

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

- Our faculty team are deeply committed to train students both theoretically and practically. Students are encouraged to independently use advanced instrumentation techniques, addressing challenges they encounter while receiving guidance and suggestions from faculty
- Students have the autonomy to select their projects based on current innovative ideas, which are often implemented within our institution. During our Institution's Innovation Day celebration, faculty members present their innovative concepts to students, who then showcase their projects to the public, inviting feedback and suggestions
- We facilitate smart classroom lectures that enhance students' ability to visualize and retain key information. All lectures are delivered through PowerPoint presentations using microphone and podium setups.
- Our faculty encourages blended learning by using e-resources which is an essential component of the modern teaching learning process. In pursuit of this requirement, the institute provides, E- enabled classrooms with LCD projectors and smart classroom. High speed broadband connectivity through campus wide optical fiber local backbone networking and Wi-Fi campus.
- Enterprise Resource Planning (ERP) – JUNO is available to students and faculty where all the details such as CE and SEE marks will be uploaded and students and parents can able to access it
- Our digitalized library provides students and faculty with ease to access online journals, e- books, and database containing previous years' student research projects.
- The institution is equipped with fixed internet facilities and Wi-Fi connections to support online classes, reference checking and webinars.
- We organize regular workshops, guest lectures and seminars featuring experts from various reputed institutions to disseminate the knowledge and softskills to the student's community. These events focus on entrepreneurial skills,



creativity, leadership, and industry-specific knowledge. The Mentor Program helps students explore the feasibility of new venture ideas, while experiential learning opportunities allow both undergraduate and graduate students to apply in-class learning through hands-on experience.

- Our laboratory is extensively utilized for consultancy work, equipped with sophisticated instruments such as HPLC, HPTLC, FTIR, UV Spectrophotometer, Semi-Automated Analyzer, Environmental Chamber and more, all under one roof.
- Our formulation & Development research centre and Animal House are the state of art facilitated dedicated with different class of pharmaceutical product development zones with excellence in quality standards & Bio safety lab Class-2 offering a range of services with a focus on confidentiality, integrity, commitment, and consistency. We provide various services and intellectual input, including analytical method development and validation, formulation development and characterization, preclinical and clinical activities, and pharmacological studies on animals for multidisciplinary research projects as consultancy services or as collaborative projects with other universities / industries.

### **1. Information and Communication Technologies**

All classrooms are equipped with internet access, enabling faculty to integrate computers, Powerpoint presentations, and other audiovisual tools to enhance teaching effectiveness and facilitate student learning. Students are provided with audio video materials to support their independent study and preparation for classes. Lecture Halls are provided Lecture Capturing systems which records all live classes and stores the modules / sessions as e-contents for future reference to students during learning process. To further enrich the learning experience, resources depicting real-life scenarios are employed to clarify theoretical concepts. Faculty members are also actively engaged in monitoring the students to register for various MOOC and NPTEL courses, addressing the technology-driven global educational demands. Use of digital notes, PowerPoint presentations for respective subjects. Students



are provided with access to E- Journals (Full text access). Students are also given access to E-Databases such as EBSCO, Proquest, Embase, e-ShodhGanga.

## **2. Tutorials**

One hour per week is allocated for tutorials for each subject per batch. During these sessions, teachers review the topics and subtopics covered in the theory classes and address any questions raised by the students. Students are also given the access to view the Lecture Captured AV theory module sessions to the needy students. Faculty members ensure that students thoroughly comprehend the material by conducting class tests, quizzes as continuous evaluation assessments on the subjects taught.

## **3. Educational Softwares**

Educational software, such as ChemDraw for drawing chemical structures, Micromedex for drug information, Ex-pharm Series for pharmacological studies, Design Expert for Quality-by-Design, Sigmapstat, GastroPlus, PK-Mobi, Autodock, GraphPad Prism, X-Cology, Micromedex, e-CTD, JMP and molecular dynamics software for statistical analysis, Words Worth software for English proficiency are employed as teaching and learning aids. Students are provided with hands-on training in these software programs to enhance their learning experience.

## **4. Pilot Plant Facilities**

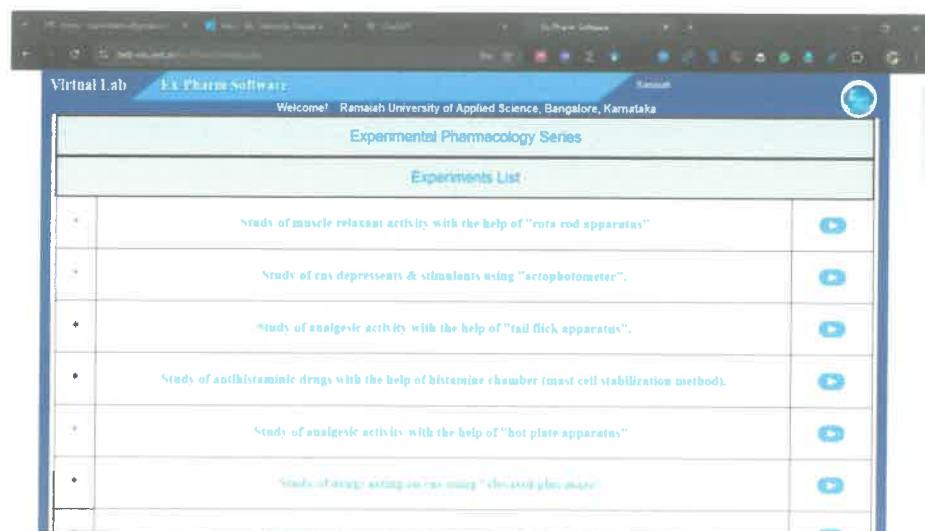
The faculty boasts an exclusive state-of-the-art Pharmaceutical Pilot Plant, equipped with advanced machinery including rotary and single tablet punching machines, a tablet coating machine, homogenizer, V-cone blender, multimill, tray dryer, fluidized bed dryer, Kalweka All-purpose equipment with 11 attachments, capsule filling machine, liquid filling machine, Electrospinning machine, Suppository testing machine, Bursting strength apparatus, Lyophilizer, and more. These machines and instruments are utilized to train students in both the theoretical and practical aspects of current pharmaceutical industry developments to make them industry ready with real time experiment scenarios.

## **5. Simulation Models for Animal Studies**

Simulation models serve as alternative methods for conducting pharmacological experiments, particularly since animal studies are labor-intensive. Hands-on experience with



live animals is not deemed essential for undergraduate pharmacy students, making simulation models a more ethical and effective substitute. The Ex-Pharm Series software is used for these simulations at the undergraduate level.



## 6. Assignments

As part of the internal assessment process, students are regularly evaluated with assignment per subject each semester to evaluate their understanding of the theory course material. Students are required to submit handwritten answers, diagrams which helps develop their learning ability, presentation skills and subject knowledge. This continuous assessment method fosters higher-order learning among students.

## 7. Seminars

In addition to regular coursework, students are regularly assigned seminar topics each semester. This practice helps students develop communication skills, leadership qualities, time management, conflict resolution, and other soft skills. Continuous assessment through seminars provides a comprehensive means of evaluating student performance.

## 8. Guest Lectures

Over and above of the academic curriculum of regular theory and practical classes, faculty members organize guest lectures from eminent subject experts of the domain. Experts from the pharmaceutical industry are invited to share their knowledge on specific topics, helping students to get updated with industry developments.



**9. Industrial Visits and Training**

During the third year of under graduate programme, students participate in industrial visits and training sessions. These experiences expose them to the pharmaceutical industry beyond the classroom, providing practical insights into the world of work. Such visits and training sessions are considered invaluable for integrating theoretical knowledge with practical industry experience. Departments arrange these visits to offer students opportunities in various sectors of the pharmaceutical industry enhancing their overall learning.

**10. Interactive techniques, project-based learning, models, YouTube videos, and informative charts**

These approaches maximize discussion time with students, facilitating the achievement of course objectives and effectively addressing any questions or concerns they may have. Use of Physical models, Charts, Videos, PowerPoint presentations are adopted during teaching-learning interaction.

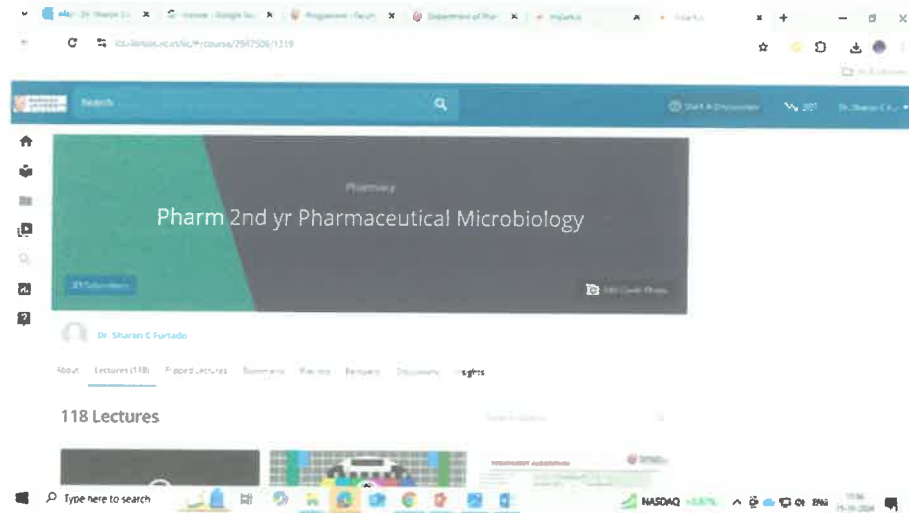
**11. Lecture Capturing System (LCS)**

Classrooms are equipped with Lecture Capturing System. Video has the power to fundamentally transform the way students learn and the way people share knowledge. So, Lecture Capturing System makes it easy for anyone to record, live stream, and share video. Faculty of Pharmacy, RUAS desires to enhance the learning process and improve student achievement. Using LCS flexible video platform that can record lectures, flip classrooms, capture student assignments, and engage faculty, students, communities, alumni, and others. With LCS, every video in an institution's library is automatically searchable, shareable, secure and accessible anytime and anywhere. LCS enables the delivery of programs at a distance.

Course content can be delivered to students located distantly or to those students who have missed particular classes due to genuine reasons. By providing the flexibility to access the recorded lecture from any location, whenever they like, students have much more control over their learning. Captured lecture content available online offers value because the material is available whenever students need it. The ability to easily access course content online at any time is incredibly beneficial for learners. It facilitates blended learning course



delivery. Combining more than one type of learning method into a program, such as combining traditional face-to-face course delivery with online learning. This kind of hybrid program is enticing to students and educators alike because it adds much-valued flexibility to course delivery.



  
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