



**Khandesh College Education Society's**  
**Post Graduate College of Science, Technology and Research, Jalgaon**

M. J. College Campus, Jalgaon, Maharashtra

**Awarded 'B+' Grade by NAAC with CGPA 2.52 in 1<sup>st</sup> cycle**

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Recognized by Govt. of Maharashtra vide G. R. No. NGC 2010/247/10 & Affiliated to K. B. C. North Maharashtra University, Jalgaon

## **BEST PRACTICES**

### **Best Practice 1:**

**1. Title of the Practice:** Prospective Researchers' Scheme (PRS)

**2. Goal:** Main objective of this practice is to inculcate research attitude and enhance intellectual ability of post-graduate students by assigning fundamental and applied scientific projects for the social benefits.

**3. Context:**

The background scenario of this practice lies with the need of connecting students with the real time situations of research industries, during their formal education. As per the slogan of our society '**Think Globally, Act Locally**', college encourages students to do research in growing fields of local as well as global demands with innovation.

**4. Practice:** The scheme is implemented from the commencement of every academic year by allotting projects to aspirant groups of students. After exhaustive literature survey, students finalize their project topic along with materials and methods under the supervision of respective guides. Experiments are repeated for confirming and/or interpreting the results in precise way. Finally, the research work is examined by eminent referees and two projects from each subject are selected as winners of PRS. All the students of winner groups are felicitated with cash prize as token of motivation by college. Research articles based on all projects are published annually in the form of a compendium.

**5. Evidence of Success:**

So far, a compendium of research articles is published with ISBN authentication. Goals of the practice in the form of innovation by the students are evident from the interdisciplinary work exhibited from projects. After reviewing the success of whole practice carefully, it has been observed that, the scheme has inculcated the research attitude amongst the students which will be helpful for their career and further doctoral degree.

## BEST PRACTICES

### 6. Problems encountered, and resources required:

Main problem arise during implantation of this practice is lack of sufficient funds to procure few expensive but necessary chemicals and equipments. It also affects some peculiar characterizations of great importance. However, project supervisors have managed hurdles with extensive efforts such as collaboration with university and other institute of KCE society. Shortage of time due to semester pattern of examination is another obstacle encountered during project. It was minimized by providing extra office hours and access to laboratories on holidays including Sunday by college authorities.

**Prospective Researchers' Scheme (PRS):** Release of A compendium under Prospective researcher scheme (PRS) has been organized on 18<sup>th</sup> September 2019 at the auspicious hands of Hon'ble Prof. P. P. Mahulikar, Pro-Vice Chancellor, KBC NMU, Jalgaon along with Prof. D. G. Hundiwale, Academic Director, KCE society, Jalgaon. This year all the 69 students of the first and second year participated in this scheme. Students completed their research project under the supervision of 16 teachers. This year due to Covid-19 situation some part of this scheme has been implemented through online guidance. However students have completed their research projects under the guidance of the teachers. The list of the projects undertaken by the students under the guidance of supervisors is given in the table below.

### Prospective Researchers' Scheme (PRS) Academic Year 2019-20

#### BIOTECHNOLOGY (M.SC. II)

- i. **Isolation and Purification of Polyphenol oxidase:** Fuse Ekta Jagannath, Patil Praful Prakash, Barde Minal Ashok
- ii. **Photochemical analysis of medicinal plant (I):** Talekar Kajal Dilip, Wagh Roshan Sanjay, Dhakare Shubhangi Bhagawan
- iii. **Photochemical analysis of medicinal plant (II):** Gonge Shubhangi Eknath, Borse Vaishali Mukunda Bonde Kanchan, Shrikrushna, Faiz Ah Mushtaque Ahmad

#### MICROBIOLOGY (M.SC. II):

- i. **Studies on effect of Monosodium glutamate (MSG) on growth of microorganism :** Mr. Jayesh M Patil, Mr. Chetan V Patil, Mr. Devesh G Walde, Mr. Pankaj G Patil
- ii. **Effect of Environmental Stresses on Food Borne Microbes:** Bhagyashri Wani, Savita Mahajan Bhuvneshwari Dusane
- iii. **Larvicidal activity of metabolites extracted from Bacillus Subtilis against vector mosquitoes:** Miss. Kanchan A Rathod, Miss. Lalita Sule, Miss. Krutika A. Suryawanshi

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- iv. **Studies on Bioethanol Production Using Agricultural Waste:** Aishwarya R. Dusane , Diksha Y. Sonawane Rachana S. Patil, Vina S. Neve
- v. **Studies on Bio-plastic producing Microorganisms:** Vandana Balvantrao Pawar, .Dipali Digambar Patil, Tejal Sunil Patil, Shubhangi Sanjay Chavan
- vi. **Studies on effect of Plant Growth Promoting Rhizobacteria on crop production:** Ms. Prajakta Nagindas Patil. Ms. Minakshi Dilip Mavchi., Ms. Priyanka chandrakant Ghatge. Ms. Atoofa Khan.
- vii. **Biodegradation of paper wastes by soli Isolates:** Mr. Dipak G. Katol, Mr . Pankaj S. Borse, Mr. Mayur D. Patil
- viii. **Microbes and you (M.Sc. I):** Puja Patil, Rupali Patil, Poonam Rathi

### CHEMISTRY (M.SC. II)

- i. **Use of HPA For Chemical Recycling of Plastic Waste (PET) (M.Sc. I):** Kaushik Patil, Dhumale Ashwini, Verma Nisha , Patil Dhiren
- ii. **Chemistry of Banana Pulp: Extraction, Screening & Tailorable Applications:** Patil Lalitkumar, Ugale Akshay, Soni Vijay.
- iii. **One-pot Multicomponent Synthesis of 2,4,5 triaryl-imidazole derivatives using Ce<sup>IV</sup> CMC as an Efficient Catalyst:** Chaudhari Kamlesh, Patil Nilesh, Khatik Nisar, Patil Ganesh.
- iv. **Chemistry of Banana Peel: Extraction, Screening & Tailorable Applications:** Pawar Prashant, Patil Tushar, Borane Rahul
- v. **Chemistry of Pseudostem Sap of Banana.:** Jain Aadesh, Mohite Shivam, Dayama Shrutika, Pawar Swapnil.
- vi. **Efficient One Pot Synthesis of Schiff's Bases By Using Cu<sup>II</sup> CMC catalyst:** Patil Madhuri, Patil Mahesh, Joshi Manasi, Valvi Dilvarsing
- vii. **Synthesis of Azo Dyes By Using Grinding Method:** Solanke Radhika, Pawar Shweta, Patil Puja, Mahajan Samrat.

### STATISTICS (M.SC. II):

- i. **Statistical Process Control Tools for Some Quality Parameter of Break System:** Pragati S. Neve, Ravina Deshmukh, Shabaj Khatik
- ii. **Statistical Analysis of Higher Education quality in India:** Umakant Patil, Avinash Patil, Harshal Nikam
- iii. **Milk Production in India(2001-2018) :** A Statistical Study : Gayatri Borse, Bharat Marathe Pratiksha Patil
- iv. **Statistical Analysis of Onion Production(2003-2019):** Nirasha Mali, Rupali Patil, Akshay Patil, Nilesh Patil
- v. **Statistical Analysis of Difference Types of Harassment:** Kunjal Patil, Mayur Patil, Amar Chaudhary, Prashant Wagh

### MATHEMATICS (M.SC. II)

- i. **Mathematics in nature :** Zambre Kanchan Yuvraj, Sharma Sarita Savarmal
- ii. **Magic in numbers:** Bhamre Neha Devidas, Badgujar Lalita Rajendra

## BEST PRACTICES

### Best Practice 2:

1. **Title of the Practice: PG Technologia: University** Level Power-Point Presentation Competition

2. **Goal:** To develop presentation skill of students along with enhancement in the knowledge of the current scientific and technological trends and create competitive environment.

3. **The Context:** This competition is organized to imbibe following aspects: ICT: Inclusive presentations with animations, audio-visual clippings, graphics, simulations which enhance the beauty of presentation.

4. **The Practice:** The organization of competition is the quality initiative of IQAC. Schedule and themes for the same are announced one month before the date of competition and communicated to the colleges and university departments. Themes for competitions are declared in the disciplines of Chemistry, Biotechnology and Microbiology. On scheduled date, the competition is held subject-wise. Candidates present their topic with their best performances in front of subject expert judges. Each candidate is allowed to present in total ten minutes out of which 7 minutes for presentation and 3 minutes for question-answers. Finally, referees evaluate the participants and select the winners of competition from each subject, based on their versatile performances. The winners are felicitated by offering the cash prizes and certificates by the auspicious hands of eminent guest.

5. **Evidence of Success:** Participating students expressed their views after competition that reveals the success of practice. Students specifically mentioned the improvement of confidence and presentation skills among them. The competition availed a platform to interact with subject experts and other participants for the exchange of knowledge. Organization of such a competition reflects in achieving the prizes at university level research convention, 'Avishkar' and university youth festival 'Yuvarang'.

### 6. Problems Encountered and Resources Required

Since the college is non-aided, to generate the financial resources to execute the practice at grand level of organization. Lack of time for organization due to compact schedule of teaching-learning process and semester pattern. To prepare students for presentation up to the high level of competence and excellence is difficult for students from rural area. However, college has successfully overcome these hurdles with rigorous, persistent, and patient efforts in this regard.

## BEST PRACTICES

### **PG Technologia-2020, a University Level Power Point Presentation Competition:**

College organized University level power point presentation competition on 25<sup>th</sup> January, 2020 for the students of chemical sciences, life sciences and mathematical sciences. For this competition 38 students were present from various colleges affiliated to KBCNMU, Jalgaon and various departments of university. Certificate and cash prizes for first two rank holders of each discipline were distributed at the auspicious hands of chief guests, Prof. J. N. Chaudhari and Prof Yogesh Narkhede of prize distribution function. Winners are;

#### **Chemical sciences :**

Rank-1: Rhishikesh Patil : Pratap College Amalner , **Rank -2:** Lalit Patil PGCSTR, Jalgaon

#### **Life Sciences (BT) :**

Rank-1 :Shital Chaudhari : School of Life Sciences, KBCNMU, Jalgaon, **Rank -2:** Danish Mahamad : M. J. College, Jalgaon

#### **Life Sciences (MB):**

Rank-1: Dipika Patil : M. J. College. **Rank -2:** Vasantika Patil ,M. J. College

#### **Mathematics:**

Rank-1: Kanchan Zambare : PGCSTR, Jalgaon, **Rank -2:** Pratiksha Tatar , Dept of Math, KBCNMU, Jalgaon

#### **Statistics:**

Rank-1: Dipika Ingale , PGCSTR, Jalgaon, **Rank -2:** Manjusha Patil, Pratap College Amalner

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