



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Textile Technology
Choice Based Credit System (CBCS) in Light of NEP-2020
Generic Elective for PG Courses
(2021-2023)

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*				
MTTX502	GE	HIGH PERFORMANCE FIBRES	60	20	20	-	-	3	0	0	3

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 Educational Objectives (CEOs):

1. To impart knowledge about the principle and manufacturing process of high performance fibres.
2. To understand accurately the optical, Electrical and Thermal properties of different synthetic fibres.

Course Outcomes (COs):

After completion of this course the students are expected to be able to demonstrate following knowledge, skills and attitudes.

The students will be able to

1. Identify and comprehend the properties of synthetic fibres accurately.
2. Explain the correct manufacturing process of various synthetic fibres.
3. Explain optical and thermal behavior of the fibres.

Syllabus:

UNIT I Inorganic Fibres

10 Hrs.

Basic idea of manufacturing process, properties and use of Glass and Carbon fibre.

UNIT II Organic Fibres

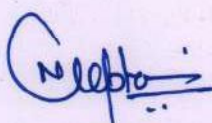
9 Hrs.

Basic idea of manufacturing process, properties and use of aramid, kevler nomax, Spandex and Spectra.

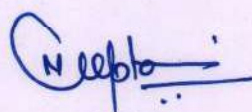
UNIT III Introduction to High-performance Fibres: Special Fibres

8 Hrs.

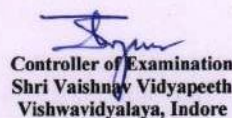
Basic concept of nano fibres, bi-component, hollow and tri-lobal fibres.



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UNIT IV Introduction to Texturing

9 Hrs.

Importance, classification, and basic principle of Texturing.

UNIT V Physical properties of high performance Fibres

9 Hrs.

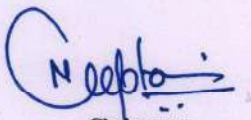
A brief idea about the optical properties of fibre, Brief idea about frictional properties of fibre, Brief Idea about electrical properties of fibres, Brief Idea about thermal properties of fibres. Brief idea about tensile properties of fibres.

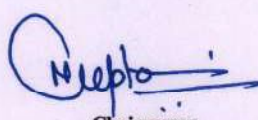
Text Books:

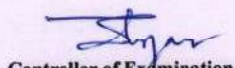
1. Physical Properties of Textile Fibres, Hearle, J. W. S., Morton, W. E., Wood Head Publishing, 2008.
2. 4th Edition Manufactured Fibre Technology, Gupta, V.B., Kothari, V.K., Springer, 1997.
3. Textile Science: An Explanation of Fibre Properties, Gohl, E. P. G., Vilensky, L. D., CBS Publisher, 1984.

References:

1. Manmade Fibers – Moncrief, R.W., Halstead Press, New York, 1975.
2. Production of Synthetic Fibres – Vaidya, A. A., Prentice Hall of India, Private Limited, New Delhi, 1998.


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