



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) Scheme in light of NEP-2020
Generic Elective for PG (Odd semester)
(2022-2024)

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
GPME102	GE	Product Design and Development	60	20	20	0	0	4	0	0	4

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit;

***Teacher Assessment** shall be based following components: Quiz/Assignment/Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:-

1. To provide a basic understanding to the students about the concept and significance of product design and development process.
2. To provide a basic understanding to the students about Investigating user behaviour; Sales promotion, test marketing products, and introduction strategy.

Course Outcomes:-

After completion of this course the students will be able to describe the followings:

1. Students will be able to understand the concept of new product design and development.
2. Students will be able to understand the techniques for idea generation and evaluation of new product ideas.
3. Students will be able to analyze user habits, expectations, perceptions, and techniques for investigating user behaviour.
4. Students will be able analyze the market preparation vendor search, sales promotion, test marketing product, and introduction strategy.

Syllabus

Unit-I

(11Hrs)

Introduction to design, product design; traditional & modern design, design process, organizational objectives. Need-related intelligence, identification of latent needs, technology-related intelligence, and development of technological competence.

Unit-II


(10Hrs)

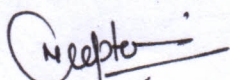
Organizational strength & weakness, criteria for a new product, new product management, coordination, and communication. Innovation, creativity and diffusion, techniques for creative idea generation; evaluation of new product ideas.

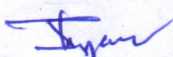
Unit-III

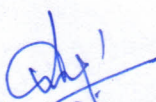
(10Hrs)

Investigating user behaviour - user habits, expectations, perception, techniques for investigating user behaviour. Product formulation, development of business analysis, functional innovation.


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Unit-IV:

(12Hrs)

Product design and design methods, Selection of methods appropriate to design stage. Design evaluation - Analysis for fault, Value and Reliability. Ergonomic analysis, Analysis for maintenance and useful life.

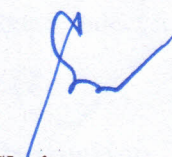
Unit-V

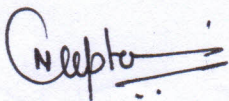
(11Hrs)

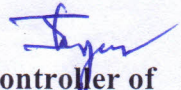
Market preparation vendor search, Sales promotion, Test marketing product and introduction strategy. Organizational structure for effective product innovation and role of product manager

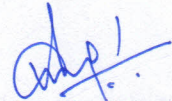
Reference Books:

1. Rothberg, Robert, R., "Corporate Strategy and Product Innovation" The Free Press, 2009.
2. Jones, J.C., "Design Methods, Seeds of Human Future", John Wiley and sons, 2005.
3. Grunwald, G., "New Product Development", Business Books, Illinois, 1985.
4. Ulrich K.T., "Principles of Product Design" McGraw Hill, 2020.
5. Birkhofer H., "Future of Design Methodology" Springer, 2020.
6. A. K. Chitale and R. C. Gupta, "Product Design and Manufacturing", PHI, 2018.


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