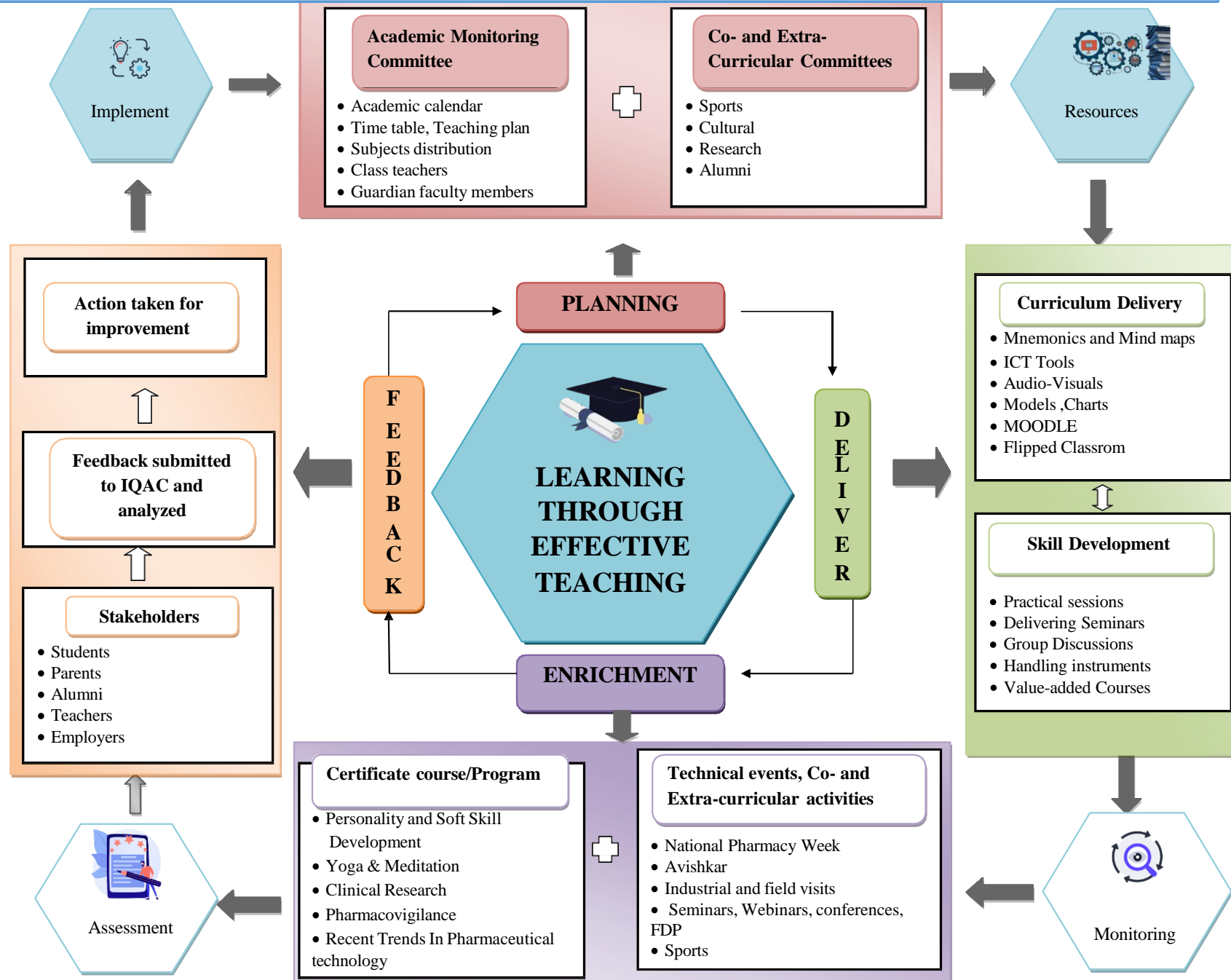


**1.1.1 - The Institution ensures effective curriculum delivery through a well planned and documented process**

# Effective Curriculum Delivery



1.1.1 The institution ensures effective curriculum delivery through a well planned and documented process as follows:

## CURRICULUM PLANNING

### Academic calendar B. Pharm

#### ACADEMIC CALENDAR 2022-23

#### B.PHARM- FIRST TERM

Sr. No	Activity	Date
1.	Commencement of classes	Final Year B Pharm -15/7/22 S.Y.,T.Y B. Pharm- 01/08/22 First Year B Pharm- 27/12/22
<b>S.Y.B. Pharm Sem – III, T.Y. Year Sem- V, Final Year B. Pharm Sem -VII Internal Examinations</b>		
1.	Continuous mode: Academic Activities Assignment	12/09/22-17/9/22
2.	Group Discussion	26/9/22-1/10/22
3.	<b>1<sup>st</sup> -Sessional Examination</b>	<b>Practical</b> 10/10/22-14/10/22
4.		<b>Theory</b> 17/10/22-21/10/22
5.	<b>2<sup>nd</sup> -Sessional Examination (SY &amp; TY)</b>	<b>Practical</b> 31/10/22-04/11/22
6.		<b>Theory</b> 28/11/22-02/12/22
7.	<b>2<sup>nd</sup> -Sessional Examination (Final year )</b>	<b>Practical</b> 31/10/22-04/11/22
8.		<b>Theory</b> 21/11/22-24/11/22
9.	Journal Certification	Final Year -02/12/22 S.Y. & T.Y.- 5/12/22
<b>F.Y. B. Pharm Sem -I Internal Examinations</b>		
1.	Continuous mode: Academic Activities Assignment	17/01/23 to 22/01/23
2.	Open Book Test	07/02/23 to 12/02/23
3.	<b>1<sup>st</sup> -Sessional Examination</b>	<b>Practical</b> 13/02/23 - 17/02/23
		<b>Theory</b> 20/02/23 - 25/02/23
4.	<b>2<sup>nd</sup> -Sessional Examination</b>	<b>Practical</b> 13/03/23 - 17/03/23
		<b>Theory</b> 20/03/23 - 27/03/23
5.	Journal Upload and Checking	Last week March
6.	University online form filling	02/01/23-18/01/23
<b>Holidays Celebration</b>		
7.	Independence Day	15/8/22
8.	Ganesh Chaturthi	31/09/22
9.	Gandhi Jayanti	2/10/22
10.	Dusshera	5/10/22
11.	Diwali vacation	24/11/22 – 26/11/22
<b>Co-curricular Activities</b>		
1.	Conclusion of Classroom Teaching for all years	Final year- 3/12/22 S.Y., T.Y.- 10/12/22 F.Y.- 31/03/23
2.	Conclusion of term	SY, TY, Final Year- /11/22 F.Y.B.Pharm- 31/3/23
Weekly Off		1 <sup>st</sup> & 3 <sup>rd</sup> Saturday , Every Sunday
Student Counseling / Mentoring		Last week of each month
Monthly Syllabus Completion submission		Last week of each month
Staff Meeting		Every Monday, 12:00- 1:00 p.m.

Academic Incharge



Principal

## Academic calendar M. Pharm

J.S.P.M.'s Rajarshi Shahu College of Pharmacy & Research, Tathawade, Pune-33

### ACADEMIC CALENDAR 2022-23

#### Masters in Pharmacy-Pharmaceutics & Pharmaceutical Quality Assurance

A) First Term : Semester-I & III: 01/08/2022 to 10/12/2022

Semester-II& IV: 26/12/2022 to 30/06/2023

B) Working days:

S. No.	Month	No. of working days
1.	August	23
2.	September	24
3.	October	20
4.	November	24
5.	December	14
<b>Total</b>		<b>105</b>

S. No.	Month	No. of working days
1.	January	23
2.	February	22
3.	March	23
4.	April	21
5.	May	24
6.	June	24
<b>Total</b>		<b>137</b>

C) Presentations and Sessional Examination

S. No.	Sessional Exam.	Theory	Practical
1.	Proposal Presentation (Sem III)	19 <sup>th</sup> September 2022 – 24 <sup>th</sup> September 2022	
2.	Non-University examination of RMB (Sem III)	28 <sup>th</sup> December 2022	-
3.	Journal Club activity (Sem III)	10 <sup>th</sup> October 2022- 18 <sup>th</sup> October 2022	
4.	Progress Research Presentations	20 <sup>th</sup> February 2023 to 23 <sup>rd</sup> February 2023	
5.	Commencement of Sem I	10 <sup>th</sup> January 2023	
6.	First Sessional Exam	20 <sup>th</sup> February 2023 – 23 <sup>rd</sup> February 2023	24 <sup>th</sup> February 2023
7.	Second Sessional Exam	22 <sup>th</sup> March 2023- 30 <sup>th</sup> March 2023	31 <sup>st</sup> March 2023
8.	Journal Club activity (Sem IV)	21 <sup>st</sup> February 2023 - 25 <sup>th</sup> February 2023	

  
Academic Incharge PG



  
Principal

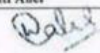
## Time table B. Pharm


RSCOPR/Acad/UG/07/2022-23


TIME TABLE ACADEMIC YEAR 2022-23						
FIRST YEAR B. PHARM. SEMESTER -I Division A w.e.f. 27/12/2022						
Day	Mon.	Tues.	Wed.	Thu.	Fri.	Sat
8:30 – 9:30 p.m.	HAP-I (VK)	PH-I (SK)	PA-I (AP)	PH-I (MB)	CS (SA)	PIC (SV)
9:30 - 10:30 p.m.	PIC (SV)	PA-I (AP)	HAP-I (PG)	CS (SA)	<b>Tutorial</b> HAP-I (VK)	CS (SA)
10:30 – 11:30 p.m.	PA-I (AP)	PIC (AM)	CS (SA)	<b>Tutorial</b> PIC (SV)	<b>Tutorial</b> PA-I (AP)	HAP-I (VK)
11:30- 12:30	PH-I (SK)	HAP-I (PG)	PH-I (SK)	PA-I (AP)	PIC (SV)	<b>Tutorial</b> PH-I (SK)
12: 30- 1:00 p.m.	L U N C H                      B R E A K					
1:00 – 5:00 p.m. <b>PRACTICALS</b>	<i>HAP-I</i> (VK)	<i>PIC</i> (SV)	<i>PH-I</i> (MB)	<i>PA-I</i> (AP)	CS (SA)	<i>Rem.Bio/Rem</i> <i>Maths (PG)</i> <i>/Library Hours</i>
<b>A</b>						
<b>B</b>	<i>PH-I</i> (SK)	<i>HAP-I</i> (PG)	<i>PIC</i> (AM)	<i>Rem.Bio/Rem</i> <i>Maths (PG)</i> <i>/Library Hours</i>	<i>PA-I</i> (AP)	CS (SA)
<b>C</b>	<i>PIC</i> (SV)	<i>PH-I</i> (SK)	<i>HAP-I</i> (PG)	CS (SA)	<i>Rem.Bio/Rem</i> <i>Maths (PG)</i> <i>/Library Hours</i>	<i>PA-I</i> (MC)

AP- Mrs. Asawari Pachauri	AM- Mrs. Archana More	MB- Mrs. Madhavi Bindu	MC- Mrs. Manisha Chavan	PG- Mrs. Priyanka Ghadage
SA- Mrs. Shruti Aber	SK- Ms. Swati Kshirsagar	SV- Mrs. Suvarna Vanjari	VK- Mrs. Vrushali Kakad	

  
 Class Teacher

  
 Academic Incharge

  
 Principal

## Time table M. Pharm

J.S.P.M.'s. Rajarshi Shahu College of Pharmacy and Research, Tathawade, Pune-33

**Masters in Pharmacy 2022-23 (Semester-I)**

**(Pharmaceutics & Pharmaceutical Quality Assurance) w. e. f. 10/1/2023**

Time	Day							
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
8.30-9.30	MPAT (AS)	Practical I Pceutics / PQA (AS/ PDG)	RA / PDTT (UK) / (KL)	MPAT (PDG)	Practical I Pceutics / PQA (APP/ PDG)	MP / QCQA (APP) / (PDG)		
9.30-10.30	MPAT (AS)		MPAT (PDG)	MP / QMS (UK) / (AS)		MP / QMS (UK) / (AS)		
10.30-11.30	DDS / QCQA (APP) / (PDG)		DDS / QMS (APP) / (AS)	DDS / QCQA (APP) / (PDG)		Journal club		
11.30- 12.30 Lunch break						Lunch break		
12.30-1.30	RA / PDTT (UK) / (KL)		MP / QCQA (UK) / (PDG)	DDS / QMS (APP) / (AS)		Journal club		
1.30-2.30	Seminar/ Assignment		RA / PDTT (UK) / (KL)	RA / PDTT (UK) / (KL)		Journal club		
2.30-3.30	Seminar/ Assignment	Seminar/ Assignment	Seminar/ Assignment	Journal club				

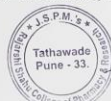
APP - Dr. A. P. Pandit, AS-Dr. A. S. Sayare, PDG- Dr. P. D. Ghode, UK- Dr. Ujjwala Kandekar, KL-Mr. K. D. Lone

*P.D.*

Dr. P. D. Ghode  
Class Teacher

*Ashlesha P. Pandit*

Dr. Ashlesha P. Pandit  
PG Coordinator



*K.R. Khandelwal*

Dr. K. R. Khandelwal  
Principal

## Teaching Plan (Theory)

J.S.P.M's  
Rajarshi Shahu College of Pharmacy & Research, Pune

### Teaching Plan

Academic Year: 2022-23 /Semester, Credit and Grading System

Subject: Drug Delivery Systems [MPH102T]	Teaching scheme: Lectures: 4hrs /week (Credits points 04) (Credits hours 04)
Class: First Year M. Pharm (Semester-I) Name of Faculty: Dr. Ashlesha P. Pandit	Examination scheme: I. Internal Assessment : 25 Marks 1. Continuous Mode : 10 Marks 2. Sessional Exams : 15 Marks II. End-semester Exams : 75 Marks TOTAL : 100 Marks

Semester- I (Theory)						
Lecture No.	Description	Planned Dates	Actual Dates	Ref. used	Content Delivery Methods/ ICT Tools used	Course Outcomes
<b>Topic I. Sustained Release (SR) and Controlled Release (CR) formulations</b>						
1.	Introduction, basic concepts used in drug delivery	10/1/23	10/1/23	R1, R4	Chalk and Talk, Power point presentation	<b>CO1.</b> Design formulation, fabrication and evaluation of sustained, controlled and rate controlled, gastro-retentive, buccal, ocular, transdermal and protein-peptide drug delivery and vaccine delivery systems.  <b>CO2.</b> Understand the criteria for selection of drug and polymers for development of delivering system.
2.	Advantages and disadvantages of SR/CR formulations	11/1/23	11/1/23	R1, R2, R4, B4, B5	Chalk and Talk	
3.	Factors influencing SR design: Physicochemical & biological approaches for SR/CR formulation	12/1/23	12/1/23	R1, R2, R4, B4, B5	Chalk and Talk	
4.	Mechanism of Drug Delivery from SR/CR formulation, Fundamentals of kinetics of SR formulations	14/1/23	14/1/23	R1, R2, R4, B4, B5	Chalk and Talk	
5.	Types of SR and CR formulations	16/1/23	17/1/23	R1, R2, J3	Chalk and Talk	
6.	Polymers: introduction, definition, classification, properties, Application of polymers	17/1/23	17/1/23	R2, R4, B1, B2	Chalk and Talk	
7.	Biopolymers in DDS	18/1/23	18/1/23	R2, R4, B1, B2	Chalk and Talk	

#### Recommended Books (R) & Journals (J):


- R1. Novel Drug Delivery Systems by Y. W. Chien, Marcel Dekker Inc., New York, 1992.
- R2. Controlled Drug Delivery Systems by Robinson J. R., Lee V. H. L. Marcel Dekker Inc., New York, 1992.
- R3. Encyclopedia of Controlled Delivery, Editor Edith Mathiositz, Published by Wiley Interscience Publication
- R4. Controlled & Novel Drug Delivery by N. K. Jain, CBS Publishers & Distributors, New Delhi, 1997
- R5. Controlled Drug Delivery - concepts and advances, by Vyas S. P. and Khar R. K. VallabhPrakashan, New Delhi, First edition 2002.
- J1. Indian Journal of Pharmaceutical Sciences (IPA)
- J2. Indian Drugs (IDMA)
- J3. Journal of Controlled Release (Elsevier Sciences)
- J4. Drug Development and Industrial Pharmacy (Marcel & Decker)


#### Reference Books (B) and e-Books (E):


- B1. Polymeric Drug Delivery Systems by Glen S. Kwon
- B2. Biodegradable polymers as drug delivery systems by Mark Chasin and Robert Langer
- B3. Aqueous Polymeric Coating Vol-176 by McGinity
- B4. Targeted & Controlled Drug Delivery by Vyas
- B5. Advances in Controlled & Novel Drug Delivery by Jain NK
- B6. Pharmaceutical Coating Technology by Cole
- B7. Progress in controlled and novel drug delivery system by N. K. Jain
- B8. Pharmaceutical Dissolution Testing by UmeshBanakar
- B9. Industrial Pharmacy by Lachman
- E1. Encyclopedia of Pharmaceutical Technology by James Swarbrick
- E2. Pharmaceutical Excipients Edited by: Raymond C Rowe, Paul J Sheskey and Siân C Owen
- E3. Surfactants and Polymers in Drug Delivery by Martin Malmsten

#### Websites:

- W1: <https://www.youtube.com>
- W2: [https://www.ich.org/fileadmin/Public\\_Web\\_Site/ICH.../Q8.../Q8\\_R2\\_Guideline.pdf](https://www.ich.org/fileadmin/Public_Web_Site/ICH.../Q8.../Q8_R2_Guideline.pdf)
- W3. Research papers published in high impact factor journal

  
Subject Teacher  
Dr. Ashlesha P. Pandit

  
Dr. Ashlesha P. Pandit  
Academic Incharge

  
Principal  
Dr. K. R. Khandelwal











## Guardian Faculty Members


Tathwade, Pune-411033  
Guardian Faculty Members

**M. Pharm First Year 2022-23 (Pharmaceutics & Pharmaceutical Quality Assurance)**

Roll No.	Name of students	Guardian Faculty Members	Signature
<b>Pharmaceutics</b>			
1	Galdhar Avinash Kanta	Dr. Ashlesha Pandit	
2	Gandhale Ajinkya Adinath		
3	Hodshil Rutuja Gorakhnath		
4	Kamble Sandesh Maroti		
5	Karhale Pooja Sonaji		
6	Khaimar Ashlesha Punjaram		
7	Khan Afrin Jakir		
8	Lotake Shriyash Shekhar		
9	Mali Asmita Jagannath	Dr. Ujjawala Kandekar	
10	Mohite Rutuja Narayanrao		
11	Naigaonkar Mayuri Madhukar		
12	Pawar Abhijeet Babaso		
13	Pokharkar Rutuja Subhash		
14	Raskar Sayali Prakash		
15	Shelake Mayank Nitin		
16	Tayade Dnyanesh Maheshrao		
17	Thakare Pratik Haridas		
<b>P.Q.A.</b>			
18	Alange Dhanashree Mallinath	Dr. Atul Sayare	
19	Bobde Ketaki Kishor		
20	Choudhari Srushti Pandit		
21	Deore Shweta Ashok		
22	Deth Varad Meghnath		
23	Gunjal Priya Shivaji		
24	Hete Mrudul Vinay		
25	Jumbad Pallavi Nayabrao		
26	Kapse Rutuja Nandkishor		
27	Karad Aishwarya Babasaheb		
28	Khansole Lakshmi Gopinath	Dr. Prashant Ghode	
29	Lakare Harshal Dilip		
30	Mansinge Rutuja Namdev		
31	Parkar Tawheed Mansoor Ali		
32	Salve Akshata Raju		
33	Shipurkar Meghan Mangaldas		
34	Zadkhande Ritika Bhagwan		

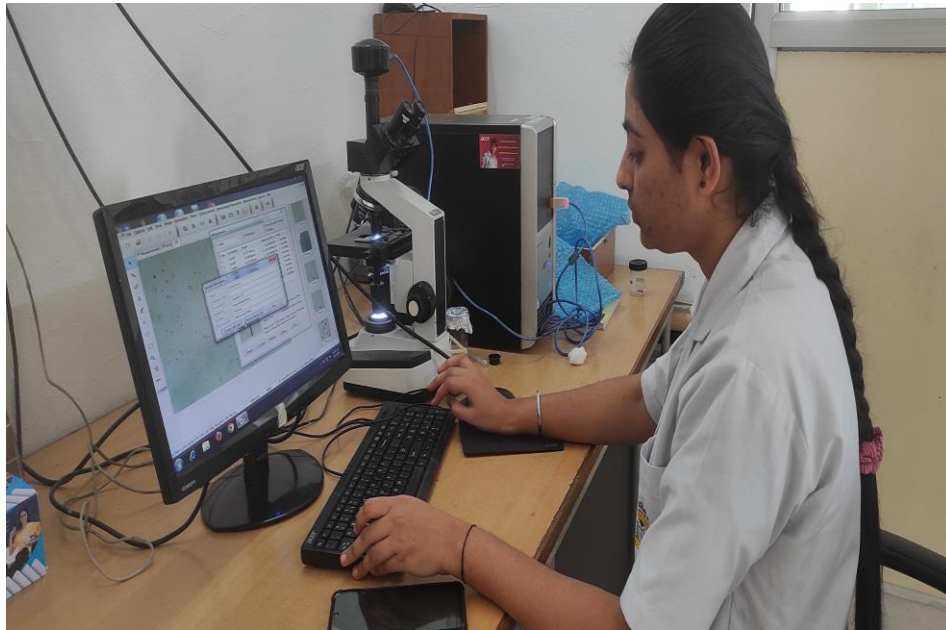
  
Dr. Prashant D. Ghode  
(Class Teacher)

  
Dr. Ashlesha P. Pandit  
(Academic In-charge)

  
Tathwade PUNE-33  
Dr. R. Khandelwal  
(Principal)

# CURRICULUM DELIVERY

## Handling of sophisticated instruments



## Mind Maps

They are self assembled colloidal structures with hydrophobic core & hydrophilic shell.

properties - synthetically nanostructured highly branched spherical particles (10-100nm).

carbon nanotubes cylindrical structure containing layers of graphene sheets.

STN - Solid hydrophobic core, lipid coat made from biocompatible lipids e.g. Triglyceride.

Polymeric nanoparticles - using biodegradable polymer, provide biological compatibility with lesser toxicity.

**Inorganic nanoparticles**

↓	↓	↓	↓
Gold nanoparticles	Quantum dots	Upconversion Nanoparticle	Magnetic Nanoparticle
↓	↓	↓	↓
emulsified by chemical means of tetrahydrofuran (THF)	semiconductor crystals that glow when stimulated by an external source such as ultraviolet light.	when it is excited with NIR radi- tion it gives fluorescence in visible range.	super paramagnetic iron oxide formed from Fe <sup>2+</sup> (Fe <sup>3+</sup> )

↓ Surface modification: uncoated - eliminated by reticulo-endothelial system (RES) within minutes. uncoated nanoparticles may spontaneously get adsorbed with plasma protein leading to elimination from systemic circulation.

## Students at Field visit



## Teaching through posters, charts

## 3D Printing & Bioprinting in vascular access

### Vascular Grafts






13. N.K. Sharma, et al. (2021), Int. J. Pharm., 511, 79-86. 2) J. Dominguez Alvarez, et al. (2021) Pharm. Sci. Eng. C: Mater. Res. Appl. 11:375

### Drug-Eluting Catheters & Fistulas












DISTRUPO  
A GROWER COMPANY

QUEEN'S UNIVERSITY

## Self-Nanoemulsifying Drug Delivery System Of Hesperidin Loaded Topical Gel For Treatment of Inflammation

Barapatre Yash, Maske Chaya, Pandit Ashlesha  
DPM's Kapsali Shahu College of Pharmacy and Research, Ulhasnagar, Pune

### INTRODUCTION

Introduction to the self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation.

### MATERIALS AND METHODS

Materials and methods used in the study, including the formulation of the SNEDDS and the preparation of the topical gel. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation.

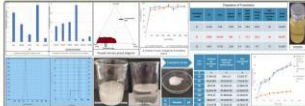
### CONCLUSION

Conclusion of the study, stating that the self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation is effective and safe. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation.

### NEED AND OBJECTIVE

The objective of the study is to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation. The study aims to develop a self-nanoemulsifying drug delivery system (SNEDDS) for the treatment of inflammation.

### RESULTS



### REFERENCES

1. Barapatre Yash, Maske Chaya, Pandit Ashlesha. (2021) Pharm. Sci. Eng. C: Mater. Res. Appl. 11:375
2. J. Dominguez Alvarez, et al. (2021) Pharm. Sci. Eng. C: Mater. Res. Appl. 11:375
3. N.K. Sharma, et al. (2021), Int. J. Pharm., 511, 79-86.
4. Barapatre Yash, Maske Chaya, Pandit Ashlesha. (2021) Pharm. Sci. Eng. C: Mater. Res. Appl. 11:375

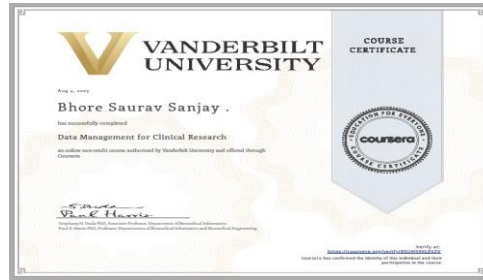
### ACKNOWLEDGEMENT

The authors would like to thank the management of DPM's Kapsali Shahu College of Pharmacy and Research, Ulhasnagar, Pune for providing the facilities.

## CURRICULUM ENRICHMENT

Institute integrates following cross-cutting issues through curricular, co-curricular and extra-curricular activities.

### Professional Ethics Value Added Certificate Courses



## Participation of students in 'National Pharmacy Week' and Pharma Rally



## Participation of students at International CRS conferences



## Free Medical Checkup Camp



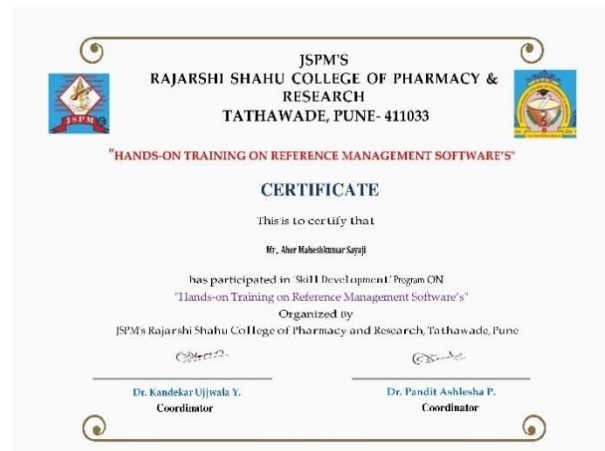
## Staff and students taking Pledge on Nasha Mukta Bharat

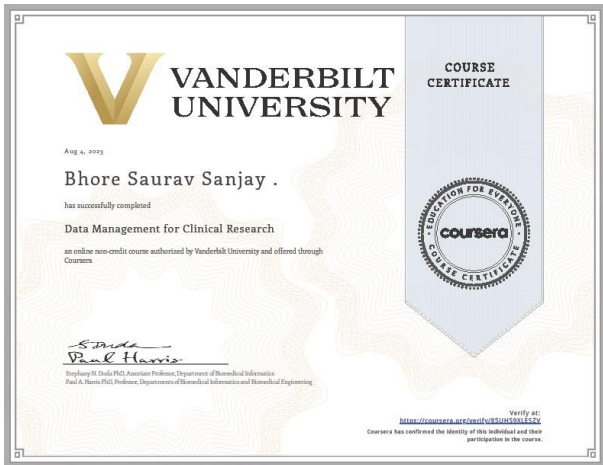


## Blood Donation Camp



## Value-added courses offered by institute







## Gender

Active participation of students in street play on Mahila aur Swasthya and 'Bacha aur Shiksha'

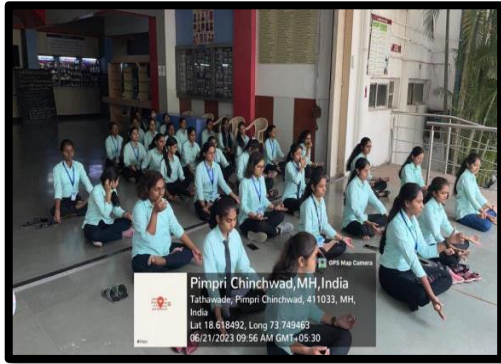


## Human Values

National Unity Day



## Yoga and Meditation



## Environment and Sustainability

### Swachh Bharat Abhiyan



## FEEDBACK SYSTEM

### Students feedback Sem V 22-23 T.Y. B. Pharm

Please submit feedback regarding the course you have just completed. Please tick the appropriate option.

Student's Name \*

Trupti Vinayak Bhosale

Email Id \*

truptibhosale2802@gmail.com

1) Overall understanding of the subject \*

	Unsatisfactory	Satisfactory	Good	Very good	Excellent
Medicinal Chemistry II	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Formulative Pharmacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Pharmacology II	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Pharmacognosy and Phytochemistry II	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Pharmaceutical Jurisprudence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

## Teachers Feedback on Ambience of the college 2022-23

Name \*

Ms. Manisha Chavan

Email id \*

walunjmanishas@gmail.com

How is the general ambience in the College? \*

- Excellent
- Very Good
- Good
- Satisfactory
- Poor

## Alumni Feedback on Curriculum

Please tick appropriate option

Email \*

ashwini93kedar@gmail.com

1) Applicability/relevance to real life situation \*

- Excellent
- Very Good
- Good
- Satisfactory
- Unsatisfactory

2) Theoretical concepts of syllabus supported by Practical/experiments: \*

- Excellent
- Very Good
- Good

## Employers Feedback form on academic performance of the institution

Name of the Employer \*

Devika Tilekar

Name of the Employee \*

Name of the company/Institute where employee is serving \*

JSPM'S

Did the institute provide student centric teaching learning process? \*

Yes

No

## Students feedback Sem I 22-23 F.Y. B. Pharm

1) Overall understanding of the subject

[Copy](#)



2) Applicability/relevance to real life situations

[Copy](#)



