



MILAGRES COLLEGE

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DEPARTMENT OF CHEMISTRY

Year: 2016-2017

➤ Faculty

Staff					
Sl.No.	Name of the Staff	Qualification	Status	Designation	Date of Joining the Service
01	Prof. Subramanya Joshi	M. Sc.	Permanent	Associate Professor & HOD	30-06-1983
02	Prof. Joseph Peter Fernnades	M. Sc.	Permanent	Associate Professor	01-07-1984
Lab Asst	Mr. Dinakar Poojary	M.A.	Permanent	Lab Asst	15-07-1984

No. of Students

III B Sc	II B Sc	I B Sc
36	25	18

➤ Action Plan for the academic year 2016-17

- 1). Bridge course of 15 hrs. duration for I B Sc. students.
- 2). Remedial Coaching for the slow learners.
- 3). Special coaching for the advanced learners for all the B.Sc. students.
- 4). Seminars for all the B.Sc. students.
- 5). Use of computers, Internet facilities in the department.
- 6). Arranging Guest lectures and extension lectures for the B Sc. students.
- 7). Arranging University Level Lecture and Seminar competition in association with Association of Chemistry Teachers of Mangalore University.
- 8). Arranging special programmes to popularize Chemistry such as
- 9). Science model competition, experiments with principle, science quiz, etc., for high school and P.U.C. students.

- 10). Arranging visits to chemical factories.
- 11). Organizing State Level Workshop in Chemistry.

➤ **Action Plan Implemented: Activities Conducted During the Year 2016-2017**

➤ **Curriculum:**

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

➤ **Seminars and Competitions**

Science Association:

The inauguration programme of the Science Association of Milagres College was held on 14th July 2016. Prof. Dr. Vyasa Upadhyaya, the chairman, Department of Physics, MIT Manipal was the chief guest. He delivered a lecture on "Ionising radiation and its applications" explaining about its sources, radioisotopes, radiation dosimeter, medical and other applications. He motivated students for science activity by giving 3D movie disk. Dr. Gerald Pinto, the Principal of Milagres College was the President of the programme. Prof. Archana K. Dabade, the convener of Science Association, introduced the chief guest and welcomed the gathering. She also presented the list of activities planned during the Golden Jubilee year 2016-2017. Prizes were also given to the meritorious students of 1st, 2nd and 3rd year B.Sc. who have scored more than 80% in previous semester examination. Rev. Fr. Dr. Prakash Anil Castelino, the Campus Director was the Guest of Honour. The office bearers of science association were present in the programme. Brandon proposed the vote of thanks. Sherwin compeered the programme.

Seminar Competitions:

A seminar competition was held for B.Sc. Students on 29th July 2016 at 3 p.m. The students were allowed to choose the topic of their choice from Physics, Mathematics or Chemistry. About nine students participated and the following students have won the prizes. 1st Prize - Hephzibah Oliver - II B Sc. Won the I Prize.

Late. Very. Rev. Fr. Dr.D'Cruz memorial Science Competitions-2016:

Late. Very. Rev. Fr. Dr. D'Cruz Memorial Science Competitions-2016 was organized on 14th September 2016 in association with the teachers of the Association of Chemistry teachers of Mangalore University in the Silver jubilee hall. The competitions were inaugurated by Dr. Deepak D'Silva, coordinator, PG Centre, St. Philomena College Putturu. The Colleges under Mangalore University participated in the competitions. There were competitions like Ice Breaking, Physics Seminar, Chemistry Seminar, Maths Seminar, Collage, Science Model, Science Poem writing and Physics Quiz. The Physics seminar and Physics Quiz were sponsored by APTMU and the Chemistry seminar was sponsored by ACTMU. SDM College, Ujire bagged the team Championship with maximum

number of points. Our College students participated only in Inter-Collegiate Physics and Chemistry sem- inar competitions. Prof. T. M. Ananda, HOD of Physics, Bhuvanendra College, Karkala, the President of the Association of Physics Teachers of Mangalore University distributed the prizes. Dr(Fr) Prakash Anil Castelino, the Campus Director was the Guest of honour. Dr Gerald Pinto, Principal presided over the function. Prof. Bhavani, Retired professor of Physics, Mrs. Chaya Karkera, a Research scholar from MIT Manipal and Akshatha Nayak from St. Mary's Junior College Udupi were the judges for the competitions.

The department along with the Association of Chemistry Teachers' of Mangalore University conducted Rev. Fr G.L. D'Cruz Memorial Intercollegiate Chemistry lecture competitions on 14th September 2016. Nearly 15 colleges affiliated to the Mangalore university participated in the competitions. The following students won the prizes.

I Prize: Ruth Lewis, St. Philomena College, Puttur

II Prize : Sowjanya, Vijaya College, Mulki

III Prize : Aveena D'Souza, Sri Bhuvanendra College, Karkala

Former President of Chemistry Teachers' Association Prof. Subrahmanya Joshi distributed prizes.

Visit to Industry: Visit to Research Laboratories, Microtron and Science Centres:

A visit to the Research Laboratories of the department of Physics, Microtron Centre at Mangalore University and to the 'Science Centre' at Pilikula was organized on 15th February 2017. Twenty-nine students of Final year B Sc. along with the staff members of the department of Physics first visited the laboratories at the Centre for Advanced Research in Environmental Radioactivity (CARER) and also at the Centre for Application of Radioisotopes and Radiation Technology (CARRT). Students were exposed to various methods of sample processing, isotope separation, Radon calibration, Gamma spectrometry etc., at CARER. They were given information regarding Gamma Irradiation Chamber used for various C198 applications, urea breath test using C14 Analyzer, TLC scanners etc., at CARRT. The students were then taken to MICROTRON Centre. The faculty there explained the working of the particle accelerator. The group also visited the 'Science Centre' at Pilikula after lunch. The students had hand-on experience with the science models explaining fundamental principles of science. Also 3D film was viewed by the group. The study tour was from 8 am to 7pm.

Celebration of National Science Day

The National Science day is celebrated all over India on 28th February every year to commemorate the discovery of Raman Effect by the Nobel Laureate Sir C.V. Raman on 28th February 1928. This year U.G.C. has assigned a theme "Science and Technology for the especially disabled people" for the celebration of the National Science Day.

The Science Association celebrated the National Science Day on 28th February, 2017 in the Audio-visual room from 3pm to 5pm. Explaining the significance of the National Science Day Prof Shailaja .H., Asst. Prof from MGM College, Udupi, the Chief Guest of the programme explained how science and technology is helping the specially disabled people. Brandon Lobo from III B.Sc. and Sushmitha Adiga from II B.Sc. gave presentations on the topics " Assisted Technology for physically and mentally disabled people" and Life of Sir C. V. Raman" respectively which was well appreciated by one and all. Student Secretary of the association Nikhil Kumar of III B.Sc. presented the annual report of Science Association. Sr. Leona and group of II B.Sc. recited the prayer. Jayaprakash Shetty, III B.Sc. welcomed the gathering. Prizes were distributed to the winners in the sem- inar and the model competitions. In the same function Mr. Brandon, the president of Science Association bid farewell to the retiring Prof. Archana Dabade. Dr. Gerald Pinto, Principal of the college presided over the function. Convener of Science Association Prof. Archana Dabade, Office Bearers, Brandon, Amru- tha, Nikhil, Andrea and Jayaprakash were present. Ramya, I B.Sc. compeered the programme and Aishwarya, III B Sc. tendered vote of thanks.

➤ **Staff Achievements**

Prof. Subramnaya Joshi served as the BOE Members of St. Aloysius College, Mangalore. Prof. Subramanya Joshi assisted the Association of Chemistry Teachers, Mangalore University in the preparation of text books for V and VI semesters. Prof. Joseph Peter Fernandes, appointed as the BOS member of Chemistry (UG) and attended a meeting at Mangalore Univeristy, Mangalagangothri, Konaje. Prof. Joseph peter Fernandes, assisted the Association of Chemistry Teachers, Mangalore University in the preparation of text books for V and VI semesters.

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

Students' participation in seminars and competitions. Mr. Nikhil Kumar and Mr. Jayaprakash of III B. Sc have participated in the Inter-Collegiate Physics Quiz conducted by the Association of Physics teachers of Mangalore University held at Milagres College on 14th September 2016

Ms. Pragathi, Manisha, Sr. Leonia, Soujanya N.; Mr. Gurucharan, Rakesh, Abhishek of II B Sc. and Brian, Ranjan, Kavya. Ramya of I B. Sc participated in the seminar **"Recent advances in Photonics"** held at the Centre for Atomic and Physics, Manipal University Manipal on 23rd July 2016.

Nikhil kumar, Brandon Lobo, Prasanna Acharya, Sam Sidney, Aishwarya, Amrutha and Anusha of BSc participated in the one day workshop on "Nano and soft matter science held at the Centre for Atomic and Physics, Manipal University, Mani pal on 17th August 2016.

Miss Sushmitha Adiga. II B Sc. and Mr. Shervin Vaz. III B Sc. have won the first prize in the District level Science Model competitions in the category "Satellites and Communications" on 6th & 7th August, 2016, at Govt. PU College, Hebri

Miss. Sushmitha Adiga, II B.Sc and Mr. Shervin Vaz, III B.Sc participated in the State Level Science Model competitions in the category "Satellites and Communications" on 20th September 2016 at P. C. Jabin's College, Hubli which was held as a part of 100th year celebration of K.LE. Society, Belagavi in association with the Dept. of Science and Technology

Miss. Hephziba Oliver, II B.Sc has participated in the Inter-Collegiate Chemistry Seminar competitions conducted by the Association of Chemistry teachers of Mangalore University held at Milagres College on 14th September 2016.

Amrutha, Aishwarya, Nikhil, Prasanna, III B.Sc and Sushmitha, Vinitha, Nirmala and Hephzibah of II B.Sc participated in the University level com- petitions AURORA 2017 on 19th January 2017

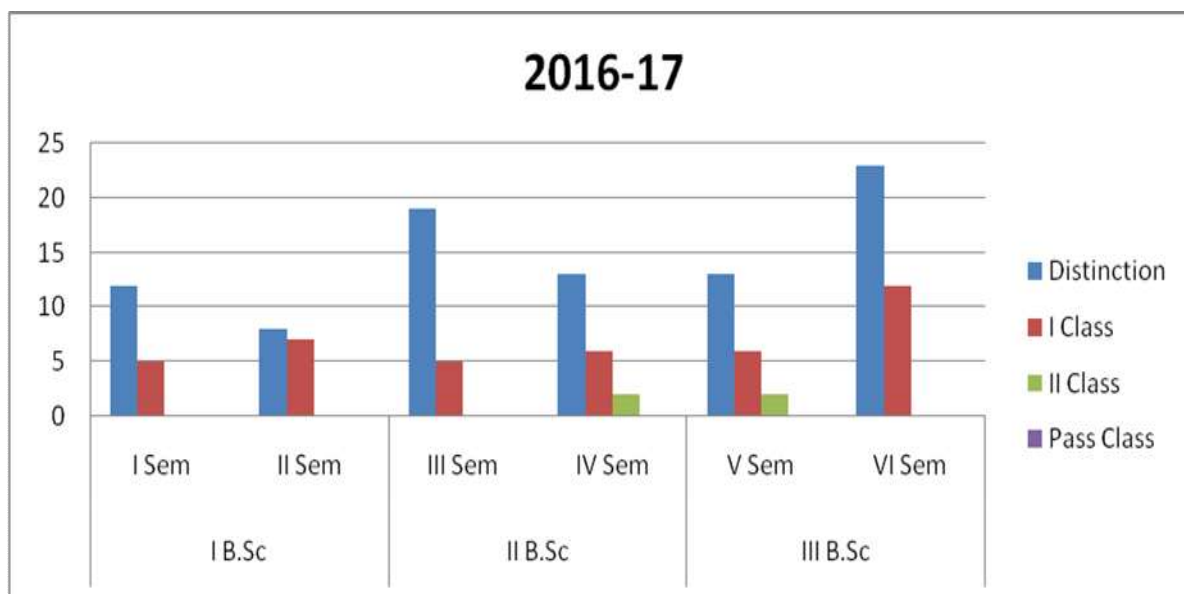
Sushmitha, Sanjay, Pragathi, Vineetha, Nirmala and Gurucharan, II B.Sc participated in the National level competitions IMPRINTS 2017 at St. Aloysius College, Mangalore on 3rd February 2017.

Hephzibah Princy Oliver, II B.Sc. and Sulakshitha. III B.Sc. participated in the inter-collegiate seminar competitions organized by Govinda Dasa College, Surathkal and Association of Chemistry Teachers of Mangalore University.



Result Analysis: University Examinations 2016-17

CLASS		Total Students	Students appeared	Students Passed	Percentage	Distinction	I Class	II Class	Pass Class
I B.Sc	I Sem	18	18	17	94.44	12	05	0	0
	II Sem	18	18	15	83.33	08	07	0	0
II B.Sc	III Sem	25	25	24	96.00	19	05	0	0
	IV Sem	25	25	21	84.00	13	06	02	0
III B.Sc	V Sem	36	36	36	100	13	06	02	0
	VI Sem	36	36	35	97.22	23	12	0	0



➤ Laboratory

The department has a full pledged laboratory. The laboratory consists of two required number of equipments/apparatus for the needs of all the students. 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. Supporting Economic background students

➤ 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 Chemistry Department**

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 knowledge 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.
- Fresher's 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.

Best Outgoing Student of the year 2016-2017

Mr. Blencil Sunraj Lewis



Apart from his excellent academic career, he has represented Mangalore University at South Zone Inter-University Table Tennis Competition

Students Progression 2016-2017

Aishwarya	M Sc.-Mathematics	Lecturer/IT, Oracle
Amrutha	MSc-Mathematics	Lecturer
Andrea	B Sc. B Ed	Teacher
Sitara	M Sc. Chemistry	IT Company
Poornima	M Sc-Material Science	
Bhavya	M Sc. Chemistry	Company
Spoorthy	M Sc. Physics	
Megha	MSc. Mathematics	Lecturer
Nikhil	B Sc.	IT-Infosys
Prasanna	M Sc. Chemistry	
Meghana	M Sc. Chemistry	
Brandon Lobo	M Sc. Physics	Karnataka Bank Ltd.
Blencil Sunraj Lewis	M Sc. In Financial Economics	NHAI Project
Sherwin	B Sc.	Ecron Aconova
Sitara Shetty	M Sc. Industrial Chemistry	

Glimpses of 2016-2017



