



ST. XAVIER'S COLLEGE

(AUTONOMOUS)

**5, Mahapalika Marg, Mumbai - 400 001,
INDIA.**

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7.2.1: HONOURS REPORTS, ACTIVITIES & PHOTOS

- ❖ **Honours Programme Report 2018 - 2019**
- ❖ **Honours Programme Report 2015 - 2016**



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2018 - 2019

HONOURS PROGRAMME REPORT



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2018 - 2019

Honours Programme Report

Overall Coordinator - Fr. Roy Pereira, Vice Principal Academics

Faculty Coordinator - Dr. Radha Kumar

Administrative Coordinator - Ms. Jemima Almeida

The Honours Programme has been in existence for more than thirty years. More recently after St. Xavier's college got autonomy many of the courses offered in the Honours Programme were made interdisciplinary through the 'Hub System'. This took the overall academics of the college to a higher level. In the years 2016-17 the programme was revamped into different format to inculcate the main objective of the programme, which is to offer interdisciplinary and multidisciplinary courses. This would encourage the students to have a holistic approach in their academic endeavour.

I: The classification of the departments are grouped into the three HUBS categorically

1. Biological Sciences Hub

- Botany
- Life Sciences and Biochemistry
- Microbiology
- Zoology
- Biotechnology
- Caius Research Laboratory

2. Lingua/Humanities Hub

- English
- Economics
- Sociology and Anthropology
- Hindi
- Ancient Indian History, Culture and Archaeology
- Statistics
- Psychology
- Commerce
- Mass Media
- Management Studies
- Vocational Tourism

3. Physical Sciences Hub

- Information Technology
- Chemistry
- Physics
- Statistics



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II: The Overall Structure- 2018 - 2019

Registrations for the year 2018-19 were held between 1st August 2018 and 10th August 2018. Timings: 9.30am to 3.30pm Venue: IQAC Office. An enrolment fee of Rupees 700/- was charged, which had to be paid at the Treasurer's Office, as central registration fees.

III: Total Number of Registrations for the year 2018-19

Lingua Hub

TY- 51

SY-156

FY-206

TOTAL=413

Physical Sciences Hub

TY-14

SY-22

FY-83

TOTAL=119

Biological Science Hub

TY-47

SY-39

FY-54

TOTAL=140

Total Number of Registration

FY-343

SY-217

TY-112

TOTAL=672

IV. The Process of Enrollment

A Student was expected to collect the form from the IQAC Office. Basic requirement for the enrolment was the previous examination mark sheet photocopy which would be verified at the IQAC Office along with the form. Verification of the form included checking of the mark sheets and stamping of the form. After the verification of the form the student was given the student copy of the form. Then the student would proceed to the Treasurer's office to pay the enrollment fee, after which the Treasurer's office would give a receipt.

V. Criteria for Enrollment

- 1 Students have to put in 15 hours of work for one credit. Students are expected to keep up their academic excellence by maintaining their CGPA: 3.00/4.00 and 7.00/10.00. For the students of first year 70% in the last examination is required.





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- 2 Students who do not fulfil the criterion of 75% attendance are disqualified. Any student who gets an ATKT or TNG is disqualified from the programme.
- 3 Student who meets all the criteria, in the third year qualifies for the Final Honours Certificate.

Total Number of TY Students who received the Honours Certificates in 2018-19: 103

VI. Honours Programme Committee

A Committee of Faculty Members put in their efforts to take this programme ahead.

The Committee of Faculty Members included

Vice Principal Academics

Fr. Roy Pereira

Faculty Coordinator

Professor Radha Kumar

Hub Coordinators

1. Physical Sciences Hub- Professor Abhilasha Jain and Professor Piyali Unnikrishnan
2. Lingua/Humanities Hub- Professor Pearl Pastakia
3. Biological Sciences Hub- Professor Priya Sunndrajan

Department Coordinators

1. **Ancient Indian History, Culture and Archaeology**- Professor Anita- Rane- Kothare
2. **English**- Professor Pearl Pastakia
3. **Hindi**- Professor Bhagwati Upadhyaya
4. **Sociology and Anthropology**- Professor Pranoti Chirmuley
5. **Economics** - Professor Manali Pawar
6. **Commerce**- Professor Suvaiba Pirani
7. **Statistics**- Professor Piyali Unnikrishnan
8. **Mass Media**- Professor Akshara Jadhav
9. **Management Studies**- Professor Pritesh Arte
10. **Vocational Tourism**- Professor Siddhi Bhatnagar
11. **Information Technology**- Professor Subhash Kumar
12. **Chemistry**- Professor Abhilasha Jain
13. **Physics**- Professor Vedaankari. K
14. **Botany**- Professor Vijaya Lobo
15. **Microbiology**- Professor Pampi Chakraborty
16. **Life Science and Biochemistry**- Professor Manasi Kanuga
17. **Biotechnology**- Professor Shiny Peter
18. **Zoology**- Professor Sujata Deshpande



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19. **Caius Research Laboratory**- Professor Priya Sunndrajan

20. **Heras Institute**- Dr. Joan Dias

21. **Indian Musical Group**- Professor. Bhaskar Saha

22. **Inter Religious Studies**- Fr. Prashant Olalekar

VII. Activity Proposals

Total Number of Activity Proposals: 57

1. INDIAN MUSIC GROUP

- Know the Raag through Music - **Dr. Bhaskar Saha**
- Raag Aur Ritu (Season) - **Dr. Bhaskar Saha**

2. MASS MEDIA DEPARTMENT

- Magazine Writing - **Ms. Jasreen Khanna**

3. DEPARTMENT OF COMMERCE

- Entrepreneurship - Needs and Challenges in the Digital Age - **Mr. Furqan Shaik**

4. DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

- Engaged Ethnography and Public Anthropology - **Mr. Proshant Chackraborty**

5. DEPARTMENT OF HINDI

- Drama - **Dr. Bhagwati P. Upadhyay**

6. DEPARTMENT OF ECONOMICS

- Advanced Econometrics - Use of DGPs for Micro and Macro Econometrics -
Mr. Purbash Nayak
- Banking Crises and Macro Economic Policy - **Mr. Rishab Devnani**
- Financial Analysis 101 - **Ms. Manali Pawar**

7. DEPARTMENT OF ENGLISH

- Persian Language (Basic) - **Ms. Zarin Irani**
- How Story-Telling Began - Narrative and Aesthetics in Cinema - **Mr. Jethu Mundul**
- Travel Writing (Workshop) - **Ms. Vani Zaveri**
- Translation: A Creative Process - **Ms. Vani Zaveri**

8. DEPARTMENT OF CHEMISTRY

- Applications of Chem-Draw: A Tool in Chemistry - **Dr. Sandip R. Kale**
- Instrumentation Workplace in Analytical Chemistry - **Dr. Pralhad Rege**
- Research Project: Complex Chemistry - **Dr. Geeta Kotian And Ms. Saima Khan**
- Research Project: Metal Oxide Semiconductors as Effective Photocatalyst: Pros and Cons - **Dr. Ashma Aggarwal**
- Conserving Artefacts: A Chemical View - **Dr. Ashma Aggarwal, Dr. Geeta Kotian and Ms. Saima Khan**



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9. DEPARTMENT OF STATISTICS

- Impact Evaluation of Developmental Economics - **Ms. Kshiti Gala**
- OR In Excel - **Prof. Hegde**
- Market Research Programme - **Mr. Tushar Pahari**

10. DEPARTMENT OF ANCIENT INDIAN HISTORY, CULTURE AND ARCHEOLOGY

- Chaturang: Ancient Board Games - **Dr. Anita Rane**
- Modi Script: Intensive Study

11. DEPARTMENTS OF PHYSICS

- Computational Physics - **Dr. Deepak More**

12. DEPARTMENT OF PSYCHOLOGY

- Team Building - **Ms. Rhea Gandhi**
- Research Capacity Building and Report Writing - **Monk Prayogshala**
- Sports Psychology - **Ms. Maurelle D'Sa**
- Psychology of Storytelling - **Ms. Toru Jhaveri**
- Forensic Psychology - **Ms. Janavi Doshi**
- Dance Movement Therapy for Dealing with Anxiety - **Ms. Devika Mehta**
- Mindfulness - **Ms. Prerana Dharnidharka**
- LGBTQIA and Affirmative Therapy - **Ms. Jagruti Wandrekar And Advaita Nigudkar**
- Rational Emotive Behaviour Therapy - **Ms. Shama Shah**
- Use of Social Media- **Ms. Saindhavi**
- Positive Thinking- **Ms. Alisha Kalidhar**

13. DEPARTMENT OF BOTANY

- Morphology and the Types of Fruits - **Dr. Rajendra Shinde**
- Extracting Oils from a Plant Sample - **Mr. Kevin D'cruz**
- Open Ended - **Mr. Alok Gude**

14. DEPARTMENT OF MICROBIOLOGY

- Antimicrobial Effects of Indian Plants, Herbs and Spices - **Prof. Miriam Stewart**
- Microbiology in Everyday Life - **Prof. Sangeetha Chavan**
- Basics of Animal Tissue Culture and Cell Cyto-toxicity Testing - **Dr. Pampi Chakraborty**
- Intellectual Property Right (IPR)

15. DEPARTMENT OF ZOOLOGY

- Evolution: The Cornerstone of Science - **Mr. Conrad Cabral**
- Wildlife Forensic Science - **Trained Forensic Consultants**
- Basic Skills in Wildlife Filmmaking- **Harshit Singh**



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16. DEPARTMENT OF LIFE SCIENCE AND BIOCHEMISTRY

- Lecture Series: Global Climate Change and Social Justice: From Theory to Action - **Ms. Janjari Jasani**
- Readings in Genetics and Biotechnology - **Dr. Priya Sundarrajan**
- Great Discoveries in Biology - **Dr. Maya Mursewar**
- Estradiol-mediated Development of Retina in Chick Embryo System - **Dr. Radhika Tendulkar**
- Mapping the Microscopic Biodiversity Using Paper Microscope Foldscope - **Dr. Maya Murdeshwar and Dr. Sujata Deshpande**
- Survey Based on Gender Dichotomy and Behavioural Differences in Selfie Acquisition - **Dr. Bhaskar Saha**
- Literature Survey: Gene Regulation at the RNA level - **Dr. Maya Murdeshwar**
- Literature Survey: Effect of Light Emitting Diode Illumination on Biological Systems - **Dr. Binoj C. Kutty**
- Literature Survey: Role of Selenium in the Vertebrate Male Reproductive System - **Dr. Manasi Kanuga**

17. DEPARTMENT OF BIOTECHNOLOGY

- Finding Hidden Messages in Bioinformatics Approach- **Ms. Norine D'Souza**
- Bioinformatics: Solutions to the Biological Problems- **Ms. Norine D'Souza**
- Embryonic Tissue Culture: A Primer for Animal Cell Culture Techniques- **Dr. Shiney Peter**

HONOURS TEAM 2018 - 2019



Question Answer Session- 15th October 2018



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DEPARTMENT CREDITS

DEPARTMENT OF ANCIENT INDIAN CULTURE

Department Coordinator: Dr. Radha Kumar

54 students enrolled for the programme.

The programme that the department offered comprised of the following activities, each of one credit:

1. Buddhist Spirituality

Conducted by Fr. Noel Sheth SJ

Eight sessions were conducted and the credit was awarded on the basis of attendance, a project and a report of 300 words.

2. Vividha

The Department Festival with Dr Anita Rane-Kothare in charge of this activity.

The theme for the year was 'Bahuli' - Dolls across the globe.

The requirement to avail of the credit was - making of the artefacts, submitting a report of 300 words and participation of the students over two days of an exhibition which showcased their work.

3. Lecture series: On socio-economic cultural aspects of India.

Three sessions were organized on the theme. The credit was awarded to students who participated after they submitted a 3500 word research project.

DEPARTMENT OF ENGLISH

Department Coordinator: Dr. Pearl Pastakia

65 students enrolled for the programmes offered by the department. The programme was open to all students of the college. All activities were of one credit.

The activities included:

1. Brazilian Film Festival

This was held over a week in August and September 2015, in collaboration with the Dept. of Ancient Indian Culture.

2. Lecture-series:

This was conducted by Prof Vishant Ramteke, on 'The Origin of English' between November and January 2015-16. This course complemented the present Literature Courses taught in College, by engaging students with an awareness of language.



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3. Series of workshops on Social Media and Hypertext Narratives:

It was conducted by Media Consultant, Ms Minal Ruhela.

The topics covered in the workshops were - from scrapbook to Facebook, Decoding Hypertext, Online reputation management, Pros and Cons of Hypertext, How private is Privacy and Social Media Activism. These four hour workshops were conducted over four weeks in January 2016. The assessment was group presentations with topics like - Cross-comparison between a literary poem and hypertext poem, Print media v/s social media (news aggregation), Gender in media and social media (social activism) and Hypertext fiction and literary fiction, drawing parallels and contrasts for which references were given during the sessions.

4. An on-line course on Nadine Gordimer:

It was conducted by Dr. Gargi of Calcutta University.

This course will be completed in the next academic year.

DEPARTMENT OF SOCIOLOGY & ANTHROPOLOGY

Department Coordinator: Dr. Pranoti Chirmuley

74 students (FYBA 35, SYBA 21, and TYBA 18) enrolled for the activities offered by the department.

In this academic year there were four courses which gave the students a wide range of issues to focus on, read, explore and critically evaluate.

1. Sustainability of Product Life Cycle and Supply Chain Management:

Conducted by Denise Fernandes

The course exposed the students to an interdisciplinary outlook and understanding of the various factors, costs, challenges and opportunities that can be assessed during the cradle to grave analysis of product life cycles and supply chain management. The course had a practical outlook that was to make students aware of the concept of 'Sustainability' in their day-to-day activities and future careers. The course was conducted through case studies, movies, documentaries, group activities and discussions along with a practical group assignment.

2. Death Penalty, Free Speech, God-men and Religious Strife - a look at contemporary legal problems through a sociological lens:

Conducted by Karan Tyagi

- a. The course focussed on the legal, political and social implications of the practice of death penalty in India, with an emphasis on the recent execution of Yakub Memon. The course delved into the moral philosophical debate about the justice of death penalty as state practice. Is the State qualified to play "God"? Further, the Supreme Court awards death penalty in "rarest of rare" cases. What is "rarest of rare"? The administration of



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this rule can be riddled with subjectivity and arbitrariness. Are death penalties now pronounced ostensibly in tune with a "society's cry for justice"? Should they?

- b. Freedom of speech and expression and how callously it is treated in India. The philosophical and constitutional justifications of the right to freedom of expression were looked at along with a further examination of legitimate limits of freedom of expression in cases where it conflicts with other rights. It looked at examples such as: All India Bakchod (AIB) controversy, Charlie Hebdo, Danish cartoons, lying and law, porn ban, among others.
- c. The factors behind the coming of several God-men in India?
- d. Communalization of political and social issues and the nonexistence of a riot free India.

3. Understanding the environment:

Conducted by Sunetro Ghosal

Over 8 two hour sessions, this course tried to unravel the complex relationship between society, ecology, culture, history and economics. It tried to relook at the various connections between issues, different fields within academics and whether there was a serious need to take the environment seriously.

4. Forced migration: focus on refugee crisis in Europe:

Conducted by Aurina Chatterji

Aurina, over 16 hours of in depth classroom discussion brought in her expertise within the judicial domain in order to discuss the issue of forced migration. She specifically chose to look at not just migration per se but specifically pick up a theme within it which is of topical interest, to not just students but also across the globe. It took up the issues of: how do we look at the refugee crisis in the context of the several events that have taken place in Europe, from the attack in Paris to the terrorist threats to several nations.

DEPARTMENT OF MASS MEDIA

Department Coordinator: Ms Akshara Jadhav

30 students across all three years of graduation enrolled for the activities offered by the department which included a 'Summer School'. All the activities were of one credit.

The various activities were:

1. City Stories


Resource person: Mr. Chaitanya Marpakwar, Journalist, Mumbai Mirror

16 students had enrolled of which 12 completed it successfully

Course Details: The course was meant to inculcate observation technique and presentation skills among the students from a journalistic point of view. Keeping in mind the various aspects of Mumbai city the students explored some significant subjects about the vibrant, dynamic life and presented it in a crisp way.



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Over six sessions; as part of the issues covered; a series of lectures was arranged for the students. This included Mr. Vasant Dhoble, Retd. Additional Police Commissioner-Importance of filing FIR and Women Safety Law, Mr. Rajendra Aklekar, Author & Senior Journalist who gave an insightful lecture on the historical past and current challenges of the local train network in Mumbai and Mr. Sunil Baghel, Senior Legal reporter who shared the experience of legal proceedings and court matters.

An assignment had to be done at the conclusion of the course to avail of the credit which required finding out information from the field, attending sessions in court and conducting interviews with elected representatives – MP, MLA or Corporator and writing a report about the same. The task which included visiting places of interest and chronicle the events made the assignments lively.

2. From Pencil to Pixel

Resource Person: Mr. Siddharth Bhatia

18 students had enrolled and all 18 completed it successfully

Course Details: The course over eight sessions was meant to communicate ideas through the use of Illustrator and make it effective. The primary aim was to convey that anyone who can think and wants to express can learn Illustrator and communicate with the audience.

An assignment, to be done at the conclusion of the course to avail of the credit required each student to choose a subject and communicate the nuances of that particular idea through illustration. They had to use the tools and justify the use of the same.

3. Summer School April 2016

The BMM Department conducted three short term courses each of one credit as part of the Summer School 2016.

DEPARTMENT OF MANAGEMENT STUDIES

Department Coordinator: Mr Pritesh Atre

72 students, across all three years of graduation enrolled for the activities offered by the department and all the students completed the activities successfully. All the activities were of one credit.

The activities were:

1. Corporate Social Responsibility

Resource person: Ms. Kasturi Bose, CSR Department,
Senior Project Leader at RPG Foundation

Number of sessions: Three

Course Details: The course was meant to give students a brief understanding about the legal and financial aspect of Corporate Social Responsibilities (CSR) over three sessions. Ms. Kasturi Bose explained to the students the various CSR activities with a number of case



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studies. The assessment was on the basis of a case study on challenges of corporate sector towards CSR.

2. Technical Analysis

Resource Person: Mr. Purv Shah. Freelance Financial Market Trainer

Course Details: The course was to understand the significance of using Technical Analysis for investment in the Stock Market. The primary aim was to learn working and use of the Charting and Candlestick method over ten sessions; to reduce investors risk before investing in the stock market.

The assessment was on the basis of 'Mock investment' in stock with the help of technical analysis.

DEPARTMENT OF CHEMISTRY

Department Coordinator :Dr.Abhilasha Jain

36 students participated in the various Honours activities. Following five activities were conducted:

1. Book Review
2. Literature Review
3. Research Project- I
4. Research Project- II
5. Instrumentation Workshop

A brief summary of the activities

1. Book Review: (1 credit)

Faculty- in – charge: - Dr.Gulshan Shaikh

The activity involved reviewing a book and comparison with other books. Evaluation was based on a written report and a presentation.

2. Literature Review: (1 credit)

Faculty- in – charge: Mr Marazban Kotwal

The activity involved reviewing about 20-25 research papers and writing a review on these topics. Evaluation was based on a written report and a powerpoint presentation.

3. Research Project – I: (2 credits)

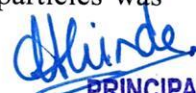
Biosynthesis of Silver Nanoparticles and Study of their Size Selectivity and Stability with Different Capping Agents

Faculty in- charge: Mr. Marazban Kotwal

In this project different environmentally benign techniques for biosynthesis of silver nanoparticles were carried out. During the biosynthesis an array of capping agents were used and the particles size dispersity as well as stability was checked using different instrumentation techniques. Absolute control on the characteristics of nanoparticles was



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achieved by co-synthesizing them with several capping agents. The effect of concentration of both the capping agent and the nano-precursor on morphology and size distribution of metallic nanoparticles was determined and the conditions for mono-dispersity in the particle size were optimised.

4. Research Project – II: (2 credits)

Development and Validation of an Antimicrobial Agent/S from a Combined Pharmaceutical Drug Formulation using Spectrophotometry

Faculty in- charge: Dr. Pralhad Rege

The prime aim of this project was to develop novel methods for combined pharmaceutical drug formulation having antimicrobial activity and subsequently validate the given methods.

For the given study U.V-VIS spectrophotometer was used.

The Research project involved:

- Development of method
- Analytical method validation using ICH guidelines
- Statistical calculations
- Quantification by using Simultaneous Equation and Absorbance Ratio Method.

The newly developed methods were found to be simple, selective, precise, accurate, rapid and cost effective. Thus the given methods can be applied for routine quality control analysis and thus can be used for quantitative determination from different pharmaceutical drug formulations. Evaluation was based on a written Project Report.

5. Instrumentation Workshop: (1 credit)

Orientation Workshop on Instrumentation in Analytical Chemistry

Faculty- in- Charge: Dr. Pralhad Rege

The workshop was conducted at PSRAICLAB, Department of Chemistry, Ruia College, Mumbai. This two day workshop was divided into Theory Session and Practical Session.


In Theory Session, lectures (2-3 hrs) were delivered on the different analytical techniques i.e. GC/GC-MS, HPLC, AAS, Spectrophotometry and FTIR.

In the Practical Session, demo practicals were conducted on the GC /GC-MS, HPLC, AAS, Spectrophotometry and FTIR instruments.

Evaluation was based on a written project report based on two days of activities which highlighted aspects like understanding the application of the instruments and the techniques involved.



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DEPARTMENT OF MICROBIOLOGY

Department Coordinator: Ms. Sangeetha Chavan

45 students registered for various activities of the programme.

The activities-

1. Workshop on Plasmid isolation

Guiding Teacher: Ms. Sangeetha Chavan

FYBSc students were given hands-on training in basic techniques in molecular biology viz. Isolation of plasmids and agarose gel electrophoresis.

2. Workshop on Antibacterial effects of plants, herbs and spices

Guiding Teacher: Ms. Miriam Stewart

19 FYBSc students participated in this module for 1 credit. They formed ten groups of two each so as to determine the antimicrobial activities of ten samples. The antimicrobial spectrum of freshly ground spice powders such as Cinnamon, Cloves, Pepper, Henna, Raw mango etc. were determined by the ditch plate method. Ten test organisms were used. Water and Alcohol extracts of each powder was tested using agar well diffusion method. Agar well diffusion method was also used to determine the antimicrobial activity of tea extracts, honey, aloe vera, rose water etc. Disc plate technique was used by the students to determine antimicrobial activity of plugs of herbs and vegetables like curry leaves, garlic, ginger, chilly, etc.

3. Animal Tissue Culture

Guiding Teacher: Dr. Pampi Chakraborty

In this course, the basic techniques of animal tissue culture were taught through lectures and practicals. Chick embryo dissection was demonstrated. Students learnt media preparation for tissue culture and maintaining and culturing cell lines. Cell revival and cryopreservation of animal cells were also taught during the course. Students performed cell enumeration by Trypan Blue staining technique and based on the result they seeded cells on tissue culture plate for further experiments. Propidium Iodide staining is considered as a good staining technique for cell lines in order to determine cell death. Students learned the technique and used fluorescence microscopes for this study. MTT assay, an important assay in cancer research and toxicity testing was taught to the students. Using this assay, students calculated the viability of cancerous cells in the presence of turmeric.

4. Lecture Series- IPR

Guiding Teacher: Dr. Biswa Prasun Chatterjee

Inventions in fields like diagnostics, therapy, treatment of diseases and agriculture have revolutionised the way we live. New blockbuster medicines and GM crops have emerged from biotechnology. Patenting inventions in biotechnology have become imperative in the past three decades. In the current scenario knowledge of IPR and patenting is important as it protects the inventor and fosters innovation. Particularly in India awareness of traditional



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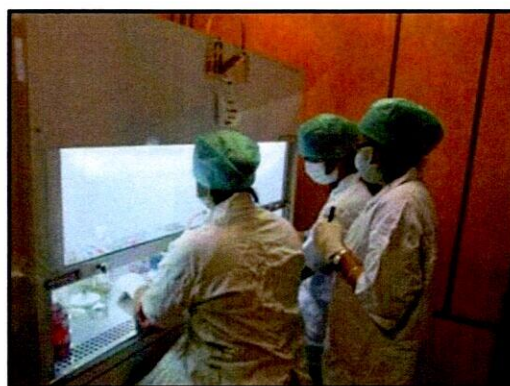
knowledge and issues in patenting biotech in changed global scenario is interesting. The lecture series imparted an understanding of biotech inventions, geographical indications, traditional knowledge and plant variety protections. Students were trained to search free online patent databases eg. USPTO, EPO, IPO, WIPO etc

5. Project

Guiding Teacher: Ms. Sangeetha Chavan

Students learnt the PCR technique and used it to identify bacterial cultures using 16SrRNA gene amplification.

HONOURS MICROBIOLOGY DEPARTMENT



Students learning PCR techniques



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DEPARTMENT OF PHYSICS

Department Coordinator: Dr K. Vidasankiri

35 students registered for different activities of the department and three TY students qualified for the Honours certificate.

The following activities were successfully completed.

Name of the professor	Courses offered	No. of credits	Class of students eligible	Nature of the course
Dr. Shyamala Bodhane	Spin coating method for making thin films	1	SY, TY B.Sc.	Experimental
Dr. Shyamala Bodhane	Microprocessor 8085	2	FY, SY B.Sc.	Lecture cum experimental
Dr. K. Vidasankari	Study of electromagnetic spectrum	1	FYB.Sc.	Guided study
Prof. Ajay Yadav	Q-point stability	1	SYBSc	Experimental
Dr. Rohan Jadhav	Computational Physics	1	SY, TY B.Sc	Guided study
Dr. Radhekrishna Dubey	Nanotechnology	1	FYB.Sc.	Guided study

Dr. Shyamala Bodhane offered an interesting experimental project on making thin films by *spin coating technique*. The students learnt the intricacies involved in the coating method which enabled them to get thin films with thicknesses in the range 1 to 10 microns.

The second two credit programme offered by the same professor consisted of two parts. The first is learning microprocessor architecture and assembly language programming.

The second part is to write the programs for specific current applications and execute the program using the microprocessor 8085 kit.

Dr. K. Vidasankari offered a guided study in the study of electromagnetic spectrum. The students were given specific topics in this to prepare and give presentations related to the industrial and medical applications of different regions of wavelengths in the electromagnetic spectrum.


Mr. Ajay Yadav's designing experimental project involved calculations and real circuit designing of different amplifier circuits and analyzing the condition for Q point stability.

Dr. Rohan Jadhav offered computational physics in which students selected special topics to write programming, execute the program, do simulations involving physical states and analyse the results.

Dr. Radhekrishna Dubey's guided study involved some input lectures by Dr. Dubey, group discussions and active presentations from the students.



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DEPARTMENT OF ZOOLOGY

Department Coordinator: Dr. Pushpa Sinkar

24 students across the three years of graduation registered for the department activities.
The following activities were conducted:

1. Basic Astrobiology: (2 credits)

Conducted by Dr. Sujata Deshpande

An interdisciplinary lecture course along with a field visit was conducted. FY, SY, and TY students of BA, BSc, BSc- IT, BMM and BMS participated in this program. The following topics were covered in the course: 'Origin of Earth, Origin of life on Earth, Evolution of life, and Habitable Zones in the solar system and Universe, Detection of exoplanets. The students were taken to Neral for the practical session on observation of the sky by the "Khagol Mandal". The credits and grades were awarded on the basis of the attendance and the field visit report.

2. DNA: Damage and Repair: (2 credits)

Conducted by Mr. Conrad Cabral

This was an interdisciplinary lecture course on Molecular Biology. The students were graded on the basis of their attendance and performance in the test. Biological Science students participated in the course.

3. Dissection of invertebrate specimens: (1 credit)

Conducted by Dr. Smita Krishnan

SYBSc and TYBSc Zoology students participated in this course. The students were graded on the basis of continuous overall performance.

4. Ornithology and Herpetology: (1 credit)

Conducted by Dr. Leon Pereira

The course involved lectures and field trips open to SYBSc and TYBSc Zoology students. Students were taken to the "Khandala Villa" and "Manor" to observe the reptiles and birds in the surrounding areas. They were graded on the basis of attendance, a field report and overall performance during the course.

5. Nanosynthesis- Investigation of silver nanoparticle toxicity using larvae of chironomus sp. (1 credit)

Conducted by Mr. Valentine Borges and Dr. Pushpa Sinkar

This was a lecture course along with experimental experience.


6. Project Work: (1 credit)

Antioxidant activity of marine algae collected from Okha

Guiding Faculty: Dr. Madhuri Hambarde



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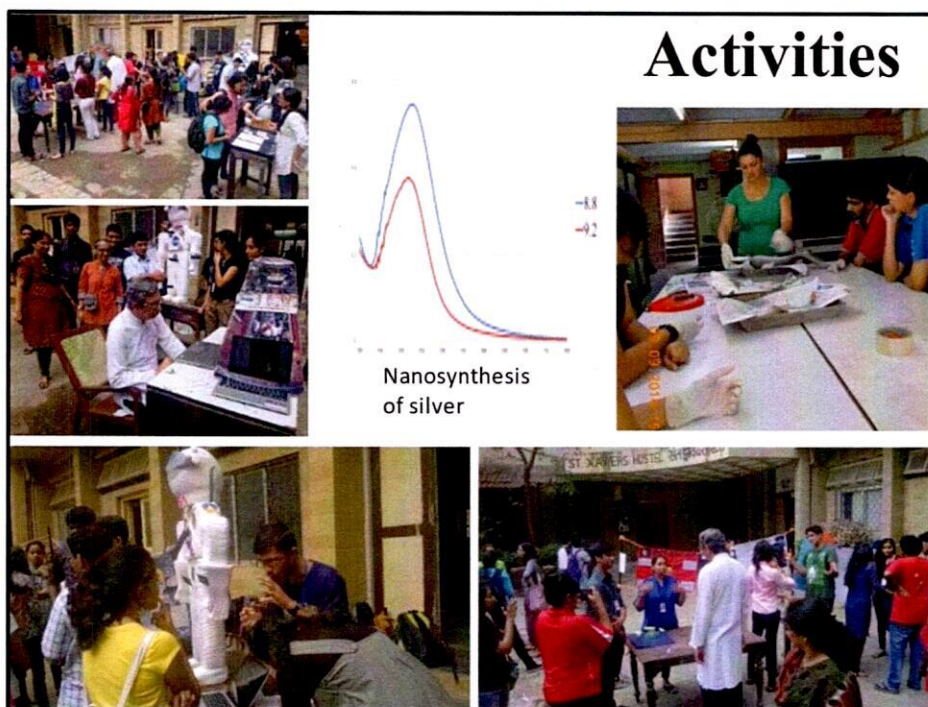
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7. Documentation of Museum specimens: (1 credit)

Conducted under the guidance of Dr. Smita Krishnan

Only S.Y.BSc Zoology students took part in this activity and the credit was awarded on completion of the activity, based on their attendance, performance and involvement throughout the program.

HONOURS ZOOLOGY DEPARTMENT



Nanosynthesis of silver



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TRANSFER CREDITS

DEPARTMENT OF FRENCH

Department Coordinator: Ms Alpana Palkhiwale

This year the French Department offered one activity of one credit as a 'transfer credit':

Workshop on 'How to read a Short story?'

A workshop was organized on 'How to read a short story?' and on understanding and analyzing various stages in the narration of a short story. A lecture series of three sessions was organized, after which the students chose short stories by various French writers belonging to the 19th and 20th century which they had to analyse and had to write an assignment on the same. 12 students of FYBA successfully completed the activity.

DEPARTMENT OF INTER-RELIGIOUS STUDIES

Programme Coordinator: Fr Prashant Olalekar

The department had a series of activities which invited students from all streams to participate. A summary of the activities is:

1. Joy of Self discovery

Conducted by Fr Prashant Olalekar S.J

There was a series of meditation workshops for those doing the Honours course on 'Joy in Self Discovery' from 7th to 9th September from 2 to 5 pm. The participants appreciated the healthy integration of eastern and western forms of meditation.

2. Awakening to Cosmic Compassion

Conducted by Dr. Orla Hazra, Fr Prashant and Candice Menezes

The FYBA 'A' division students were fortunate to have the team of Dr. Orla Hazra and Fr. Prashant, assisted by Ms Candice Menezes to teach the SPC courses on Environment and Giving Voice to Values. They tried various creative initiatives to provide an integrated perspective based on the overarching context of the universe story and the universal values of the Earth Charter.

The team also co-facilitated a weekend retreat at St. Xavier's villa, Khandala from 11th to 13th September 2015 for selected Honours students of FYBA Environment class. The methodology of the Ignatian Pedagogical Paradigm (IPP) was conducive to explore creative forms of art, music, movement and meditation thus giving a new flavour to the theme: **Awakening to Cosmic Compassion**. The culmination of the retreat was a meditative cosmic walk pausing at the 8 thresholds of the 13.8 billion year universe story. To foster an integral ecological approach the students were first given an exposure on 31st August to the Pardhi tribe at the Reay Road slum, where the XISR has an ongoing social project. They were struck by the environmental garbage dumped in front of the Pardhi huts and also witnessed how the Pardhis are considered as human garbage.



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3. HINDUISM – HONOURS COURSE

Conducted by Dr. (Fr) Noel Sheth S.J

The DIRS organized an Honours Course on 'Hinduism' from 30th November to 8th December, 2015. This course was facilitated by Dr. Noel Sheth, S.J. was quite enlightening and well appreciated.

DEPARTMENT OF PSYCHOLOGY

Department Coordinator: Ms. Ruby Pavri

A summary of the workshops offered by the department is in the table. All the activities were of one credit. The workshops were held over two days and the credit was awarded on the basis of interactive participation and a report.

No.	Activity	Resource Person	No. of Students
1.	Qualitative Market Research	Ms Trusha Dalal	24
2.	Gestalt approach to self awareness	Ms Tarana Pithawala	15
3.	Art based therapy	Ms Aarti Aggarwal	34
4.	Holistic child development	Ms Deepika Aggarwal	30
5.	Quantitative Research (highlighting the use of surveys)	Monk prayogshala (Ms Rupa Kalahasti)	23
6.	Interpersonal communication	Ms Anuja Deodhar, Ms Shruti Murali, Ms Rupa Kalahasti	33
7.	Dance movement therapy	Ms Devika Mehta	33
8.	Rational emotive therapy	Ms Shama Shah	16
9.	Forensic psychology	Ms Jhanavi Doshi	39
10.	Sports psychology	Ms Vardayani Chitale	25





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Here are some glimpses of the **dance movement psychotherapy** workshop



Honours Psychology Department

SOCIAL INVOLVEMENT PROGRAMME

St. Xavier's College- Autonomous, Mumbai, has always endeavoured to change the paradigms of education. Since 1996 it has been providing students with beyond the classroom and campus learning opportunities through the Social Involvement Programme (S.I.P.) This programme fundamentally aspires towards a holistic education by focusing on:

1. The creation of social awareness and sensitization, both among students and citizens at large.
2. The motivation of students to explore and engage with India's socio-economic realities so as to raise vital questions and make meaningful interventions.

In the academic year 2015-16, 84 students participated in the voluntary Honours Programme component of the S.I.P. The class wise distribution is shown in the following figure.



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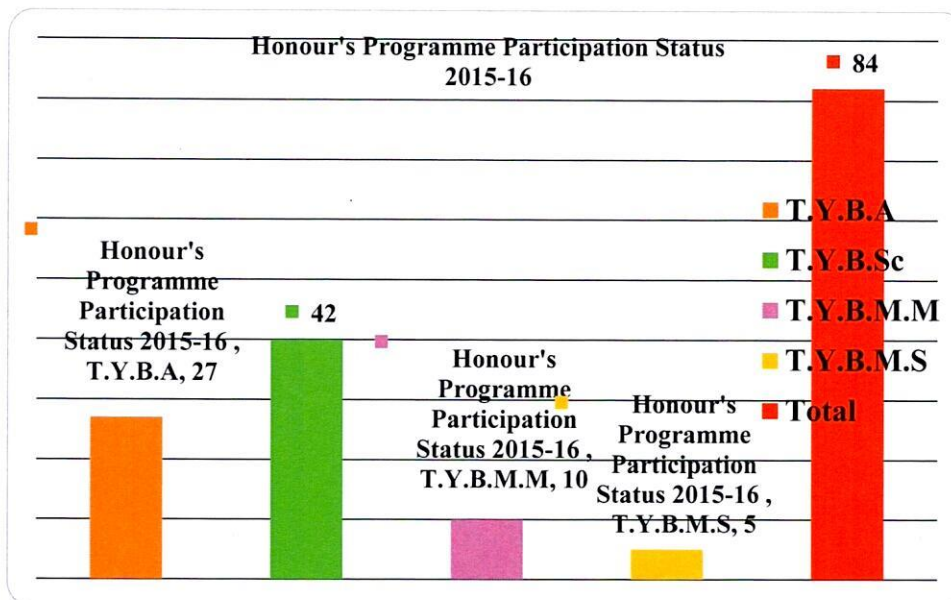


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Activities in the following genres were undertaken by the students for the completion of SIP credit.

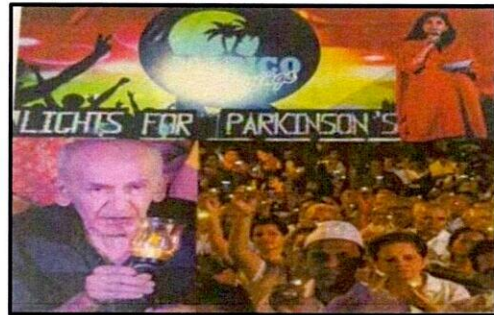
1. HEALTH

- a. **Medical Camp:** 10 students participated in the free medical health camp organized by the Inter-Religious Department. Prior to the Health Camp students were asked to mobilize and motivate the underprivileged sections of the society especially women and children residing on the pavement in and around the Churchgate and Reay Road area. On the day of the medical camp the volunteer's role was to scrutinize the medicines and provide them to the patients under the guidance of the doctors. They also had to keep the children engaged by playing games.
- b. **Genetic Disorder:** 9 students volunteered to create awareness about genetic disorder among the general public. As part of this programme students were asked to visit special schools to introduce the organisation and their work in the area of facilitating children who are suffering from genetic disorder. Some students also participated in the NGO's "Medical Community Survey" with the aim of understanding the current status of genetic disorders in different parts of Mumbai. In addition to this, students interviewed doctors to collect their opinion about genetic disorders.
- c. **Hospital Intervention:** 2 students worked in the area of health. The work involved visiting Parkinson Disease patients, engaging with health issues in slums and interacting with patients in hospitals.





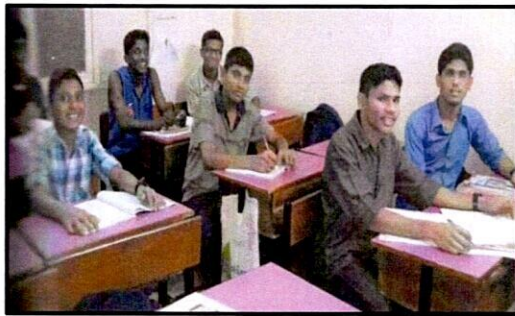
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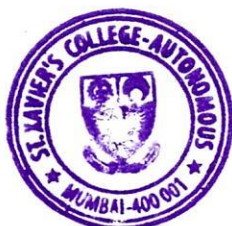
Honours SIP

2. LITERACY AND LIVELIHOOD

- a. **School Interventions:** 47 Student-volunteers assisted the educational efforts of economically vulnerable children by helping in both informal schools and formal schools. Some volunteers conducted language enhancement classes for underprivileged vernacular medium students in the college itself.



- b. **Work with Destitutes:** 8 students volunteered with the NGO "Pehchan" which works for the rights and identity of the homeless people. The students' work involved conducting income generation activities for women. Here they taught women how to prepare coasters as well as bows for hair bands. The students also conducted drawing competitions with children and taught them Basic English.



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c. **Generating Educational Databases:** 2 students volunteered at “Freakademics” an online facility for generating academic material for school children by selecting relevant videos related to the Maharashtra Board syllabus and uploading them on Freakademics website. This material is used by organisations working with underprivileged children.

3. DIFFERENTLY-ABLED:

6 students assisted visually challenged and those with physical and intellectual disabilities by being “shadow- teachers” and interacting with them.



Shadow learners

