



MILAGRES COLLEGE

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Office of the Principal

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DEPARTMENT OF CHEMISTRY

Year: 2020-2021

✓ **Faculty**

Staff					
Sl.No.	Name of the Staff	Qualification	Status	Designation	Date of Joining the Service
01	Rev. Dr (Fr) Prakash Anil Castelino	M Sc. Ph.D	Management	Asst. Professor & HOD	01-01-2019
02	Mrs Loyleeta M D Souza	M Sc., K-SET	Management	Lecturer	01-01-2021
03	Lab Asst	Mr. Dinakar Poojary	M.A.	Permanent	Lab Asst

No. of Students

III B Sc	II B Sc	I B Sc
47	27	15

✓ **Action Plan 2020-2021**

The following activities have been planned for the academic year 2020-2021

1. National Conference in Chemistry in August/September 2020
2. Arranging at least two guest Lectures to BSc Students
3. Organize inter class seminar, Quiz and Science Model Competitions
4. Organize University level Fr G. D'Cruz memorial Science Lecture and Quiz Competitions.

5. Arranging Study Tour/Industrial Visits to B Sc. Students.
6. Participation in National/International level Seminars.
7. Training to Students on software's like Chem draw, chem Sketch
8. Training the students on Basics of Computer
9. Bridge Course and Remedial course in Chemistry
10. Staff attending at least two State level or National level conferences.
11. Basic Computer skills to B Sc. Students.

✓ **Action Plan Implemented: Activities**

Action plan implemented or Activities Conducted During the Year 2020-2021

➤ **Curriculum:**

Classes, Laboratory experiments were conducted in accordance with the syllabus prescribed by the Mangalore University-UG course.

CBCS syllabus was implemented. At the end of the even semester the regular classes were suspended due to an outbreak of COVID-19. Online classes were conducted.

Inauguration and Celebration of Science Day on 02-03-2021.

Science Association for the academic year 2020-2021 was inaugurated on the 02-03-2021. Dr Clifha Saldanha, a renowned Professor in Nitte Institute, Nitte, Karkala was the esteemed guest. The talk on 'Science-It's scope and Future' was arranged after the inaugural programme.

National Science Day was celebrated under the leadership of III B Sc. Students on 28-02-2021.

Plant a sapling

In July and August 2021, Due to COVID-19 pandemic, students had online classes to a greater extent. During their stay at home, Chemistry Department along with Science Association conducted a 'Plant a sapling' competition for science and non science students, where 60 science students had planted saplings and uploaded photographs.

Department of Chemistry is trying its best to make Chemistry fascinating to students. COVID-19 had an impact globally, so was the case in India. Due to COVID-19 restrictions, few programmes were conducted. Amidst the pandemic, Labs were conducted for students. To make the learning process interesting PPT's of each subject were prepared, where students had visuals and audio concepts.

Students were encouraged to participate in various events organized by different colleges to create leadership qualities and make them bold to face the society after graduation. Quite a few students have participated in University level and State level

competitions and won laurels. Regular articles or information related to Chemistry are published on the Notice boards of the Department. We place on record the services of Prof. Joseph Peter Fernandes, who strived hard to develop the Chemistry Department.

➤ **Staff Achievements**

Counseling Techniques Through Role Play

Staff Memebtrs had fruitful training programme on the Counseling techniques through Role Play on 25-05-2020. Mr. Oliver N Sutari was the resource person. Therapeutic role playing technique was followed which allows the person with a phobia to practice new behaviours.

New Education Policy Training

Staff members participated in a training programme of New Education Policy organized by IQAC on 05-07-2021. You tube video on NEP presented by Dr Thimme Gowda, Deputy Chairperson Karnataka State Council for Higher Eductaion was screened. The Chemistry Department teachers participated in the programme.

Training on effective use of Social Media was conducted to staff on 27-11-2020 by Asst Prof. Elson Hirgan, St Agnes College Mangaluru (Autonomus).

Zoom and Google Class room training

Mr. Ankith and Fr Evan Gomes conducted FDP to staff on Google class room on 12-01-2021 in which Chemistry department actively engaged.

NAAC New Methodology

Staff participated in one day programme on NAAC new methodology by IQAc, to which Dr Richard Gonsalves, the Director of DDU Kaushal Kendra, St Aloysus College (Autonomous), Mangaluru and Dr Naveen P. Mascarenhas, Associate Professor in Departmnet of Computer Science, Application and Animation at St Aloysius College (Autonomous) Mangaluru were the resource persons.

Farewell to Prof. Joseph Peter Fernandes

On 31-12-2020, Prof. Joseph Peter Fernandes on reaching superannuation bid farewell to his teaching faculty and to the Department of Chemistry. He hasd served the deprtment for 36 and half years.

COVID-19 online classes

The Department of Chemistry made teaching fascinating amidst the period of crisis. Due to COVID-19 though there were pandemic restrictions, teaching was made easy through video's power points. Students were encouraged to equip themselves to online mode of communication.

Staff members, Rev. Dr (Fr) Prakash Anil Castelino & Mrs Loyleeta D'Souza attended 10 days programme on FDP on 'Recent Trends in Education, Technology and Management' from 30-07-2021 to 08-08-2021 organized by Milagres College, Kallianpur and GFGC Kavoor, Mangalore.

➤ **Students Achievements: Student's participation in seminars and competitions.**

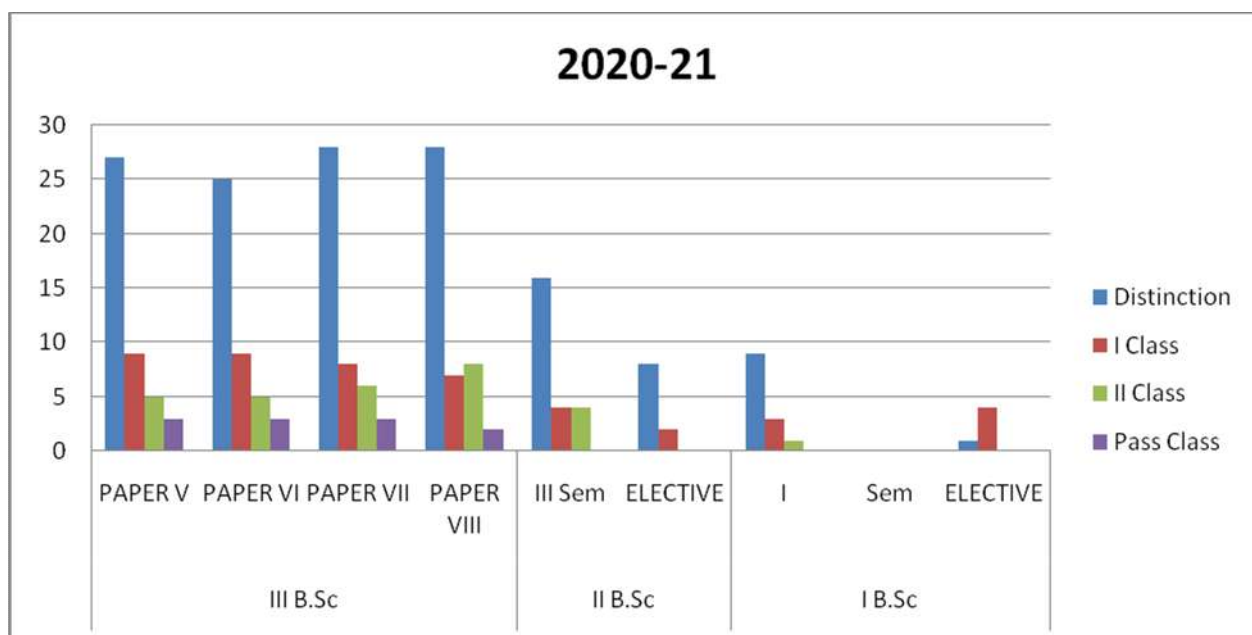
Student's tiny steps

Plant a sapling

In July and August 2021, Due to COVID-19 pandemic, students had online classes to a greater extent. During their stay at home, Chemistry Department along with Science Association conducted a 'Plant a sapling' competition for science and non science students, where 60 science students had planted saplings and uploaded photographs.

➤ **Result Analysis: University Examinations 2020-2021**

CLASS		Total number of Students	No of students appeared	No of students Passed	Percentage	Distinction	I Class	II Class	Pass Class
III B.Sc	PAPER V	47	47	44	93.61	27	9	5	3
	PAPER VI	47	47	44	93.61	25	9	5	3
	PAPER VII	47	44	45	95.74	28	8	6	3
	PAPER VIII	47	44	45	95.74	28	7	8	2
II B.Sc	III Sem	27	27	24	88.88	16	4	4	0
	ELECTIVE	10	10	10	100	8	2	0	0
I B.Sc	I Sem	15	15	13	86.66	9	3	1	0
	ELECTIVE	5	5	5	100	1	4	0	0



✓ **Laboratory**

The department has a full pledged laboratory. The Laboratory was renovated in 2020. It has basic facilities required for UG curriculum. Safety precautions, signboards were added. Apron and safety precautions like goggles are providing best guidelines. The laboratory contains safety measures such as fire extinguishers, First aid etc. and is well maintained.

✓ **Best Practices**

1. Opportunity and guidance to all the college/high school students to perform experiment of their choice and interest,
2. Special encouragements to the students in using Departmental Library to acquire additional knowledge in the subject.
3. Getting students to the Campus to participate in various Science Events.

✓ **Planning and Curriculum Delivery**

The assessment of the effective delivery of the curriculum and learning outcome is ensured through bridge course, the periodic interaction with the learners, assignments, class tests, internal assessment tests (mandatory by the University) and university semester examinations.

✓ **Lesson plan**

Teachers prepare monthly plan of the syllabus for each semester to complete the syllabus systematically.

✓ **Department Meetings:**

We conduct Dept. Meetings to discuss many issues relating to the curriculum. Staff and the Laboratory Asst meet regularly to discuss the curriculum. Regular meetings were conducted to discuss mode of operation of syllabus, Bridge course, remedial courses, activities of the department etc. Every programme was evaluated during the Departmental meetings. After the announcement of the results/class test the performance of each student was evaluated and the remedial measures were taken.

- ✓ Syllabus - Method of Teaching
- ✓ Conducting Bridge Course
- ✓ Identifying slow learners and remedial coaching
- ✓ Discussion on guest lectures
- ✓ Project for the year and visits to farms, industries, fisher folk, banks etc.
- ✓ Conducting Tests and Seminars
- ✓ Review of syllabus done and students' performance in examinations.
- ✓ Use of modern techniques of teaching
- ✓ Preparation for NAAC visit - Documents to be prepared

✓ **Departmental Library**

Latest editions are available in all the Disciplines of Chemistry are available in the Department Library to have additional Knowledge. Research journals of Chemistry and Environment and Chemistry Today are also available in the College Library. All the books are used by the students. Mr. Ronald Rajesh Lewis and Mr. Laxman, Alumni of the Department donated a number of books to the Departmental Library.

✓ **Bridge Course**

A bridge course of 10 hours for newly admitted students is conducted every year to I B Sc. Students. The main objective of the course is to bridge the gap between subjects studied at Pre-university level and subjects they would be studying in Graduation. The syllabus was framed. It included the introduction to Chemistry, Fundamentals of Chemistry, basic Information of Periodic table, Atomic Structure, IUPAC Nomenclature and volumetric analysis. At the end of Bridge course a test was conducted and the progress was evaluated. These classes help them to understand the syllabus of I degree better.

✓ **Internal Tests**

Every year we conduct class test/ internal assessment tests to evaluate the learning ability, skills of the students.

The performance of the learners in university examinations is documented in the register of examinations, class test/ internal assessment test scorings are documented in the office for computation of internal assessment marks.

After the evaluation of the internal assessment & university examinations, advanced learners and slow learners are identified and special efforts are made to encourage them.

✓ **Tutorials**

The tutorial work taken by Prof. Joseph peter Fernandes and Prof. Subramnaya Joshi. Two hours of tutorials per week were held. About 20 students were given to each lecturer and the teacher guided the students in both academic as well as co-curricular activities. Timely advice was given to the student/s.

✓ **Advanced learners**

Advanced learners are asked to refer more books from the library and collect more information from online and are motivated to present papers and teach their peers. These students were given text books and asked to prepare notes and help the slow learners. They were made to present papers in class and Seminars with power point presentations and on the board by the traditional methods.

✓ **Slow Learners: Remedial coaching**

These students were given remedial coaching after class hours. Tests were given to these students. They were made to write assignments. Examination question papers were discussed with them. Students benefited from constant tips and revision along with constant instruction on different issues and concepts.

✓ **Teaching Methodology**

Students and staff use modern and Innovative techniques of teaching along with traditional method of chalk and talk.

✓ **Cross Cutting Issues of the Curriculum in the Department of Chemistry**

Human Values: Value Education Classes, Communal harmony

Gender : Study Constitution, Co-education college, Respect to others, National Festival Celebrations

Environment and Sustainability: Eco friendly practices in the Lab, Environment Chemistry, Students participate in NCC, NSS, Paddy cultivation, Chemistry in Daily Life.

Professional Ethics: Right usage of knowable to build progressive and development Society, Importance of Higher Education, Lab safety.

✓ **PROGRAMME SPECIFIC OUTCOMES**

The Department gives an awareness about the programme outcomes to have an overall idea about the knowledge, skills, abilities and attitudes that students can acquire during the pursuit of UG courses. In the B. Sc programme Chemistry Courses are part. The specific learning outcomes of various courses are built into the curriculum of each programme is available on the Mangalore **University website** (www.mangaloreuniversity.ac.in). Learning outcomes form an integral part of college vision, mission and objectives.

The Institution communicates the programme and course outcomes to the teachers and students in the following ways:

- Learning Outcomes of Programs and Courses are uploaded on the website of the college.
- Freshers get the required information from the college prospectus, college notice boards and student Handbooks.
- During admission, Students are informed of the courses and their outcomes.
- The outcomes of each programme and the course outcome of each subject are made known to the students by organizing Orientation Programmes.
- The hard copy of the syllabus of each subject with course outcomes is made available in the respective departments for ready reference for the teachers and students.
- Course outcomes are displayed on the departmental notice board.
- Teachers make the students understand the learning outcome of each unit, making the teaching-learning process more fruitful.
- The interactive sessions with successful alumni are organized to guide students to choose programmes to shape their careers.
- Teachers of every department interact with the students about what they are supposed to get at the end of each program.

- Teachers participate in the workshops organized for revising the syllabus of the various subjects under various programmes of the University.
- College puts up the digital flex boards in the prominent area of the college to make the stakeholders aware of the programmes of the college and also highlights students achievements and list the kind of jobs that students can get after completion of the different programs.
- **Programme Specific Outcome for Chemistry are,**
 - Helps Students to develop skills
 - Laboratory Experience
 - Scope for Research and Higher Education: M Sc. Ph. D, Bed etc.
 - Competitive exams preparation
 - Civil service-Entry
 - Development of Scientific temper

✓ **Attainment of Course Outcome (CO'S), and Programme Specific Outcomes (PSO's)**

Students are evaluated based on continuous evaluation based on

- Through the Vision, Mission of the College

“To transform youth into responsible citizens and competent professionals through quality education and research.”

- Vision Mission of the Department
- Through their Learning capacity: Slow, average and Advanced Learners
- Exposure to Industry, Field Visits
- Seminars, Projects etc.
- Entrepreneurship awareness.
- Certificate courses and training programmes.
- Experiential learning.
- Coaching for competitive exams (IAS, CET etc.)
- Talent Nurturing programmes in the campus: Soft skill Development
- Course outcomes are measured through the performance of the students in the class, practical, internal evaluations, and external evaluations.

Mentor-Mentee

Every teacher of the department conducts is assigned the responsibility of mentoring a group of students. The teacher interacts personally with the allotted students to know their family background, social and economic status, their emotional problems if any. These mentees meet mentors regularly to seek advice and share their feelings. Mentors

give guidance, and advice to the mentees to improve their performance in the studies ,encourage them to participate in extra-curricular activities, prepare them to face the challenges in life and become a successful in life.
