

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
FIRST SEMESTER 2021-2022
Course Handout (Part II)

Date:

07.08.2021

In addition to Part-I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course.

Course No. : PHA G616
Course Title : **Pharmaceutical Administration & Management**
Instructor-in-charge : **Dr. Akash Chaurasiya**
Instructor : **Dr. Akash Chaurasiya**

Description: Technology innovation and creativity, new drugs and products planning, strategic considerations, project implementation, product development, production management and scale up, preparation of product literature and marketing strategy, IPR processes, human resource development, industrial relations, documentation, R & D management, ethical aspects.

1. Scope & Objective of the Course: It is a course intended to give the students an idea of various aspects of pharmaceutical management with emphasis on technology innovation, new drugs & products planning, strategic considerations, project implementation, product development, production management & scale up, marketing strategy, human resources development, ethical issues and R & D management.

2. Learning outcome: At the end of the course students will have

- Complete knowledge about various aspect of pharmaceutical management like operations, sales, marketing, etc.
- Understanding of inventory management in pharmaceutical operations
- Complete understanding on project design, planning, costing and research methodologies.

3. Text Book:

- i. Raja, B. Smarta: *Strategic Pharmaceutical Marketing*, Wheeler Pub First edition 1994.
- ii. Mickey C. Smith, *Principles of Pharmaceutical Marketing*, Lea & Febiger, First edition 1968.

4. Ref. Book: The students should refer the following books for further knowledge.

- i. Naresh Malhotra: *Marketing Research: An Applied Orientation*, Prentice Hall, Fourth edition.
- ii. Lachmann, Liebermann & Kanig: *The Theory & Practice of Industrial, Pharmacy*, K.M. Varghese, Third Edition.

- iii. Mark Dodgson, *The Management of Technological Innovation*, Oxford, First edition.
- iv. Roberta S. Russell and Bernard W. Taylor III: *Operations Management*, Prentice Hall, Seventh edition.

5. Course Plan:

Module No/ Topics	Lecture session	Reference Chap/Sec	Learning objectives
1. Introduction to principles of management	L1.1 Introduction to an organization, its departments, its mission and vision statements	---	Scope & objective of course
2. Management of Operations	L2.1 Introduction- Definition of product, production and its management, its objectives and benefits	4 (iv) Ch 3 – 4	Understanding of product and production and their management.
	L2.2-3 Production Management- Production cycle, its components and measurement of productivity.	4 (iv) Ch 3 – 4	Factors dictating selection of a particular type of production and detailed understanding of each production aspect.
	L2.4-5 Types of production practices		
	L2.6. Make or buy decision and EBQ determination		
	L2.7. Tool control, details about each production aspect		
	L2.8. Scheduling of resources, dispatching		
	L2.9. Line of balance technique		
	L2.10-11. Pharmaceutical Plant layout and location	4 (iv) Ch 3 – 4; class notes	How to select appropriate location for setting up a new plant and how to plan its layout.
3. Sales Forecasting	L3.1-2 Different techniques for making forecasts of estimated sales	4 (iv) Ch 12	Estimating future market demand by using one or a combination of techniques.

4. Marketing Management	L4.1-2 Types of marketing concepts, sales vs. marketing, market research, market planning.	3(i) Ch 1 – 9 4 (iv) Ch 4	Significance of marketing, designing of a marketing mix and product positioning, brand value.
	L4.3-4 Budget, Marketing audit. Decision on new products, Channels of distribution		
	L4.5-6 Stretching of product line. Advertising,		
	L4.7-8 Branding and labeling, differences between FMCG and pharmaceuticals marketing practices		
5. Strategic Management	L5.1 Options in the Indian environment, Segmentation & product positioning	3(i) Ch 1 – 5	4Ps and product life cycle
6. R & D Management	L6.1-2 Managing research teams & new product	4 (iv) Ch 3 – 4	Factors effecting new product design and estimation of resources required
7. Management of inventory	L7.1-2. Different techniques, Economic order quantity, ERP and MRP systems	4 (iv) Ch 13	Classification of items in inventory, ways of ordering new materials, softwares to manage inventories
8. Project Planning	L8. 1-4 Network analysis-CPM and PERT	4 (iv) Ch 9	Learn the technique of management of the production cycle in a time bound manner and meeting deadlines
9. Product Costing, Break Even analysis	L9. 1-3. Elements of costing, overheads, calculations on cost of man and materials, depreciation and breakeven analysis	Class notes	Basic Financial Management, significance of fixed and variable cost
10. HRD	L10.1-2. Activities of HR department, welfare and factories act	4 (iv) Ch 8	Planning of human resources for organizational effectiveness
11. Ethical Aspects	L11.1 Code of conduct, Insidious trading, social responsibility, PEST factors	Class notes	Concept of professional & business ethics

12. Research Methodology	L12. 1-4. Introduction to different aspects of research methodology-literature review, hypothesis, designing of experiments, data collection and compilation, different study designs	4(i) Ch 1 - 7, 16 –20.	Importance of Research Design, Effect of internal validity and external validity on research design
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5. Evaluation Scheme:

Component	Duration	Weightage (%)	Date & Time	Remarks
Mid-semester Test	90 min	25		CB
Seminars/ Assignments	-	25		OB
Laboratory component	-	20		OB + CB
Comprehensive exam	120 min	30	15/12 FN	OB + CB

***OB: Open Book; CB: Closed Book**

Closed Book Exam: No reference material of any kind will be permitted inside the exam hall.

Open Book Exam: Use of any printed / written reference material (books and notebooks) will be permitted inside the exam hall. Loose sheets of paper will not be permitted. Computers of any kind will not be allowed inside the exam hall. Use of calculators will be allowed in all exams. No exchange of any material will be allowed.

6. Mid-semester evaluation: Will be announced after the Test.

7. Grading Procedure:

Grading would be done by the “bunching” procedure. The total mark obtained by students will be arranged in descending order, bunches identified and grades awarded accordingly. In borderline cases subjective judgment, based on regularity, sincerity etc. will be used to award the grades. It is not mandatory to award all the five grades (i.e. from A to E) Subjective judgment would be used in the award of A and E grades.

8. Make-up Policy:

The facility of make-up test is meant to take care of ‘Unavoidable’ absence from scheduled tests. It is expected that the students will “keep faith” in this respect and avoid any misuse of this useful feature.

9. Chamber Consultation Hour: To be announced in the class

10. Notices: Notices, if any, concerning the course will be displayed on the Notice Board of Pharmacy Group Only

11. Academic Honesty and Integrity Policy: Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

Instructor In-Charge
PHA G616