



Tel. : 080 - 25584020
Email: xavierboard@gmail.com
Web : www.xavierboard.org

XAVIER BOARD OF HIGHER EDUCATION IN INDIA

31, PRIMROSE ROAD, BANGALORE - 560 025, SOUTH INDIA

ACADEMIC AUDIT REPORT OF THE DEPARTMENT OF CHEMISTRY

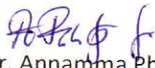
SACRED HEART COLLEGE (AUTONOMOUS), THEVARA, KOCHI

The Academic Audit of SACRED HEART COLLEGE (AUTONOMOUS), THEVARA, KOCHI was conducted from 19th to 21st December, 2018. The team comprised:

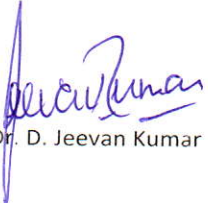
- **Dr. Sr. Annamma Philip**, FMM, Secretary General, Xavier Board of Higher Education in India, (XBHEI), Bangalore & former Principal, Stella Maris College (Autonomous), Chennai,
- **Dr. Fr. Joseph Xavier SJ**, former Principal, Loyola College (Autonomous), Chennai and former President, XBHEI,
- **Dr. D. Jeevan Kumar**, former Prof. of Political Science, University of Bangalore and currently Hon. Professor at Karnataka State Rural Development and Panchayat Raj University, Gadag, Karnataka
- **Dr. Ms. Ordetta Mendoza**, Member, XBHEI and former Head, Dept. of Bioinformatics, Stella Maris College (Autonomous), Chennai, and Co-ordinator, Xavier Board-Administrative & Academic Audit (XB-AA Audit).

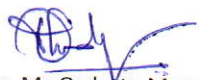
Prior to the visit, the department completed and submitted the Audit Manual developed and deployed by Xavier Board of Higher Education in India.

Dr. Sr. Annamma Philip, FMM, visited the Department of Chemistry on 19th December 2018 and interacted with the Head of Department and faculty. Earlier, Dr. K. B. Jose, HoD made a presentation to all the team members followed by an interaction. A verification of the relevant


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documents and visit to the laboratories and facilities of the department was carried out by Dr. Sr. Annamma Philip, FMM.

About the Department:

The department of Chemistry was established in 1944 and offered the Undergraduate programme in Chemistry from 1947. In 1962 the department began offering the Post Graduate Programme in Chemistry while Ph.D. was offered from 1998. The department has also been offering M.Sc. in Pharmaceutical Chemistry from 2001.

The Vision of the department is to form an enlightened group of wisdom seekers in Chemistry founded on relentless pursuit of excellence, a secular outlook and a thirst for moral values.

Its Mission is to provide an academic environment that facilitates holistic development of the individual with special emphasis on chemistry as a discipline, enabling the students to play a vital role in nation building and contribute to the progress of the humanity through the knowledge and skill that they have acquired. The mission also instills in students a thirst for frontier areas of chemistry and research, it also cultivates a concern for nature and environment along with technology up gradation.

The department is dynamic and vibrant exuding a strong research culture which provides an attractive ambiance to the young students.

Commendations:

- The curriculum of the department is in keeping with the vision and mission of the college and has relevance to the local, national and global needs.
- The department has incorporated courses and activities that integrate cross cutting issues relevant to environment and sustainability into the curriculum.
- Some of the faculty members serve on academic bodies of other institutions.
- The department has taken care to include several thrust areas / latest branches of Chemistry in the UG /PG course work.



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- The department takes great care to consult experts in preparing the syllabi for the Board of Studies meeting. Care is also taken to be at par with the UGC model curriculum and UGC-CSIR syllabus prescribed for NET examination.
- ✓ • Several new courses have been added in the programmes during the last revision. *eg.*
- ✓ • Department offers a 3 month certificate course on Molecular Docking and Drug Designing.
- The department ensures that its curriculum is enriched in different ways by allowing students to undertake study tours and field trips, internships both at the UG and PG level and interact with experts.
- Feedback on the curriculum is obtained from Students, parents, Members of Board of Studies and Alumni/alumnae and is acted upon. The outgoing students are given an orientation on the necessity of giving feedback before they leave the institution.
- Student enrolment is good both at the UG and PG levels.
- Advanced learners are engaged in Walk with scholar programme, presentation of seminars, and interaction with leading scientists and industrial experts to update the knowledge. Slow Learners are given remedial coaching and more interaction with their mentors.
- Teacher: student ratio is approximately 1:16 for the UG and PG programmes.
- Detailed teaching plan is drawn up by all faculty of the department which is given to students at the beginning of the semester.
- Learner-centric methods (experiential, participative and problem solving methods) assignments, seminars using PPTs, projects are employed by the faculty to enhance teaching-learning.
- ✓ • The department has sufficient IT infrastructure in the department to aid in the teaching – learning process.
- ✓ • Students get some training for drawing chemical structures by using software such as Chems sketch and Chemdraw as well as Computational software such as Gaussian, Autodock, Pymol, Avogadro, VMD, and Gamme
- ✓ • There is a good mentoring programme with the mentor to mentee ratio being approximately 1:20.



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- Faculty are adequately qualified with 14 of the faculty holding Ph.D. Degree and 2 of them having received National recognition (Fellowships). 5 faculty have been recognized as research guides.
- Faculty have made significant scientific contributions to journals.
- The department has 5 Lab assistants / technical and supportive staff.
- 6 faculty members have been invited as resource persons to other institutions to participate in conferences /seminars.
- The department has also been inviting several renowned and eminent scholars, scientists and teachers to the institution to deliver lectures and interact with students thereby enriching their learning experience.
- Several workshops, seminars and lectures have been organized for the students each year.
- Faculty participate in conferences /seminars /refresher courses and workshops as a means of capacity building.
- The laboratories and other physical infrastructure in the department are good.
- Department has academe –academe linkages with some institutions in India and abroad.
- A number of scholarships are available in the department.
- Over 50% of the students proceed for higher studies.
- Students are encouraged to participate in academic programmes at the intercollegiate level.
- Few students have cleared the NET/SET/GATE examinations.
- Organized International seminar on “Negishi Coupling Reactions ” By Nobel Laureate Prof. Eiichi Negishi, February 2016 and
15th KVT International Seminar on New Trends in Applied Chemistry, February 2017
- **The best practice** in the department is the regular feedback of students and open forum with the Parents.

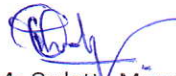
Recommendations:

- The department may offer more value – added courses and add – on courses for imparting transferable and life skills.
- The department may make efforts to attract students from across the country and abroad.


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- Students of the department may be encouraged to take courses offered by other departments.
- ✓ • Teachers from other states may be recruited if possible.
- Faculty maybe encouraged to attend more training /specialized workshops /seminars to enhance their knowledge in newer areas of chemistry.
- Alumni/ae may be encouraged to increase the no. of private scholarships already available to students in the department.
- Alumni/ae engagement to be enhanced –both for financial and non-financial assistance.
- Make efforts to increase the number of students passing JAM/UGC-CSIR /GATE.
- ✓ • Students involvement in extension activities could be strengthened.
- ✓ • Industry-Academic linkages maybe fostered.

Date: 12/02/2019

Place: Bangalore



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