

TEXTILE FOUNDATION (TXF)

TXF 501: Foundation Fiber & Yarn Studies

This course introduces the basic knowledge of fiber and yarn technology. Included are the proper use of fiber/yarn terms and definitions, the construction parameters of the various fiber and yarn types and detailed analysis of performance properties for each. This information is then used in the proper selection of fibers and yarns for various fabrics and ultimately for various end-use textile products in apparel, household and industrial applications. This is a foundation course that does not count for credit toward the graduate degree.

Credits: 3

College: School of Design & Engineering

Schedule Type: Lab, Lecture, Lecture/Lab

TXF 502: Foundation Fabric Studies

Credits: 3

College: School of Design & Engineering

Schedule Type: Lecture, Studio

TXF 503: History of Textiles & Costumes

A multi-faceted survey of textiles and costumes from ancient cultures to the present, technical- and visual-design aspects of the textile arts, the influence of trade on design trends, styles in period costume and the sociological implications of dress are all incorporated. This is a foundation course that does not count for credit towards the graduate degree.

Credits: 3

College: School of Design & Engineering

Schedule Type: Lecture

TXF 504: Text Des Studio IV: Performance

This is the final course in a sequence of four studios. This course enables students to create textiles for contract furnishings, automotive interiors, high performance apparel or smart textile applications. The studio emphasizes the marriage of performance characteristics and aesthetics, with a focus on fitness for use.

Credits: 3

College: School of Design & Engineering

Schedule Type: Lecture, Studio

TXF 505: Design I

This foundation design course explores the basic elements and principles of 2D and 3D form and their application in the design process. Line, shape, mass, space, texture and gray value are introduced as fundamental and interrelated components necessary in structuring solutions to problems in design. Projects are introduced which encourage students to express ideas in a visual/tactile context, while exploring the interaction of ideas and materials.

Credits: 3

College: School of Design & Engineering

Schedule Type: Lecture, Studio

TXF 506: Design II

Credits: 3

College: School of Design & Engineering

Schedule Type: Lecture, Studio

TXF 507: Design III

Credits: 3

College: School of Design & Engineering

Schedule Type: Lecture, Studio

TXF 510: Intro to Digital Imaging

This course focuses on increasing the student's individual level of computer literacy through the exploration of the basic structure of the operating system, general Internet skills and the fundamentals of 2D image making and web-design programs. Course projects provide hands-on experience with Adobe Photoshop, Adobe Illustrator and web design software. This is a foundation course that does not count for credit towards the graduate degree.

Credits: 3

College: School of Design & Engineering

Schedule Type: Lab, Lecture, Lecture/Lab

TXF 511: Knit Technology I

The understanding of both weft- and warp-knit fabrics through an investigation of knit construction, machinery, principles and knit fabric analysis. Lectures are complemented with a series of lab exercises on hand-flat equipment and fabric-analysis projects designed to fully acquaint the student with the principles of knit-fabric design and production.

Credits: 3

College: School of Design & Engineering

Schedule Type: Lab, Lecture, Lecture/Lab

TXF 512: Knit Design Studio I

Students will learn through individual development how to create a range of texture and color effects within knit design. Independent needle selection and the use of the presser foot will be explored within design areas involving Jacquard, held-stitch and tuck-stitch structures. Design ideas will be developed through to swatch/sketch proposals suitable for sweater production.

Credits: 3

College: School of Design & Engineering

Schedule Type: Lecture, Lecture/Studio Combination, Studio

TXF 513: Knit Design Studio II

A knit design studio elective for Textile or Fashion majors specializing in the knit-design area. Original design ideas will be developed through swatch/sketch presentations. Garment ideas will be developed through technical sketches and specifications into completed sweaters.

Credits: 3

College: School of Design & Engineering

Schedule Type: Lecture, Lecture/Studio Combination, Studio

TXF 514: Print Design Studio I

Techniques, materials, tools and basic information needed for the design on paper of printed fabrics for the apparel and home furnishing fields are studied. Hands on approaches with gouache and watercolor are used to prepare colorway and repeats. Students prepare a portfolio and learn to keep a sketchbook. A brief introduction to printing methods is included.

Credits: 3

College: School of Design & Engineering

Schedule Type: Lecture, Studio

TXF 515: Print Design Studio II

This course focuses on creative use of CAD in surface patterning, which integrates with hands-on design applications that students acquired in PRINT-303 Print Design I. Digital workflow, which includes scanning croquis, designing pattern on CAD, digital color matching and color ways will be introduced. At the same time, strong emphasis is placed on making croquis, which develop from drawings and paintings in the sketchbook. Students will create printed textile designs and patterns for Jacquard designs on paper with digital printers for apparel and home furnishing fields. Throughout the semester, sketchbook study will also be required to document the working process, as well as drawings and paintings.

Credits: 3**College:** School of Design & Engineering**Schedule Type:** Lecture, Lecture/Studio Combination, Studio**TXF 516: Dyeing and Finishing****Credits:** 4**College:** School of Design & Engineering**Schedule Type:** Lab, Lecture**TXF 517: Weave Technology I**

The structures and analysis of woven fabrics will be studied utilizing CAD, pick outs and laboratory assignments on industrial equipment. Weave structures will include plain, twills and satins (with their derivatives), color effects, textural effects (cords, piques, etc.) and pile weaves. Fabric will be mathematically analyzed for weight, yarn size, fabric count and yarn crimp to specify fabric structure. Necessary loom controls (draw, chains and reed plans) will be used to relate lectures and laboratory work on dobby looms.

Credits: 3**College:** School of Design & Engineering**Schedule Type:** Lab, Lecture, Lecture/Lab**TXF 518: Weave Design Studio I**

This course focuses on the effects and interactions that yarn, color, texture and structure play in woven design. Working with multi-harness floor looms and dobby looms, students create warps and chains, and weave prototype cloth for various end uses.

Credits: 3**College:** School of Design & Engineering**Schedule Type:** Lecture, Lecture/Studio Combination, Studio**TXF 519: Weave Design Studio II**

The study of elements of woven design is brought to the problems of multi-layered cloth, compound weaves, block designs and other advanced structures. Students use several CAD programs in conjunction with AVL compu-dobbies to increase their design capabilities. Multi-harness floor looms and dobby looms are also used to develop cloth from concept to actuality.

Credits: 3**College:** School of Design & Engineering**Schedule Type:** By Appointment, Lecture, Lecture/Studio Combination, Studio**TXF 542: Color, Dyeing and Finishing**

This lecture course presents an overview of color science and wet processing of fibers, yarns and fabrics. Included are the preparation, dyeing and finishing of textiles. Some emphasis is placed on the chemistry and technology involved in these operations. Dyes are studied by their method of application and the primary substrates to which they are applied. Chemical, thermal and mechanical processes are discussed for both preparation and finishing of fabrics. This course may not be taken for credit by anyone who previously received credit for TEXTCHM242, TXF516 or C501. (First offered Fall 2014) Prerequisite: CHEM-101 or CHEM-103

Credits: 3**College:** School of Design & Engineering**Schedule Type:** Lecture, On-Line**TXF 542L: Color, Dyeing & Finishing Lab**

This hands-on laboratory-based course highlights concepts covered in Color, Dyeing and Finishing Lecture. Emphasis is placed on developing laboratory skills and to reinforce the concepts covered in the weekly lecture throughout the term. Experiments include color measurement, color mixing, dyeing of various classes and finishing using both chemical & mechanical techniques. This course may not be taken for credit by anyone who previously received credit for TEXTCHM242, TXF516 or C501. (First offered Fall 2014) Prerequisite: CHEM-101 or CHEM-103

Credits: 1**College:** School of Design & Engineering**Schedule Type:** Lab