

## **SCHOOL OF PHARMACY**


### **CIRCULAR**

**No: AJU/SP/022/23**

**Date 28.01.2023**

It is hereby notified that a 30 hours Short Term Training Course On “THEORETICAL AND PRACTICAL APPROACH TO VARIOUS UNIT OPERATIONS IN PHARMACEUTICAL ENGINEERING” will be conducted 27<sup>th</sup> February 2023-03<sup>rd</sup> April 2023. Students of ARKA JAIN University with Science back ground in senior secondary level can avail the opportunity. For registration interested eligible candidates need to contact Mr. Asutosha Parida (Lab Technician), School of Pharmacy. Registration amount is Rs100/- only. Registered candidates herewith notified to attend the course without failing. Coordinators need to submit the evaluated assessment papers by 6<sup>th</sup> April 2023. For details can go through the brochure available with website of School of Pharmacy, ARKA JAIN University.

ANNEXURE-1- Course Content

  
Dean  
School of Pharmacy  
ARKA JAIN University Jharkhand

**Dean**

**School of Pharmacy**

**Copy to**

Vice Chancellor  
Office of the Registrar  
IQAC  
Head of the Departments  
Dean of Different Schools  
In-charge ERP Coordinator  
ERP In-charge  
Website In-charge  
Office file  
Student Whatsapp group

## Course Content

Day	Date	Session to be instructed
1	27 <sup>th</sup> Feb 2023	Discussion on various unit operations and its importance
2	28 <sup>th</sup> Feb 2023	Discussion on Dimensions, Units and their Inter-conversion
3	1 <sup>st</sup> March 2023	Demonstration on plotting of graph using provided data and determination of Slope and to find out concentration by given absorbance.
4	2 <sup>nd</sup> March 2023	Pharmaceutical Importance of Size Reduction a discussion
5	3 <sup>rd</sup> March 2023	Discussion on principle, mechanism of various units used for Size reduction.
6	4 <sup>th</sup> March 2023	Instruments used under the principle of Impact for comminution their demonstration of working and detail studies
7	5 <sup>th</sup> March 2023	Demonstration of Ball Mill and interpretation of various factors affecting particle size.
8	6 <sup>th</sup> March 2023	Andreasen apparatus and justification of particle size separation by sedimentation
9	7 <sup>th</sup> March 2023	Significance of Flow of fluids with relation to various dosage forms, fluid statics, fluid dynamics and discussion of different laws involved with fluid flow
10	8 <sup>th</sup> March 2023	Factors affecting fluid flow a practical approach
11	9 <sup>th</sup> March 2023	Demonstration of Reynolds Experiment and deduction of Reynolds number
12	10 <sup>th</sup> March 2023	Pharmaceutical Importance of Size separation a discussion
13	11 <sup>th</sup> March 2023	Principle, Construction and Working of various units implemented for size separation a discussion
14	13 <sup>th</sup> March 2023	Pharmacopoeial standard sieve, size separation and particle size determination
15	14 <sup>th</sup> March 2023	Theories of Humidification and dehumidification, behaviour of solids in presence of moisture a pharmaceutical importance, introduction to psychrometric chart
16	15 <sup>th</sup> March 2023	Determination of humidity by dew point metho
17	16 <sup>th</sup> March 2023	Determination of humidity by psychrometer
18	17 <sup>th</sup> March 2023	Pharmaceutical importance of filtration, various factors responsible and the units used for filtration in pharmaceutical industries
19	20 <sup>th</sup> March 2023	A practical approach to explain various factors affecting filtration
20	21 <sup>st</sup> March 2023	Fundamentals of centrifugation, pharmaceutical



		significance, theories a discussion
21	22 <sup>nd</sup> March 2023	Various factors affecting centrifugation a practical approach
22	23 <sup>rd</sup> March 2023	Significance of mixing for different pharmaceutical dosage forms, units implemented in pharmaceutical industries for solid-solid, solid-liquid and other formulations, their mechanisms a discussion
23	24 <sup>th</sup> March 2023	A practical approach to study the solubility rate of soluble solids with solvent introducing propeller in different positions
24	25 <sup>st</sup> March 2023	Moisture content and mechanism of drying and different kinds of dryers used to dry different kinds of materials and their pharmaceutical significance a discussion
25	27 <sup>th</sup> March 2023	Construction of a drying curve using calcium carbonate and hot air oven a practical approach
26	28 <sup>th</sup> March 2023	Theories of crystallization, pharmaceutical application, characteristics a discussion
27	29 <sup>th</sup> March 2023	Study the effect of time on rate of crystallization by shock cooling method a practical approach
28	31 <sup>st</sup> March 2023	Preparation of absolute alcohol by azeotropic distillation a practical approach
29	1 <sup>st</sup> April 2023	Efficiency of steam distillation using sodium chloride and nitrobenzene a practical approach
30	3 <sup>rd</sup> April 2023	Pharmaceutical importance of evaporation, various factors affecting evaporation and different kinds of evaporators used in Pharmaceutical industries a discussion
31	4 <sup>th</sup> April 2023	<b>Assessment</b>