science Department are good at evidence based teaching practices which motivate students.
5	Add new courses in MSc Microbiology
6	Industrial Microbiology and Bioprocess engineering appropriately includes fermentative production of primary as well as secondary metabolites. This course also addresses recent advancement in the field including use of Recombinant DNA technology for the commercial production of various metabolites. It also include basic aspects on IPR and Patenting. The course is very meticulously designed by incorporating all the aspects related to this course.

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DEPARTMENT OF BIOLOGICAL SCIENCES

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SUMMARY OF ALUMNI FEEDBACK - ACADEMIC YEAR 2021-22

Username	**khushburathod.1210@gmail.com**	**charuchavda17@gmail.com**	**patelkashyap721@gmail.com**	**henipatel1812hd@gmail.com**	**vidhibhatt802@gmail.com**
Name	**Khushbu Rathod**	**Chandni Chavda**	**patel kashyap**	**Heni Patel**	**Vidhi Bhatt**
Mobile Number	9724904989	6356281193	7016742095	9825227575	8460141825
Designation	Research Scholar	Junior Embryologist	Officer	Student	Research Scholar
Institute/Organisation	PDPIAS, CHARUSAT	Morpheus life sciences Pvt Ltd	Sun Pharmaceutical ltd	PDPIAS	P. D. Patel Institute of Applied Sciences, CHARUSAT
Feedback for the department	Department of Biological Sciences	Department of Biological Sciences	Department of Biological Sciences	Department of Biological	Department of Biological Sciences
Feedback for the Program	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)
Feedback for the course	All	Microbiology	Good Course	Microbiology	The course should focus onto improvising logical reasoning and analogy questions in the subject.
1. Content of syllabus	Very good	Very good	Very good	Good	Very good
2. Relevance of	Good	Very good	Very good	Very good	Very good
3. Course outcomes	Very good	Very good	Very good	Very good	Very good
4. Sufficient reading	Very good	Good	Very good	Very good	Satisfactory
5. Incorporation of	Good	Satisfactory	Very good	Very good	Good
6. Pedagogy proposed	Very good	Satisfactory	Very good	Very good	Good
7. Have a desired	Excellent	Satisfactory	Very good	Very good	Good
8. Assessment	Excellent	Very good	Very good	Very good	Very good
9. Project component	Very good	Satisfactory	Very good	Very good	Good
10. Industrial training/	Good	Needs Improvements	Good	Good	Good
Additional suggestions and remarks, if any:	None	And new course	Good	No	It is great that powerpoint presentations are provided for the topics, in that way one can follow in the class and not worry about missing out some important points but reading subject related books should be emphasized for in depth knowledge of the subject.

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Username	sagarsharma.ss376@gmail.com	divya2830patel@gmail.com	prashantkshatriya7@gmail.	ptanvi200@gmail.com
Name	**Sagar Sharma**	**DIVYA PATEL**	**Prashant Kshatriya**	**Tanvi Patel**
Mobile Number	-729689716	+1 9202690438	9724739794	6353405714
Designation	P.hD. student	MASTER'S OF MICROBIOGY	Research Scientist	BIOTECHNOLOGY
Institute/Organisation	University of Silesia	P D PATEL INSTITUTE OF APPLIED SCIENCES	GIOSTAR Research Pvt. Ltd	PDPIAS
Feedback for the department	Department of Biological Sciences	Department of Biological Sciences	Department of Biological Sciences	Department of Biological Sciences
Feedback for the Program	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)	Postgraduate course (M.Sc.)
Feedback for the course	Can we please add more detailed molecular biology. In the subject where we teach different methods like SDS page, we should also inclide clonning in detail and also new and advanced techique should be made known like CRISPR/Cas9. There should also be practicles involving tissue culture techniques of both plants and animals.	MICCROBIOLOGY	BioChemistry	Course taught in the college is excellent,there is no need to do the changes. Thank you.
1. Content of syllabus	Satisfactory	Excellent	Very good	Excellent
2. Relevance of syllabus to	Needs Improvements	Excellent	Good	Excellent
3. Course outcomes are well	Good	Excellent	Good	Excellent
4. Sufficient reading materials	Very good	Excellent	Very good	Excellent
5. Incorporation of advanced	Needs Improvements	Excellent	Satisfactory	Excellent
6. Pedagogy proposed	Good	Excellent	Good	Excellent
7. Have a desired balance	Satisfactory	Excellent	Good	Excellent
8. Assessment methods are	Excellent	Very good	Very good	Excellent
9. Project component in the	Excellent	Excellent	Good	Excellent
10. Industrial training/	Satisfactory	Very good	Good	Excellent
Additional suggestions and remarks, if any:	NA	PDPIAS is the best platform for all of the biological sciences students. I highly recommend PDPIAS if someone wants to pursue the degree of Microbiology or biotechnology or biochemistry. Thank you to the all-faculty members for explaining every single thing in detail and for	Need to increase the industrial visits and trainings to gain the actual working knowledge in the industries. Can invite some industrial senior people as guest lecturer.	No

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