

*One good book is equal to hundred teachers One
encouraging teacher is equal to one big library*

- Anonymous

CRITERION II - TEACHING - LEARNING AND EVALUATION

2.1 Student Enrollment and Profile

2.1.1 How does the college ensure publicity and transparency in the admission process?

A well informed prospectus is provided to the candidates seeking admission and the selection is done on the basis of merit. Eligibility criteria are strictly followed according to the Bangalore University norms. College has a well-designed website with all the information about various courses, fee structure, hostel facilities, departments and institutional strengths. Advertisement is also given in regional and national newspapers and opportunities are provided to students for seeking admissions. College participates in educational fairs at different states to put up stalls and encourage students to take spot admissions. Students who secure merit in the undergraduate courses are given encouragement to join PG courses in our college. Preference is also given to admit candidates belonging to SC, ST and OBC. Economically weak students are provided with special fee concessions ranging from Rs.5000/-10,000/-. In cases of meritorious, economically weaker and needy students, fee concession is given up to 50%.

2.1.2 Explain in detail the criteria adopted and process of admission (Ex. (i) merit (ii) common admission test conducted by state agencies and national agencies (iii) combination of merit and entrance test or merit, entrance test and interview (iv) any

other) to various programmes of the Institution.

Admission process is open and the candidate fulfilling the minimum eligibility criteria is given admission strictly according to Bangalore University norms after following the given processes without any capitation fee and uniform fee structure is maintained.

Selected candidates then undergo a counseling session along with their parents, following which the candidate is admitted to the courses.

Decisions are made by the management to implement equity in admission from current academic year. The governing council has decided to offer fee concessions to a maximum possible extent while admitting meritorious students of disadvantaged community, differently able, economically weaker section and sports persons. From the academic year 2013-14, the plan of action for the same will be implemented.

2.1.3 Give the minimum and maximum percentage of marks for admission at entry level for each of the programmes offered by the college and provide a comparison with other colleges of the affiliating university within the city/district.

Being a college affiliated to Bangalore University admissions to the courses offered are strictly done as per the guidelines of the Bangalore University. Such guidelines and conditions are clearly spelt out in the website, prospectus and advertisement matters for the benefit of prospective students.

2.1.4 Is there a mechanism in the institution to review the admission process and student profiles annually? If 'yes' what is the outcome of such an effort and how has it contributed to the improvement of the process?

Pre and post admission principals' meetings are conducted by the Director – Admissions. An admission Cell is constituted to assist and co-ordinate with admission process of the group institutions. In the pre-admission meetings the following issues will be discussed and consensus arrived:

- Discussion about feed backs about the admissions by all the stakeholders
- Student quality and methods to improve the quality of the student.
- Conducting a bridge course for the students who come from different backgrounds.
- Admission strategies to be followed.
- Review of the fee structure based on the expenditure incurred unit cost per student, etc.

Outcome of the review meetings:

Based on the meetings during 2011-12, an online self-assessment screening test was introduced to check the suitability of the candidate. This process is outsourced to an organization called Shodhaka. A toll free number and enquiry form is created on the group institution website to get connected with the aspirants. Prospectus and application form is displayed online. Padmashree Group of Institutions has made a strict policy to provide prospectus and application form free of cost. An orientation program is organized before the commencement of program to assess the skills of students. A week long bridge course is arranged at the beginning of every semester where basic calculations, handling of equipments, SOP's are taught to students and are equipped to take up the course. Students from various disciplines are brought on to a single platform by conducting this bridge course.

2.1.5 Reflecting on the strategies adopted to increase/improve access for following categories of students, enumerate on how the admission policy of the institution and its student profiles demonstrate/reflect the National commitment to diversity and inclusion

- * SC/ST
- * OBC
- * Women
- * Differently abled
- * Economically weaker sections
- * Minority community
- * Any other

The college admission criteria provide special provision for students' socio economic background. From this year onwards there are proposals to provide opportunity for meritorious students on a nominal fee basis in all the courses. A special drive is being planned to take economically weaker, meritorious students. College guides and facilitates for procurement of scholarships and loans for eligible candidates. College guides and facilitates for procurement of scholarships and loans for eligible candidates.

To facilitate differently abled students, a special committee would be identified to discuss **and come out with suitable systems at the institute**. Currently management has agreed upon to provide a ramp facility and wheel chair to facilitate differently abled students. The percentage of students from various disadvantaged sections is as given under.

2.1.6 Provide the following details for various programmes offered by the institution during the last four years and comment on the trends. i.e. reasons for increase / decrease and actions initiated for improvement.

YEAR	UG PROGRAM	NO. OF APPLICATION	NO. OF STUDENT ADMITTED	DEMAND RATIO %
2010 – 11	B.C.A.	40	30	60
	B.Sc.	10	08	10
	B.B.M.	20	18	40
2011 – 12	B.C.A.	30	24	50
	B.Sc.	10	06	10
	B.B.M.	20	15	40
2012 – 13	B.C.A.	10	07	10
	B.Sc.	15	11	10
	B.B.M.	15	10	10
2013 – 14	B.C.A.	25	21	60
	B.Sc.	15	10	30
	B.B.M.	20	15	40

YEAR	PG PROGRAM	NO. OF APPLICATION	NO. OF STUDENT ADMITTED	DEMAND RATIO %
2010 – 11	M.Sc. (BIOTECHNOLOGY)	40	36	60
	M.Sc. (MICROBIOLOGY)	15	12	40
	M.Sc. (BIOCHEMISTRY)	10	08	10
	M.B.A.	40	34	40
2011 – 12	M.Sc. (BIOTECHNOLOGY)	18	15	25
	M.Sc. (MICROBIOLOGY)	07	06	20
	M.Sc. (BIOCHEMISTRY)	08	07	10
	M.Sc. (ORGANIC CHEMISTRY)	10	08	30
	M.B.A.	42	38	60
2012 – 13	M.Sc. (BIOTECHNOLOGY)	06	05	05
	M.Sc. (MICROBIOLOGY)	03	02	08
	M.Sc. (BIOCHEMISTRY)	25	20	40
	M.Sc. (ORGANIC CHEMISTRY)	30	28	100
	M.B.A.	40	36	75
2013 – 14	M.Sc. (BIOTECHNOLOGY)	00	00	00
	M.Sc. (MICROBIOLOGY)	10	09	60
	M.Sc. (BIOCHEMISTRY)	15	11	60
	M.Sc. (ORGANIC CHEMISTRY)	25	18	80

	M.B.A.	25	15	25
	M.Com.	33	30	100
YEAR	PG DIPLOMA	NO. OF APPLICATION	NO. OF STUDENT ADMITTED	DEMAND RATIO %
2010 – 11	Nutraceuticals & Food Processing.	-	-	-
2011 – 12	Nutraceuticals & Food Processing.	15	10	-
2012 – 13	Nutraceuticals & Food Processing	22	14	-
2013 – 14	Nutraceuticals & Food Processing	25	20	-

2.2 Catering to Student Diversity

2.2.1 How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?

Differently abled students are given special attention in terms of their learning methods. Our teachers help them out in making them comfortable in the college environment. The college has plans to improve infrastructure for such people in terms of having ramp facility etc., in the coming years.

2.2.2 Does the institution assess the students' needs in terms of knowledge and skills before the commencement of the programme? If 'yes', give details on the process.

Students are interviewed and their educational background is analyzed. Based on teachers and students feed back during the orientation program, a fifteen days bridge course is conducted both in theory and instrumentation. During the program students are assessed for their skills and knowledge.

2.2.3 What are the strategies adopted by the institution to bridge the knowledge gap of the enrolled students (Bridge/Remedial/ Add-on/Enrichment Courses, etc.) to enable them to cope with the programme of their choice?

An orientation program is organized before the commencement of program to assess the skills of students. A week long bridge course is arranged at the beginning of every semester where basic calculations, handling of equipments, SOP's are taught to students and are equipped to take up the course.

Remedial coaching classes are also regularly conducted for identified students by respective subject teachers.

2.2.4 How does the college sensitize its staff and students on issues such as gender, inclusion, environment etc.?

The Women Empowerment Cell constituted on International Women's Day 2011, briefed the activities of women empowerment cell and the same is communicated to all segments in the college. Women empowerment cell takes care of grievances in particular and create awareness among women students and staff. The Women Empowerment Cell celebrates International Women's Day every year and make efforts to bring awareness about various aspects related Women and girl students in particular. They are provided details of opportunities available for in having career in science and technology, obtaining scholarships, etc, regularly.

The college organizes special programs on nationally important Independence Day and Republic Day conveying the message of national integration and solidarity. Teacher's Day, Ethnic Day, important Indian festivals are also celebrated to spread the message of peace and harmony.

An Eco Club is formed and guest lectures on environment awareness are arranged. Annually, since 2006 Eco Week is organized every year highlighting the importance of environment and its conservation.

Through JAAGTE RAHO! Club regular activity is planned towards higher voter registration and voter turnout in our campus, and to promote the spirit of volunteerism.

An active anti-ragging cell creates awareness among students the perils of ragging.

2.2.5 How does the institution identify and respond to special educational/learning needs of advanced learners?

The institution is equipped with the latest communication media facilities thereby ensuring students and teachers by using power points, animations and LCD. College management is in a process of procuring interactive boards with internet facility. The college has multimedia software for learning anatomy and physiology. Every student is encouraged to submit student projects to state and central government agencies. In the process PIMS students to their credit got selected for VGST/SPICE short term projects, sponsored by Department of Science and technology, Government of Karnataka. For the selected students Department of Science and Technology provides a financial support for three months to per sue short term projects in the college.

2.2.6 How does the institute collect, analyze and use the data and information on the academic performance (through the programme duration) of the students at risk of drop out (students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker sections etc. who may discontinue their studies if some sort of support is not provided)?

Mentors (faculty) are allotted with 5-6 students and they conduct regular

meetings with students to understand them. Based on the personal discussions and observation, mentors categorize students and pay personal attention to help slow learners. Remedial classes are conducted for low performing students.

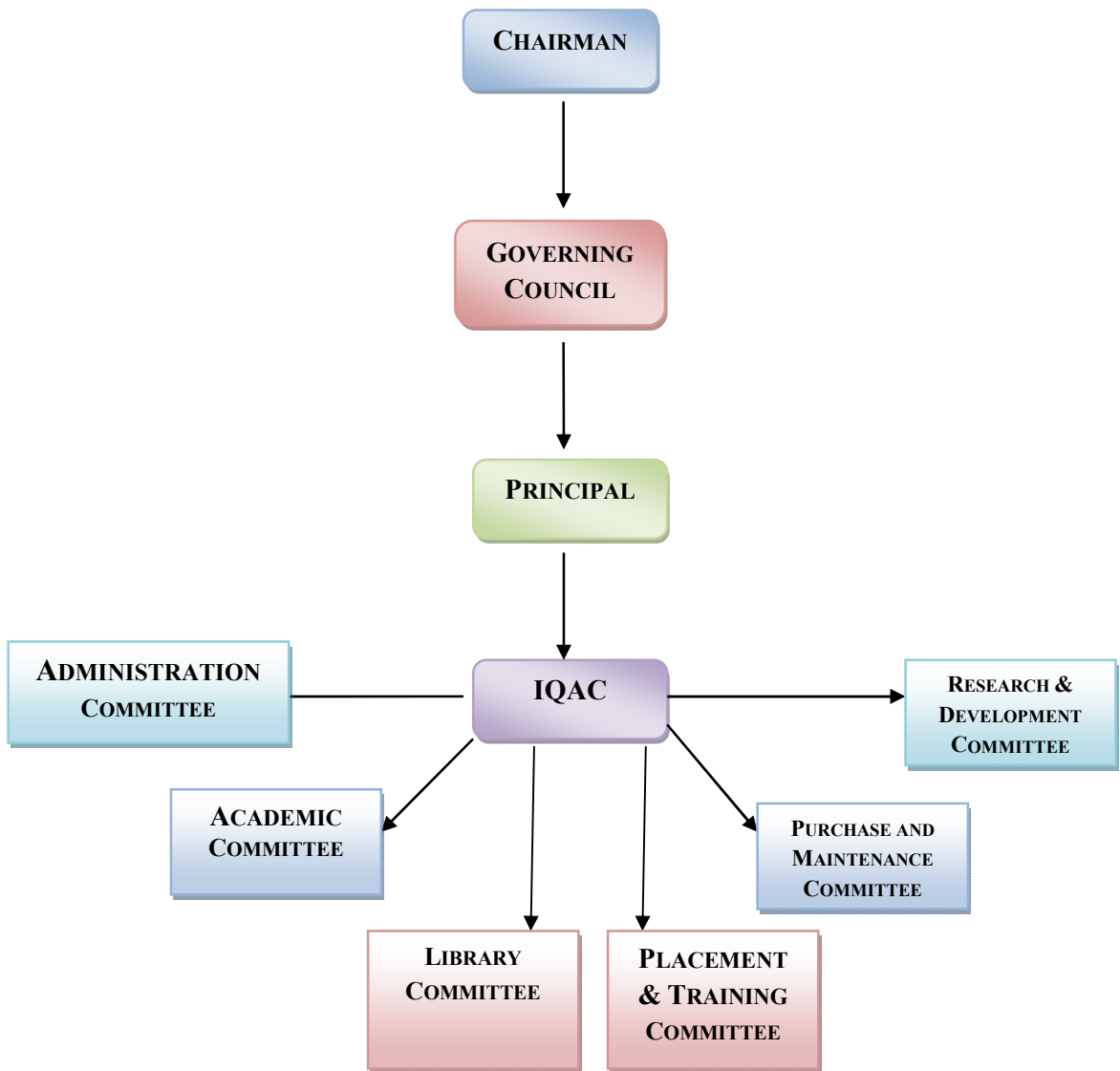
2.3 Teaching-Learning Process

2.3.1 How does the college plan and organize the teaching, learning and evaluation schedules? (Academic calendar, teaching plan, evaluation blue print, etc.)

The institution strategically prepares the academic calendar based on the calendar of events given by the university. The academic calendar starts from the commencement of classes, internal examinations, feedback collection, midsession exams, extracurricular activities, guest talks, preparatory and final examinations. The paper distribution is done among the faculty members well in advance and are directed to prepare the required academic documentation according to the prescribed formats made by the Academic cell. The teachers prepare course plan with distribution of syllabus into units and the required number of teaching hours. The lesson plan is made at the beginning of every session and teaching evaluation is done by the submission of lesson completion report. Practical manuals are prepared by the teachers to make students competent enough to learn the practical skills. Sample viva questions are also included in the manual. Practical plan includes the entire requirement for practical sessions, working principle, methodology and expected outcome. Practical completion report is submitted at the end of every practical session. All these teaching evaluation formats are assessed by the quality assurance department.

2.3.2 How does IQAC contribute to improve the teaching –learning process?

Pursuant to acceptance of IEQA, the institution has formed the IQAC and has identified a mechanism for internal quality assurance with the following structure.



Organizational chart for the functioning of IQAC

The institution has been actively pursuing quality assurance in all academic and administrative matters. Six committees viz., Academic, Administration, Placement & Training, Research & Development, Library and Purchase & Maintenance Committees were made to ensure the quality assurance. The role,

responsibility and mechanism of quality assurance at every level by all the committees are clearly defined.

2.3.3 How is learning made more student-centric? Give details on the support structures and systems available for teachers to develop skills like interactive learning, collaborative learning and independent learning among the students?

Comprehensive teaching and learning methods are designed by teachers in the beginning of the semester. By and large lecture method is employed to teach students the curriculum. But based on the subject/topic, the teaching methods are modified. Teachers use power point presentations and animations to make the concepts interesting and appealing. Few topics are taught in the lab with practical demonstration interspersed with theory for better understanding. Activity based teaching-learning is also given preference where teachers conduct quizzes, debates and field visits. In order to provide practical orientation to the management students, the faculties use case analysis method, group discussion method and presentation extensively.

2.3.4 How does the institution nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators?

Project based learning is conceptualized by conducting short term research projects for students in their final semester. The academic calendar allots specified fifteen days' duration for carrying out this work. Latest research topics of commercial and industrial implications are allotted to each mentor who would guide the students in designing and carrying out the experiments. A presentation is given by the students at the beginning where objectives, requirements and expected outcome of the experiments are discussed with the review of literature. After completion of the

project, students give a presentation discussing the results and outcome. These results are used to make poster and oral presentation at national seminars and symposia. Students are also encouraged to publish research articles in national and international journals.

Guest talks are organized in the college on a regular basis inviting eminent speakers from various fields. This helps students to learn the latest advancements in the field and also provide interactions with industry and academic experts during the process. The details of some of the important guest talks held during last two years are as follows:

Sl No	Name of the invited speaker	Area of expertise/Industry	Topic on which talk was given
1.	Dr. Priya R. Rao	Pelican Biotech and Chemical Labs Pvt Ltd., Kerala	Analytical techniques used in Quality Control
2.	Dr. Priya R. Rao	Pelican Biotech and Chemical Labs Pvt Ltd., Kerala	Biosafety practices and its importance
3.	Dr. Kameshwara Rao	Professor (Retd.) Bangalore University	Genetic Transformation and GMOs
4.	Dr. R. Dore Swamy	Eminent Plant Tissue Culturist	Prospects in Banana Tissue culture
5.	Dr. Purushottam	Indus Seeds Pvt Ltd., Bangalore	Gene Transformation
6.	Dr. Manoj C N	Pelican Biotech and Chemical Labs Pvt Ltd., Kerala	Job Readiness for freshers in life science industry
7.	Dr. G. Ravishankar	CFTRI	Algal Biotechnology
8.	Mr. S. Swaminathan	Katra Phytotech Pvt Ltd., Bangalore	Job skill required in Pharm industry
9.	Mr. Mohan P V	QA Dept, Sunil Agrobiotech Ltd., Tumkur	HACCP regulations.
10.	Mr. S. Swaminathan	Katra Phytotech Pvt Ltd., Bangalore	Analytical techniques in Pharma and Biotech industry.
11.	Dr. T. Pullaiah	Professor, Dept. of Botany, S. K. University, Anantapur	Biodiversity in India and Conservation through Biotechnology
12.	Dr. Shivakumar	Monsanto Research Center, Bangalore	Genetic transformation in plants
13.	Dr. D.H. Tejavathi	Professor, Dept of Botany, Bangalore University	An Overview of Micropropagation
14.	Dr. Jitendra Prasad	In Vitro International Pvt. Ltd., Bangalore	Commercial tissue culture and entrepreneurship.
15.	Dr. Seenappa	Eminent Ornithologist	Bird conservation in urban scenario

16.	Mohan Kumar K S	Consultant & Expert in supply chain Management	Supply chain Management
17.	Sriram D K	Expert in Marketing	Marketing in Global Economy
18.	Dilip Kumar Thakur	Formal VP Wipro	Evolution & Growth of Wipro. Industry expectation from MBAs
19.	Dr. Rajeev Gowda	Prof from IIM Bangalore	Recession & its impact on Indian Economy
20.	Dr. Bhanu K M	Prof from S V University, Tirupati	Statistics & its application & business
21.	Ms. Suchin	HR Manager, Wipro	Recruitment Strategies

2.3.5 What are the technologies and facilities available and used by the faculty for effective teaching? Eg: Virtual laboratories, e-learning - resources from National Programme on Technology Enhanced Learning (NPTEL) and National Mission on Education through Information and Communication Technology (NME-ICT), open educational resources, mobile education, etc.

The institution is equipped with the latest communication media facilities thereby ensuring students and teachers by using power points, animations and LCD. Teachers are encouraged to make an animation library, interactive CD's and maintained in the library. PIMS have subscribed to Bangalore University and the digital facility can be accessed at Bangalore University library. Eleven cards are given to the college and they are disbursed to the students and faculty on rotation basis for proper utilization.

2.3.6 How are the students and faculty exposed to advanced level of knowledge and skills (blended learning, expert lectures, seminars, workshops etc.)?

Seminar club holds the responsibility of conducting seminars for students. Topics are allotted to students, which are related to advanced and recent developments in their respective subjects at the beginning of the semester. Mentors

will assist the students in preparing the presentation and submission of report. Seminar club arranges for a panel of teachers to assess the seminars and give suitable suggestions for better presentation. Good presentations are encouraged with awarding prizes and certificates.

2.3.7 Detail (process and the number of students / benefitted) on the academic, personal and psycho-social support and guidance services (professional counseling/mentoring/academic advice) provided to students?

We have a systematic mentor-ward system. Each mentor would be allotted five students from each class. The mentor will collect and maintain the students' data. They conduct regular weekly meetings which are incorporated in the timetable itself. The mentor is responsible for the overall academic growth of the students. Mentor will maintain the student data in a prescribed format. The data which is entered into student profile include general information, contact numbers, previous academic profile, extracurricular activities etc. The following criteria are given importance during weekly meetings:-

- Regularity and punctuality in attending classes.
- Preparing seminar reports and presentations.
- Guiding in assignments and submissions
- Schedules for up to date studies and internal exams
- Personal counseling and motivation

2.3.8 Provide details of innovative teaching approaches/methods adopted by the faculty during the last four years? What are the efforts made by the institution to encourage the faculty to adopt new and innovative approaches and the impact of

such innovative practices on student learning?

Comprehensive teaching and learning methods are designed by teachers in the beginning of the semester. By and large lecture method is employed to teach students the curriculum. Based on the requirement of the topic the teaching methods are modified. Teachers use power point presentations and animations to make the concepts interesting and appealing. Few topics are taught in the lab with practical demonstration interspersed with theory for better understanding. Activity based teaching-learning is also given preference where teachers conduct quizzes, debates and field visits.

The institution is equipped with the latest communication media facilities thereby ensuring students and teachers by using power points, animations and LCD. College management is in a process of procuring interactive boards with internet facility.

Teachers and students are being sent to institutions like Indian Institute of Horticultural Research, IISc, GKVK, NCBS, CIMAP and allowed to interact with scientists to discuss about latest developments. Faculties are being sent to workshops conducted by different industries to upgrade their analytical and technical skills. Regular guest talks by industry experts and scientists are arranged to get updated with recent development at the research and industry front. Recently three of our faculty members attended a workshop at the Waters Ltd., Bangalore on ‘Recent advancements in HPLC and UPLC techniques’. These teachers have been regularly in touch with the industry and attend refresher programs whenever conducted.

2.3.9 How are library resources used to augment the teaching- learning process?

Library books are indented based on the updated syllabus and latest editions. Teachers suggest books to library as per the requirements of students and students feedback. There is a proposal to start departmental libraries in this academic year. Already indents are being collected from faculty and students for the purchase of books.

2.3.10 Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If 'yes', elaborate on the challenges encountered and the institutional approaches to overcome these.

Because of the proper planning, course plan system, advanced subject distribution the faculty hardly face any challenges in completing the curriculum. In the beginning of the semester as the faculty follows lesson plan & weekly work plan schedules for completion of syllabus. When there is a requirement for extra hours due to shortage of time, teachers put in additional teaching hours by adjusting during practical sessions. One of the challenges faced by the faculty is due to lack of time for add on syllabus and additional skill development along with regular curriculum. During such instances, a weeklong schedule is planned, especially experiments which are in need of continuity and longer incubation periods. Students are given with assignments and seminars, when there is a need for revision or repetition of certain topics. The IQAC and Coordinators of the class regularly monitor and help identifying guest speakers for specialized subjects.

2.3.11 How does the institute monitor and evaluate the quality of teaching learning?

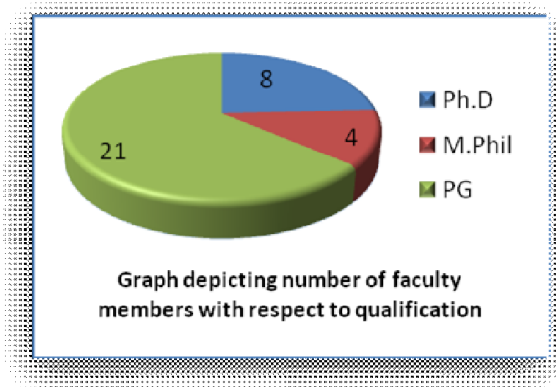
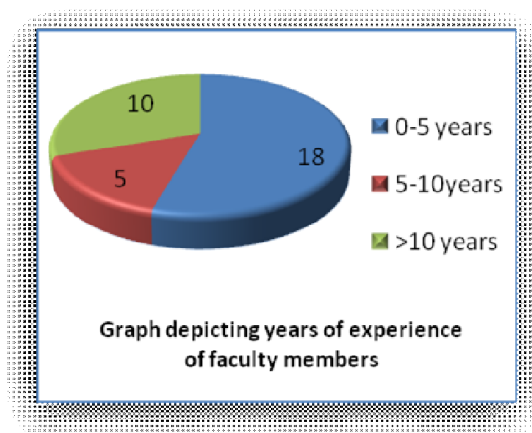
Principal in coordination with department heads and coordinators review and monitor planning and execution of academic activities. Academic cell which is constituted with an In-charge and members takes care of the proper functioning of the academic activities. Feedback mechanism is very effective and helps in monitoring and evaluating the teaching and learning process. Student and management feedback is analysed by IQAC and finally reviewed in meetings. Anonymous feed backs from students and all the stakeholders are collected by placing suggestion and complaint boxes.

2.4 Teacher Quality

2.4.1 Provide the following details and elaborate on the strategies adopted by the college in planning and management (recruitment and retention) of its human resource (qualified and competent teachers) to meet the changing requirements of the curriculum

Faculty members are selected and appointed based on merit, required qualifications and teaching and professional experience. A compulsory demonstration lecture followed by interview by panel is made mandatory. Final selection and appointment is done based on students, teachers and management feedback. In every department well qualified and competent teachers are appointed to handle all the courses. Few subjects where high expertise is required are handled by guest faculty and industry experts. Faculty is sent to training to renowned academic institutions and industry to get updated with the emerging trends.

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.	-	-	-	-	-	-	-
Ph.D.	-	1	-	-	-	-	09
M.Phil.	-	-	-	02	-	-	02
PG	-	-	03	-	06	10	19
Temporary teachers							
Ph.D.	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	-	-	-
Part-time teachers							
Ph.D.	04	01	-	-	-	-	05
M.Phil.	-	-	-	-	-	-	-
PG	-	-	01	01	04	04	10



Graphical representation of teacher strength in comparison with qualification & experience

2.4.2 How does the institution cope with the growing demand/ scarcity of qualified senior faculty to teach new programmes / modern areas (emerging areas) of study being introduced (Biotechnology, IT, Bioinformatics etc.)? Provide details on the

efforts made by the institution in this direction and the outcome during the last three years.

Institution appoints well qualified guest faculty to teach new programmes, in case of non-availability of teachers in specific areas of study. In certain subjects like bioinformatics and animal cell culture, exchange program is initiated between other colleges and institutions. PIMS students are sent to Maharani Lakshmi Ammanni College for Women (MLACW), Bangalore for a week to learn bioinformatics (both theory and practical). MLACW students in turn are taught with HPLC and other techniques where PIMS is having strong background and facility. In similar lines PIMS students are sent to industries like Radiant Research & Services Pvt. Ltd., Bangalore and Probiosys, Bangalore to train them in animal cell culture. This enables PIMS to develop relationship with other academic institutions and industries. Students are also exposed to latest technologies.

2.4.3 Providing details on staff development programmes during the last four years elaborate on the strategies adopted by the institution in enhancing the teacher quality.

Faculty are supported with financial aid as well as provided special leave facility for getting themselves updated with latest knowledge in their area of expertise as well as in subjects they teach. Teachers are deputed to attend training programs, refresher courses and workshops, which enabled them to get acquainted with latest trends and developments in their core areas. Faculties are sent to annual prestigious events like Bangalore India Bio and Nutra India Summit. Both are international platforms where they get opportunity to interact with the scientists of national and international reputation. Industry participation in such events is another important

aspect which helped PIMS faculty for networking and positive interactions.

a) Nomination to staff development programmes

Academic Staff Development Programmes	Name of faculty nominated
Refresher Courses	Dr. M Anuradha
HRD Programmes	
Orientation programmes	-
Staff training conducted by the University	Dr. Kumara swamy M Mr. Sudipta Kumar Mohanty
Staff training conducted by other institutions	Dr. Kumara swamy M Dr. Ravikumar H.N Mrs. Dhathri Devi N Mr. Pradeep S. Kaushik Mr. Sudipta Kumar Mohanty Mr. Lokesh P
Summer/Winter Schools, Workshops, etc.	Mr. Upendra Mr. Lokesh P

b) Faculty Training programmes organized by the institution to empower and enable the use of various tools and technology for improved teaching-learning

- ❖ Teaching learning methods/approaches:
- ❖ Handling new curriculum:
- ❖ Content/knowledge management:
- ❖ Selection, development and use of enrichment materials
- ❖ Assessment
- ❖ Cross cutting issues
- ❖ Audio Visual Aids/multimedia
- ❖ OER's
- ❖ Teaching learning material development, selection and use

Teachers are sent to industries like Monsanto Research Centre, Radiant Research & Services Pvt. Ltd., Chromus Biotech Pvt. Ltd, Rishi Herbal Technologies Pvt. Ltd, Probiosys Pvt. Ltd., etc., to train themselves at their labs. These training programs are organized in both formal and informal ways. Faculty are very proactive and successfully completed both formal and informal training at renowned academic institutions like IISc., GKVK, CFTRI etc. To enhance the ability of teaching, training

programs are organized on regular basis. Institutions like academy for creative teaching, CII conducted these programs for entire faculty of group institutions. Faculty utilizes the facility extended by Bangalore University both in terms of ICT and also skill development. Teachers also visit IISc., library for collecting literature. Alumnus of the institution pursuing higher education at CFTRI, IISc, NCBS share content and extend cordial support in terms of providing information about the technology and knowledge developments and trends.

c) Percentage of faculty

- ❖ invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies
- ❖ participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies
- ❖ presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies

More than 50% of the faculty are called as resource persons, participated and presented papers in workshops, seminars, conferences conducted by other organizations. Institution as a social responsibility promotes and popularizes science in rural colleges based at Tumkur, Mandya, Chitradurga, Chennapatna, Davanagere, etc. Faculties personally visited these places and delivered talks on job opportunities.

2.4.4 What policies/systems are in place to recharge teachers? (eg: providing research grants, study leave, support for research and academic publications teaching experience in other national institutions and specialized programmes industrial engagement etc.)

As the Institution believes that research as the prime driving force in all the post graduate programs, the committee is keen in active participation of the faculty

members in research. Institution encourages faculty members to register for their PhDs on extramural and part time basis, entire facility and consumables are provided to the faculty for their research activities. Financial assistance is provided for paper publication. On duty leave is granted for appearing for pre-Ph.D exams, *viva-voce*, attending seminars and conferences. Seed money is sponsored to faculty members who are interested in carrying out preliminary research that can lead to IP generation or publications.

The State Government sponsored VGST- SPiCE grants has been obtained by three of our teachers to mentor short term research projects for undergraduate students. In the last six years the institution has received two major projects sanctioned by the National Medicinal Plants Board, Government of India. Through the collaborative activities with RISHI Foundation, the institution has successfully completed the Rufford Foundation, UK sponsored project on biodiversity and conservation. The faculty are also encouraged to actively involved in projects sanctioned to alumni students of PIMS like Rajat Jayanthi Vigyan Sancharak Fellowship sanctioned by DST, New Delhi. With the tie-ups with many industries, the college is conducting collaborative activities in terms of student training, placement, research and development.

The institution is in collaboration with industries, NGOs and other organizations. The industry partners have helped in giving their valuable inputs in designing curriculum for add on programs and workshops. They have also given suggestions to supplement the course curriculum with industry helpful skills. We have sent many of our students to carry out internship at various industries. On job training services is provided in collaboration with Rishi Herbal Technologies Pvt. Ltd.

Every year students get trained in the Department of Biotechnology, New Delhi sponsored Biotechnology Industrial Training Program (BITP) conducted by the Biotechnology Consortium of India Limited, New Delhi. Through the collaborative activities with industries and NGOs the college is successful in developing and expanding its network in society and in the field of science and technology. It is also conducting many extension activities having social and environmental concern. The collaboration has also helped in assisting us in paper publications as well as applying for patents.

2.4.5 Give the number of faculty who received awards / recognition at the state, national and international level for excellence in teaching during the last four years. Enunciate how the institutional culture and environment contributed to such performance/achievement of the faculty.

Institutional culture though support teaching fraternity in all aspects, no awards for teaching has been received so far. However, teaching faculty of our institute is known in their peer group for the research activity undertaken and number of paper published in peer reviewed journals. Also they are recognized in terms of receiving research grants from many funding agencies. Department of Biotechnology of our institute has been consistently ranked among top private biotech schools by leading biotechnology magazine, Biospectrum. Also our teachers are called for various workshops and seminars as guest speakers and resource persons.

2.4.6 Has the institution introduced evaluation of teachers by the students and external Peers? If yes, how is the evaluation used for improving the quality of the teaching-learning process?

The institution has stringent mechanism in collecting feedbacks from students. The quality assessment cell in coordination with the academic cell prepares feedback formats for students and the filled formats are collected twice in a semester. Student feedbacks are analyzed by the quality assurance cell which consists of a representative from management, academic cell in charge and a subject expert.

2.5 Evaluation Process and Reforms

2.5.1 How does the institution ensure that the stakeholders of the institution especially students and faculty are aware of the evaluation processes?

The vision and mission of the institution is taken into consideration for planning. Long term goals in this regard are planned and the same are conveyed to the staff members at the regular meetings conducted with the management. The goal of the institution to achieve the center of excellence is always conveyed to the staff members and they are urged to give their inputs to achieve this. All teaching staffs and non-teaching staffs are involved in planning and implementation as they are involved in various committees under the different capacities of members, in charge persons and coordinators. Student representatives at some of the committees are ensuring their involvement in these processes.

The alumni and parents feedbacks are always considered as valuable inputs in planning and execution of different academic programs. The college's academic advisory committee comprising of industry experts and academicians are involved in planning. The IQAC of the institution is a completely organized structure which involves all the stake holders at various levels and achieves a coordinated evaluation of all academic programs.

2.5.2 What are the major evaluation reforms of the university that the institution has

adopted and what are the reforms initiated by the institution on its own?

Bangalore University calls for regular principals meetings of the affiliated colleges to discuss about the reforms in the university evaluation process. PIMS college principal and senior faculty members attend the meetings and contribute significantly towards the scheme and the process of evaluation. A separate meeting was initiated to discuss about the department of chemistry and the honorable vice-chancellor accepted to introduce project system and evaluators from eligible affiliated colleges also. The major reforms university has introduced in recent years are – making evaluation compulsory for all eligible teachers from affiliated colleges, introduction of OMR sheets and computerization of examination process. University has prescribed upper limit of number of papers to be evaluated. There are suggestions regarding introduction of CCTV coverage for transparency in paper evaluation. To benefit old students who could not complete their back papers within 2 years after their academic year completion were given another chance to complete their back papers. As far as college is concerned every reform introduced by university were strictly followed and implemented. Student fraternity is properly updated regarding the reforms and new systems introduced in the university. Introduction of projects for some P.G programs are well received and utilized by both faculty and students. This lead to paper publications and helped students to secure jobs. Internal assessment process is organized with schematic distribution of marks to students with a continuous evaluation.

2.5.3 How does the institution ensure effective implementation of the evaluation reforms of the university and those initiated by the institution on its own?

Class coordinators and HODs monitor the mechanism of evaluation. Internal

assessment marks are informed to students. The list eligible examiners are submitted to the university and faculty is encouraged to take up evaluation with priority.

2.5.4 Provide details on the formative and summative assessment approaches adapted to measure student achievement. Cite a few examples which have positively impacted the system.

Formative Assessment of the students are done by evaluating assignments, presentations, field visits, industrial visits, debates, quiz sessions, class interactions, group discussions, *viva-voce*, workshops, seminars, research activities and projects. Because of the assessment on research activities, students are motivated to submit small research projects and selected for the award of the same. Many students developed research aptitude and choose research as a career.

Summative Assessment of the student is done by continuous evaluations considering students regularity, assignments, seminars and internal tests. Each of the criteria carries marks and these are evaluated and marks are awarded and submitted to the university within stipulated time. This is how the Institution uses the formative and summative evaluation approach to measure the student's performance. Apart from the institutional summative assessment, the university conducts a summative evaluation at the end of each semester through the written exams, practical exams, *viva voce*, project work, etc.

2.5.5 Detail on the significant improvements made in ensuring rigor and transparency in the internal assessment during the last four years and weightages assigned for the overall development of students (weight age for behavioral aspects, independent learning, communication skills etc.)

Improvements in Internal Assessment

For assessing students in the last four several criteria were added. Written tests, attendance, presentations, field visits, assignments, seminars, workshops, and research activities, independent learning; behavioral aspects were considered to gauge the student.

Transparency in Internal Assessment

After evaluation, the student outcome is discussed with the students. The test results and final internal assessment marks are displayed on the notice boards. Under performing students are counseled by their mentors.

Weightage in Internal Assessment

While evaluating students for internal assessment due weightage is considered for their presentations skills in seminars, writing skills in the assignments, behavioral aspects in the form of regularity and punctuality, independent learning and communication skills.

2.5.6 What are the graduate attributes specified by the college/ affiliating university? How does the college ensure the attainment of these by the students?

With a constant endeavour to achieve and overall development of the students, various sessions for personality development, skill development, time management and other soft skills are integrated into the system

2.5.7 What are the mechanisms for redressal of grievances with reference to evaluation both at the college and University level?

The redressal of grievances regarding evaluation in both internal assessment and university examination are addressed through the following methods.

Internal Assessment

The student can discuss and allowed to get clarification regarding their internal assessment marks. Mentors and faculty explains and clears the doubts if any regarding the same. Discrepancies regarding totalling, valuations are treated with seriousness, both student and teachers are counselled.

University Examinations

With regard to university examinations, the mechanism adopted by the Bangalore University is allowing revaluation with payment of fees. College facilitates students and forwards the application form for revaluation.

2.6. Student performance and Learning Outcomes

2.6.1 Does the college have clearly stated learning outcomes? If ‘yes’ give details on how the students and staff are made aware of these?

The institution strategically prepares the academic calendar based on the calendar of events given by the university. The academic calendar starts from the commencement of classes, internal examinations, feedback collection, midsession exams, extracurricular activities, guest talks, preparatory and final examinations. The paper distribution is done among the faculty members well in advance and are directed to prepare the required academic documentation according to the prescribed formats made by the Academic cell. The teachers prepare course plan with distribution of syllabus into units and the required number of teaching hours. The lesson plan is made at the beginning of every session and teaching evaluation is done by the submission of lesson completion report. Practical manuals are prepared by the teachers to make students competent enough to learn the practical skills. Sample viva questions are also included in the manual. Practical plan includes the entire

requirement for practical sessions, working principle, methodology and expected outcome. Practical completion report is submitted at the end of every practical session. All these teaching evaluation formats are assessed by the quality assurance department.

2.6.2 Enumerate on how the institution monitors and communicates the progress and performance of students through the duration of the course/programme? Provide an analysis of the student's results/achievements (Programme/course wise for last four years) and explain the differences if any and patterns of achievement across the programmes/courses offered.

Value addition to Academic activities

Institution is bound to follow curriculum prescribed by Bangalore University. However various programs are introduced and implemented to supplement the curriculum and enhance the skill levels of the students. The following are the value addition initiatives.

- Bridge course on basics and fundamentals at the beginning of the course.
- Add on courses with industry modules for science streams.
- Involving students in seminars and workshops conducted at regional and national level.
- Industrial visits and institutional visits, Mentor-ward system to inculcate healthy competition.
- Remedial classes are conducted for slow learners

Value addition to skills

- Upgraded practical syllabus with more number of experiments

- In-house projects supervised by teachers
- Personality development and time management programs
- Talks organized on job readiness and skill up gradation

Value addition to Career:

- Encourage students and guide them to present papers and posters at national conferences/seminars.
- Awareness is made about fellowships, scholarships and grants available for higher education
- Interaction with industry experts in the campus itself.
- Placement cell takes care of students from resume building, identification of suitable industries or jobs, campus interviews.

Social values:

- Annual eco-week with different central themes every year is creating environmental and social concern to students.
- DST Rajat Jayanthi Vigyan Sanchar Science Communicator Fellowships is implemented in collaboration with RISHI Foundation, Bangalore.

2.6.3 How are the teaching, learning and assessment strategies of the institution structured to facilitate the achievement of the intended learning outcomes?

2.6.4 What are the measures/initiatives taken up by the institution to enhance the social and economic relevance (student placements, entrepreneurship, innovation and research aptitude developed among students etc.) of the courses offered?

The Placement and Training Cell is constituted that plans and executes the activities of the placements and training. The cell helps in building network with

industries and companies and is responsible to arrange student interviews and arrange industry to visit the campus for recruitment. The other activities include helping students in skill development, resume preparation, mock interviews as well as periodical display of useful information regarding employment, training and research opportunities. It also conducts workshops and guest talks on capacity building, time management and personality development for the help of students. The alumni student association also gives its sincere inputs in helping our students in placements.

The competitive examination cell at the college is functional and helps students to prepare for taking up UGC-CSIR, SLET, GATE, CAT, GRE, TOEFL, GMAT, Civil services (IAS, IPS, IFS, IRS), Central/State services exams. We have a core team comprising in charge, teachers as members and student representatives from each department. The activities and infrastructure such as books, purchases, computers and other learning resources are being maintained by in charge and student representatives.

The institution is in collaboration with industries, NGOs and other organizations. The industry partners have helped in giving their valuable inputs in designing curriculum for add on programs and workshops. They have also given suggestions to supplement the course curriculum with industry helpful skills. We have sent many of our students to carry out internship at various industries. On job training services is provided in collaboration with Rishi Herbal Technologies Pvt. Ltd.

Every year students get trained in the DBT sponsored Biotechnology Industrial Training Program (BITP) conducted by the Biotechnology Consortium of India Limited. Through the collaborative activities with industries and NGOs the college is successful in developing and expanding its network in society and in the

field of science and technology. It is also conducting many extension activities having social and environmental concern. The collaboration has also helped in assisting us in paper publications as well as applying for patents.

2.6.5 How does the institution collect and analyze data on student performance and learning outcomes and use it for planning and overcoming barriers of learning?

Student performance data is collected by various means like mentors after interacting with students submit a report to IQAC, which in turn conducts meetings with staff, students and management to deliberate issues with special reference to students. Student centered learning, special coaching for slow learners, encouragement towards research and development, industry orientation is done on case to case basis. Parent's feedback and student's future aspirations are given prime importance while designing these co-curricular and extra-curricular activities. To support activity based learning special focus and attention is given to week long programs on environment, safety and extension programs. Hundred per cent Student participation is achieved in all such diversified activities. With reference to management and computer students' practical orientation, case studies, group discussions are adopted. The concept of project based learning is initiated and a program named as BiodHRona is started to improve job oriented training and business aptitude. Based on the outcome of the same from this year a business incubator along with department of management studies is planned and to be placed in next governing council meeting for approval. P.G. students of life sciences stream are assigned with live projects in their second year. Every student is allotted with a guide and the positive output of this exercise is paper publications, presentations in national and international journals.

2.6.6 How does the institution monitor and ensure the achievement of learning outcomes?

The institution has been actively pursuing quality assurance in all academic and administrative matters. Six committees viz., were made to ensure the quality assurance. The role, responsibility and mechanism of quality assurance at every level by all the cells and committees are as follows. There are IQAC meetings every quarter to monitor and suitable strategies or reforms made. Students awarded with best seminar presentation to ensure best outcome.

2.6.7 Does the institution and individual teachers use assessment/ evaluation outcomes as an indicator for evaluating student performance, achievement of learning objectives and planning? If 'yes' provide details on the process and cite a few examples.

Yes, the institution and individual teachers use assessment / evaluation outcomes as an indicator for evaluating student performance, achievement of learning objectives and planning. Unit tests were conducted after completion of each unit and assessment were made on weekly basis. Internal assessment was made for both Theory and Practical papers. Seminar club holds the responsibility of conducting seminars for students. Topics are allotted to students, which are related to advanced and recent developments in their respective subjects at the beginning of the semester.

Mentors will assist the students in preparing the presentation and submission of report. Seminar club arranges for a panel of teachers to assess the seminars and give suitable suggestions for better presentation. Good presentations are encouraged with awarding prizes and certificates.