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DATE:

CIRCULAR

20 AUG 2024

Subject: Additional PEC to Textile Technology 2021 scheme regarding...

Reference:

1. The Chairpersons recommendation vide email dated 05.08.2024
2. The Hon'ble Vice-Chancellor's direction dated: 20.08.2024

This is reference to the subject cited above, the Chairperson, Board of Studies for Textile Technology, VTU Belagavi has recommended to add one more professional elective course/subject: "**21TX735 - Advanced Fabric Structure and Design**" to the existing list. The syllabus for this course/subject is enclosed with this circular for your information and reference.

All Principals of Engineering Colleges are requested to bring the content of the circular to the attention of the concerned staff and students.

Encl: Ads mentioned above

Sd/-

REGISTRAR

To,

All the Principals of Affiliated/Constituent Engineering Colleges under the ambit of the University

Copy to

- The Hon'ble Vice-Chancellor through the secretary to VC for information
- The Registrar (Evaluation) for information and needful
- The Director, ITI,SMU,VTU Belagavi for information and needful also request to upload the circular on the University website
- The Special Officer QPDS section of VTU Belagavi for information and needful
- Office copy

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ADVANCED FABRIC STRUCTURE AND DESIGN			
Course Code	21TX735	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	3 : 0 : 0 : 1	SEE Marks	50
Total Hours of Pedagogy	40	Total Marks	100
Credits	03	Exam Hours	03
Course objectives:			
<ul style="list-style-type: none"> • The objective of this course are 1. To make students to have a knowledge about advanced design features of various complicated and intricate design fabrics. 2. Students are to learn analysis of these fabrics for their various construction particulars, manufacturing data and design details. 3. Students are to understand the characteristic features of fabrics, design features and aesthetic qualities of different fabrics. 4. Students will understand the raw material requirements, machine and equipment for the production the fabric. 5. Students understand the end uses of different fabrics and their suitability. 			
Teaching-Learning Process (General Instructions)			
The following are the simple strategies, which a teacher can use to accelerate the attainment of the various course outcomes :			
<ol style="list-style-type: none"> 1. Apart from conventional lecturer methods various types of innovative teaching techniques through videos, may be adopted so that the delivered lesson can progress the students in theoretical and applied practical analysing skills. 2. Seminars may be arranged for students to develop this subject skill. 3. To encourage the students for group learning so as to improve their creativity and analytical skills. 4. To support and guide the students for self-study. 5. Encourage students to observe working of various weaving machines in order to understand the construction and manufacturing details for making a fabric with help of design, draft, lifting plan and denting plan. 			
Module-1			
Welts & pique fabrics, weft wadded pique, figured pique Fabrics. Extra warp and extra weft fabrics. Backed weaves and fabrics.			
Teaching-Learning Process			
Module-2			
Double cloths- Classification, selection criteria for threads, weaves etc., self-stitched double cloths, interchangeable double cloths. Centre stitched double cloths.			
Teaching-Learning Process			
Module-3			
Gauze and leno structures, principles of leno structure, basic sheds in leno structure, leno weaving with flat steel dupes with an eye, Russian cords design, simple net leno, Easing action shaker device. Principle of designing simple damask and brocades.			
Teaching-Learning Process			
Module-4			
Weft pile fabrics - all over or plain velveteen, corded velveteen, Warp pile fabrics produced with the aid of wires and by face to face principle.			
Teaching-Learning Process			
Module-5			

Terry pile structures - formation of pile, terry weaves, figured terry pile fabrics. Narrow fabrics. Uncommon woven structures- Lappet & Swivel fabrics.

Teaching-Learning Process

Course outcome (Course Skill Set)

On completion of this course, the students will be able to :

- CO 1: Learn various construction particulars and manufacturing data for Welts & Piques, Figured Pique, Figuring with Extra warp and Extra weft and Backed fabric weaves.
- CO2: Learn various construction particulars and manufacturing data for Double clothes fabrics.
- CO3: Learn various construction particulars and manufacturing data for Gauze and Leno structures and Designing of simple Damask and Brocade fabrics.
- CO4: Learn various construction particulars and manufacturing data for Warp & Weft pile fabrics
- CO5: Learn various construction particulars and manufacturing data for Terry pile structures, Narrow fabrics. Uncommon woven structures.

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50)in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together

Continuous Internal Evaluation:

Three Unit Tests each of **20 Marks (duration 01 hour)**

1. First test at the end of 5th week of the semester
2. Second test at the end of the 10th week of the semester
3. Third test at the end of the 15th week of the semester

Two assignments each of **10 Marks**

4. First assignment at the end of 4th week of the semester
5. Second assignment at the end of 9th week of the semester

Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for **20 Marks (duration 01 hours)**

6. At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be **scaled down to 50 marks**

(to have less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course).

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination:

Theory SEE will be conducted by **University** as per the scheduled timetable, with common question papers for the subject (**duration 03 hours**)

1. The question paper will have ten questions. Each question is set for 20 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), **should have a mix of topics** under that module.

The students have to answer 5 full questions, selecting one full question from each module

Suggested Learning Resources:

Text Books

1. **Watsons Advanced Textile Design**, Z.J Grosicki, Universal Publishing Corporation, Bombay, 1988

2. **Grammar of Textile Design**, H. Nisbet. Taraporewala and Sons, 1985

Web links and Video Lectures (e-Resources):

- [https://www.academia.edu/7112662/1 Fabric Structure and Design](https://www.academia.edu/7112662/1_Fabric_Structure_and_Design)
- <https://www.youtube.com/watch?v=i3aRX2587CU>
- <https://www.youtube.com/watch?v=34P4sR6tP7M>
- <https://www.google.com/search?sxsrf=ALiCzsZWzmwmCco->

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Seminars, Group discussion, Quiz, analysing and drawing of design, draft, lifting plan and denting plan of various fabrics.
- Practical exposure to various design features, aesthetic values, manufacturing requirements of fabrics with various basic designs and to understand the use of colours and colour combinations in the production of fabric designs.