

### **Innovations by the Faculty in Teaching and Learning**

*Innovations by the Faculty in teaching and learning shall be summarized as per the following description.*

*Contributions to teaching and learning are activities that contribute to the improvement of student learning. These activities may include innovations including, however not limited to, use of ICT, in instruction delivery, instructional methods, assessment, evaluation and inclusive class rooms that lead to effective, efficient and engaging instruction. Any contributions to teaching and learning should satisfy the criteria:*

- *The work must be made available on Institute website*
- *The work must be available for peer review and critique*
- *The work must be able to be reproduced and built on by other scholars*

*The institution may set up appropriate processes for making the contributions available to the public, getting them reviewed and for rewarding. These may typically include statement of clear goals, adequate preparation, use of appropriate methods and significance of results, effective presentation and reflective critique.*

The institute has taken many measures to make the teaching and learning process effective. It includes following techniques for improvement in student learning:

- Use of ICT
- Instruction Delivery Methods
- Assessment Methods
- Mentorship
- Every classroom of the college is installed with mounted LCD projector, which are well utilizes by faculty members. In addition, videos or animations are adopted to explain a concept more clearly.

### **Use of ICT methods**

- These activities are based on the use of advanced technology. These are mainly instructional materials that faculty members have created like their videos, animations, presentations for better learning of learners.
- The work of the faculty (Innovations using ICT) is available on the Institute's website.



Adarsh Shikshan Mandal's  
**IDEAL COLLEGE OF PHARMACY &  
RESEARCH**

Adarsh Vidyanagri, 21/11, At Bhal, P. O. Dwarli, Via-Kalyan Rly. Stn., Malang gad Road, Kalyan  
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Sr. No.	Name of faculty	Innovative teaching method	Class and Sem (Syllabus)	Subject	Topic/ Title	Source (link / website)/course file
<b>2022-23</b>						
1	Dr. Suvarna Bhadane	Teaching through video (online lab)	Third Yr. B. Pharm Sem V (R-19)	Industrial Pharmacy	Formulation of Clear liquid Shampoo	<a href="https://www.youtube.com/watch?v=lxvTF0Du0nw&amp;t=142s">https://www.youtube.com/watch?v=lxvTF0Du0nw&amp;t=142s</a>
<b>2021-22</b>						
1.	Ms. Suvarna Bhadane	Teaching through video (online lab)	Third Yr. B. Pharm Sem V (R-19)	Industrial Pharmacy	Hammer Mill	<a href="https://www.youtube.com/watch?v=pu5NWKhGiAA">https://www.youtube.com/watch?v=pu5NWKhGiAA</a>
2.	Mr. Sujit Ubale	Flipped Classroom	Second Yr. B. Pharm Sem V (R-19)	Physical Pharmaceutics-I	Surface tension	<a href="https://youtu.be/l3abWzEIA1I">https://youtu.be/l3abWzEIA1I</a>
<b>2020-21</b>						
1.	Ms. Suvarna Bhadane	Teaching through video (online lab)	Third Yr. B. Pharm Sem V (R-19)	Industrial pharmacy	1. Paracetamol suspension 2. Aqueous Calamine Cream	<a href="https://www.youtube.com/watch?v=hz2YAIFOSQI&amp;t=63s">https://www.youtube.com/watch?v=hz2YAIFOSQI&amp;t=63s</a> <a href="https://www.youtube.com/watch?v=Am4DrAe8-xg&amp;t=16s">https://www.youtube.com/watch?v=Am4DrAe8-xg&amp;t=16s</a> <a href="https://www.youtube.com/watch?v=iuO9DuPEMa">https://www.youtube.com/watch?v=iuO9DuPEMa</a>



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					3. Cetrimide Cream IP 4. Preparation of Liquid Paraffin Emulsion. 5. Introduction to Tablet 6. Reticulo-endothelial System 7. Blood transfusion, its significance 8. Toothpaste Formulation	<a href="#">E&amp;t=148s</a> <a href="https://www.youtube.com/watch?v=O89bE1qWmGw&amp;t=16s">https://www.youtube.com/watch?v=O89bE1qWmGw&amp;t=16s</a> <a href="https://www.youtube.com/watch?v=uMnMsoa9ejo&amp;t=426s">https://www.youtube.com/watch?v=uMnMsoa9ejo&amp;t=426s</a> <a href="https://www.youtube.com/watch?v=oOHWZDK1wJ4&amp;t=2s">https://www.youtube.com/watch?v=oOHWZDK1wJ4&amp;t=2s</a> <a href="https://www.youtube.com/watch?v=owhubf5bEJA">https://www.youtube.com/watch?v=owhubf5bEJA</a> <a href="https://www.youtube.com/watch?v=f7dQyv0OKaM&amp;t=720s">https://www.youtube.com/watch?v=f7dQyv0OKaM&amp;t=720s</a>
2.	Kirteebala Pawar	Teaching through video (online lab)	Second Yr. B. Pharm Sem V (R-19)	Pharmaceutical Microbiology	1. Introduction to microbiology lab equipment: Incubator 2. Introduction to Refrigerator 3. Introduction to Laminar Airflow Cabinets	<a href="https://www.youtube.com/watch?v=hmoJHzeqik">https://www.youtube.com/watch?v=hmoJHzeqik</a> <a href="https://www.youtube.com/watch?v=DvbbhT3I83w">https://www.youtube.com/watch?v=DvbbhT3I83w</a> <a href="https://www.youtube.com/watch?v=akxQXWHS2W0">https://www.youtube.com/watch?v=akxQXWHS2W0</a>



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3.	Mr. Sujit Ubale	Teaching through video or Flipped Classroom	Second Yr. B. Pharm Sem V (R-19)	Physical Pharmaceutics-I	1. DLVO theory 2. Classification of complexes 3. Accelerated Stability studies	<a href="https://youtu.be/Y_BXmG7pl1E">https://youtu.be/Y_BXmG7pl1E</a> <a href="https://www.youtube.com/watch?v=_Ub4qAVY2OY">https://www.youtube.com/watch?v=_Ub4qAVY2OY</a> <a href="https://www.youtube.com/watch?v=Ej6CYFSTIss">https://www.youtube.com/watch?v=Ej6CYFSTIss</a>
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**Innovative Methods by Faculty**

### **Instruction Delivery Methods**

- Instructional materials, also known as Teaching Learning Materials (TLM), are collection of materials that a teacher uses in teaching and learning situations to help achieve desired learning objectives.
- Each faculty member has made lab manual for respective subjects, which is available in the laboratories for referencing.
- Several videos are uploaded by faculty members, are available on YOU TUBE, for students to watch and learn to prepare for their respective course.
- Concerned students regularly visit the sites and watch the videos. They discuss their difficulties with the faculty.

### **Assessment Methods:**

- Various assessment methods are used by faculty members to evaluate student performance.
- The different assessment methods include class tests, quiz, periodic, semester examinations etc and outcomes are used to improve the teaching learning process.

### **Mentoring**

- Mentoring in the institute is the factor that ensures better outputs and high employability for the students but also ensures high enrolment ratio.
- Mentor guides and helps to shape the next generation.
- So a mentorship system is developed in which each faculty is a mentor of 20 students.
- One mentor is associated with 5 students from each class- F.Y., S.Y., T.Y. and Final year.
- Teaching learning is made more interested by outside class training, which reflects practical knowledge for better understanding of students. Students are encouraged to take up a research project as a part of continuous efforts for grooming students. The findings of student research are then published in research journal, which is displayed on student's corner for further encouragement of the students.
- The faculty is constantly encouraged to update their ICT skills using ICT-based teaching methodology.
- Faculty are often engaged in developing their respective lectures using different techniques like **developing website** and having the lecture ready on it to be used in a **flipped-class-room-activity**.
- Some thought **provoking short-films**, other than curriculum, are displayed in-between classes to cultivate the good thinking practice among the students.
- Faculty members are regularly deputed to participate in the Faculty development Programmes, organized during summer/winter session within the country.

- Several videos are uploaded by faculty members, are available on **YOU TUBE**, for students to watch and learn to prepare for their respective course. Concerned students regularly visit the sites and watch the videos. They discuss their difficulties with the faculty.
- All Faculties has prepared several **power point presentations** which are available on the social media for the students for study. Following are the contributions made available to the students since 2019.
- **Dr. Suvarna Bhadane, Ms. Kirteebala Pawar and Mr. Sujit Ubale** has prepared several **teaching aid, interactive presentations** in the subject taught at undergraduate levels and are available on You Tube. These contents are accessible to students.
- **Dr. Suchita Gokhale, Dr. Smita Takarkhede, Dr. Ujwala Dube and Ms. Suvarna Patil** has developed Organ bath to predict animal tissue activity.
- **Dr. Suvarna Bhadane** has developed **Elevated Plus Maze and Radial Arm Maze models**.
- The **Elevated Plus Maze** is a widely used behavioural assay for anxiety behaviour of rodents. It is easy to use, can be fully automated and valid results can be obtained in a short, 5-min testing period.



**Elevated Plus Maze**

- The **Radial Arm Maze** model is a widely used and reliable method for assessing spatial learning and memory in rodents and it has been used in a wide range of neuroscience research, including studies on aging, brain injury and neurological

disorders. It can also be used to study the effects of substances, chemicals or other manipulations on spatial learning and memory.



**Radial Arm Maze**

- **Mr. Shriram Bairagi** from the Department of Pharmaceutical Chemistry has developed a **water circulation system in laboratories** to reuse water continuously during use of condenser.



**water circulation system in laboratories**

- This simple modification saves ample water from being wasted in chemistry laboratory work, and is important in the draught-affected area.
- **Mrs. Suvarna Badhane** from the Department of Pharmaceutics has developed a **Glass Mould for preparation of Buccal Patches**.
- This simple mould is useful for preparation of Buccal patches in Pharmaceutics laboratory.





**Glass Mould**