



Design of Experiment

FACULTY DEVELOPMENT PROGRAMME

Resource Person

Dr. Chandra Sekhar Patro Professor, CUTM
No. of Students and/or Faculty Participated: 47

Date: 31-05-2021

About the session

Experimental design is a concept used to organize, conduct, and interpret results of experiments in an efficient way, making sure that as much useful information as possible is obtained by performing a small number of trials. It discusses the first important step: developing hypotheses to be studied. Further, it reviews the various study design options, followed by the definition of bias and how to reduce or minimize biases in the conduct of the study. The study follows a discussion of one of the more important aspects of a good study design: sample.

Objective:

The objective of this session is to create interest among the faculties in the field of statistics, design of experiment by using the response surface methodology. Which helps with interdisciplinary research and innovations.

About the resource person:

Dr. Chandra Sekhar Patro currently works at the Department of Pharmacy, CUTM. He has expertise in novel drug delivery systems, statistics and targeted drug delivery systems by using Nanotechnology.



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Faculty Development Program Design of Experiment

Topics Covered

- CONCEPT OF EXPERIMENTAL DESIGN
- INTERPRETATION OF RESULT
- CONDUCTING TRIALS
- HYPOTHESIS DEVELOPMENT
- BIAS & STRATEGIES TO OVERCOME BIAS

[Click Here for Registration](#)
[Literature Resource](#)
 Dates: 31-5-21 (14:30-16:00 IST)

Resource Person
 Dr. Chandra Sekhar Patro, PhD
 Professor, CUTM, Raygada

Organizers: Prof. KVD Prakash & Dr. Gurudutta Pattanaik

Organized by
 Center for Drug Design

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FDP Flyerr circulated for reg

4.2.3 Pre-compression Parameters
 Table 4-13 Pre-Compression Parameters

Formulation(Product Code)	Poured density(gm/cm ³)	Tapped density(gm/cm ³)	Angle of repose°C	Carr's Compressibility Index (%)	Hausner's Ratio
F ₁	0.487	0.52	31.9	6.34615385	1.06776181
F ₂	0.496	0.531	33.1	6.5913371	1.07056452
F ₃	0.43	0.472	31.5	8.89830508	1.09767442

ANOVA for Quadratic model
 Response: R² 0.90

Source	Sum of Squares	df	Mean Square	F-value	p-value
Model	15.90	9	1.767	5.73	0.0003
Error	1.90	1	1.90	5.73	0.0003
Total	17.80	10			

Final Equation in Terms of Actual Factors

$$R^2 = 0.90$$

$$R^2 = 0.90 = 0.487 + 0.52 + 0.531 + 0.472 + 0.43 + 0.487 \times 0.52 + 0.487 \times 0.531 + 0.487 \times 0.472 + 0.487 \times 0.43 + 0.52 \times 0.531 + 0.52 \times 0.472 + 0.52 \times 0.43 + 0.531 \times 0.472 + 0.531 \times 0.43 + 0.472 \times 0.43$$

Snapshots from FDP on design of experiment conducted on 31-05-2021

Participants List

SI NO	Name	Campus
1	Dr Gurudutta Pattnaik (RC)	Bhubaneswar
2	Dr Amulyaratna Behera	Bhubaneswar
3	Mr Himansu Bhusan Samal	Bhubaneswar
4	Mr Suman Mekap	Bhubaneswar
5	Dr Rudra Narayan Sahoo	Bhubaneswar
6	Dr. Ranjan Kumar Sahoo	Bhubaneswar
7	Dr. Ashirbad Nanda	Bhubaneswar
8	Dr. Chandan Das	Bhubaneswar
9	Mr. Bikash Ranjan Jena	Bhubaneswar
10	Mr. Biswajit Samantaray	Bhubaneswar
11	Mr. Abhisek Sahu	Bhubaneswar
12	Mrs. Rupali Rupasmita Rout	Bhubaneswar
13	Ms. Rasmita Jena	Bhubaneswar
14	Ms. Kumudini Sahoo	Bhubaneswar
15	Mr. Satya Narayan Triparthy	Bhubaneswar
16	Mr. Satish Kanhar	Bhubaneswar
17	Ms. Varsha Singh	Bhubaneswar
18	Ms. Shruti Rajwar	Bhubaneswar
19	Ms. Tamosa Mukherjee	Bhubaneswar
20	Mr. Sangram Kishore Routray	Bhubaneswar
21	Dr Gyanranjan Mahalik	Bhubaneswar
22	Dr. Sagarika Parida	Bhubaneswar
23	Dr. Kalpita Bhatta	Bhubaneswar
24	Dr. Siba Prasad Parida	Bhubaneswar
25	Dr. Bhisma Narayan Ratha	Paralakhemundi
26	Dr. Nihar Ranjan Kar	Balasore
27	Mr. Sujay Kumar Parida	Balasore
28	Mr. Sidhartha Parida	Balasore
29	Mis. Jayshreemaa Biswal	Balasore
30	Mr. Hrudesh Priyadarsan Sahoo	Balasore

31	Mr. Binayak Mishra	Balasore
32	Ms. Annanya Gangopadhyay	Balasore
33	Dr. Chandra Sekhar Patro	Rayagada
34	Dr. Gopal Krishna Padhy	Rayagada
35	Mr. K Shyam Sundar Rao	Rayagada
36	Mr. Shyam Sundar Sahu	Rayagada
37	Miss Babita Adhikary	Rayagada
38	Miss Bijay Laxmi Sabar	Rayagada
39	Mr. Abinash Patra	Rayagada
40	Dr. Prafulla Kumar Sahu	Balangir
41	Dr. Santosh Kumar Ranajit	Balangir
42	Mr. Vijaya Kumar Meher	Balangir
43	Mr. Durga Prasad Mishra	Balangir
44	Miss I Sailaja	Balangir
45	Mr. Jyoti Prakash Guru	Balangir
46	Ms. Gayatri Behera	Balangir
47	Mr. Chaitanya Prasad Meher	Balangir



Dr. Prasanta Ku. Mohanty
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Prof. KVD Prakash
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