General Studies Gold Request Form

Consult the General Studies Request FAQ for more information and quick answers.

New permanent numbered courses must be submitted to the workflow in Kuali CM before a General Studies request is submitted here. The General Studies Council will not review requests ahead of a new course proposal being sent to the Senate.

Submission Information

College/School	Department/School
Herberger Institute for Design and the Arts (CHI)	ASU FIDM (CFIDM)

Submission Type

New Request

Requested Effective Date

Fall 2025

ASU Request

Is this request for a permanent course or a topic?

Permanent Course

Subject Code	Course Number	Units/Credit Hours
FSH	200	1

Course Information

Enter the course catalog information, found in the web course catalog or Kuali CM.

Course Title

Textiles Science Lab

Course Catalog Description

Complements and supports the learning objectives and outcomes for the textiles survey lecture. Hands-on, interactive experience conducted in a lab setting. Includes identification of fibers, yarns and fabrics using various methods of observation, scientific testing and activities to reinforce the student's understanding of textile characteristics and performance properties, along with their end uses.

Enrollment Requirements (Prerequisites, Corequisites, and/or Antirequisites)

Pre- or corequisite(s): FSH 201; Credit is allowed for only FSH 200 or FSH 294 (Textiles Lab) OR Visiting University Student

Is this a crosslisted course?

No

Is this course offered by (shared with) another academic unit?

No

If this course or topic already carries a different General Studies Gold (not Maroon) designation than the one being requested, please check this box.

General Studies Gold Designation Request

Requested Designation

Scientific Thinking in Natural Sciences (SCIT)

SCIT Request - Multiple Courses

FSH 201 Textiles Science

Attach a representative syllabus for the course, including course learning outcomes and descriptions of assignments and assessments.

FSH 200 Textile Science Lab Syllabus.pdf

Scientific Thinking in Natural Sciences (SCIT)
Courses in scientific thinking in natural sciences will promote public scientific literacy, which is critical for sound decisions about scientifically infused issues such as climate change. Scientific thinking in natural sciences includes understanding basic science concepts, such as the fundamental behavior of matter and energy, as well as understanding that science is not an encyclopedic collection of facts. Science is a process of exploration that embraces curiosity, inquiry, testing, and communication, to reduce uncertainty about nature. In Scientific Thinking in the Natural Sciences courses, students will engage in the scientific process through lab experiences.

Instructions: In the fields below, state the assignment, project, or assessment that will measure each learning outcome, and provide a description. The description should provide enough detail to show how it measures the learning outcome. If needed, more than one can be identified.

The proposal does not need to include all course assessments that measure a given learning outcome. The provided assessment should include sufficient detail to allow the subcommittee to make their evaluation. When appropriate, the same assessment can be listed for more than one learning outcome (e.g., a culminating project).

You may provide links to a document (Google Drive or Dropbox) that includes the relevant details for the assessment. Do not provide links to Canvas shells.

SCIT Learning Outcome 1: Obtain and interpret qualitative or quantitative data and communicate the findings.

Assignment: Dimensional Stability.
Completed: FSH 200 Textiles Science Lab
Description: Students evaluate the potential of a material to retain its original dimensions after being subjected to laundry processes. The results determine usability for a particular product, and / or the care instructions for its intended use. Students conduct standardized testing for various materials and analyze the data for a pass/fail evaluation. Students will also use data to make recommendations to change variables to obtain a different result.

Assignment: Elastic Recovery
Completed: FSH 200 Textiles Science Lab
Description: Students measure and evaluate fabric elasticity. Elasticity must be measured to determine its appropriate application as a stable knit (little stretch and no sagging) or a product suitable for compression – medical or athletic. Students utilize standard protocols to extend the material to its full potential, hold it for a determined period of time and measure both the amount of stretch possible and its ultimate recovery. Based on collected data, students evaluate the appropriateness of each fabric for its intended use.

SCIT Learning Outcome 2: Employ evidence to construct and test scientific hypotheses.

Assignment: Tearing Strength and Analysis
Completed: FSH 200 Textiles Science Lab
Description: Students will hypothesize recommendations to improve tearing strength. Students will then perform tests to evaluate their recommendations on tearing strength as well as tensile strength and elongation. The results are returned in pounds of force, newtons and centimeters in elongation. They will then determine the usability for particular applications according to strength testing standards in a pass or fail modality.

SCIT Learning Outcome 3: Assess the validity of scientific claims using evidence from biological or physical science.

Assignment: Thermoplasticity
Completed: FSH 200 Textiles Science Lab
Description: Students will test the stated thermoplasticity of two different fiber classifications. Two different materials made of two different fiber classifications will be manipulated (pleated) and subjected to specific heat criteria to prove or disprove their stated thermoplastic nature. Students will write a report on the results of this test, analyzing the accuracy of the stated thermoplasticity of the two fiber classifications.

SCIT Learning Outcome 4: Create models to explain observable phenomena and understand biological or physical processes in the natural world.

Assignment: Burn Test
Completed: FSH 201 Textiles Science
Description: Students will analyze material composition through empirical lab testing. The burn test provides fiber classification; determining if the fibers come from the natural world – protein or cellulose, or manmade – manufactured or synthetic.

Assignment: Solubility for the Identification of Fibers

Completed: FSH 200 Textiles Science Lab
Description: Based on the results of the burn test, students will create testing procedures for the solubility test.

Assignment: Microscopy
Completed: FSH 200 Textiles Science Lab
Description: Students will conduct Microscopic analysis; both cross sectional and longitudinal evaluations will provide final determination of material composition. Students will create a model of textile behavior under various physical processes through observation, evaluation of the variables, formulation of a hypothesis and finally provide proofs, defense and a rationale for their conclusion.

SCIT Learning Outcome 5: Communicate coherent arguments using evidence drawn from qualitative or quantitative sources.

Assignment: Fabric Confirmation
Completed: FSH 200 Textiles Science Lab
Description: Using all of the testing strategies that preceded this assignment, students will evaluate provided fabrics. They must independently decide on and perform relevant testing, analyze the results and defend their conclusions. Students will analyze the results and conclude an appropriate end use for the fabric based on results of testing.

List all course-specific learning outcomes. Where appropriate, identify the associated SCIT learning outcome(s) in brackets (see below for example). Note: It is expected that a majority of course-specific learning outcomes will be associated with a SCIT learning outcome.

The student will be able to:

1. Examine the textile cycle in the global marketplace emphasizing fiber production, yarn and fabric construction, along with the roles of converters in the dye, print and finish industries. (SCIT LO1)
2. Observe and verify the elements of a textile using the principles and procedures of standardized lab testing (SCIT LO2)
3. Use appropriate scientific terminology to build models and effectively communicate how fiber content, yarn and fabric structure contribute to a fabric's properties and characteristics. (SCIT LO4)
4. Utilize scientific inquiry and methods through weekly experiments to form an appropriate hypothesis followed by standardized testing procedures to prove or disprove the hypothesis. (SCIT LO2&3)
5. Analyze observable phenomena to identify, compare, contrast and apply fabric construction criteria for specific products. (SCIT LO4)
6. Develop arguments from empirical textile knowledge to justify product decision making for appropriate end uses. (SCIT LO5)
7. Determine and apply scientific criteria and testing outcomes to accurately predict and defend performance expectations and care requirements for target market categories. (SCIT LO4&5)
8. Apply critical thinking and ethical considerations to engage and support sustainable practices and socially responsible design. (SCIT LO5)

Backmapped Maroon Approval

No Response

Form Submission - Proposer

Submitted for Approval | Proposer

Regan Fisher - August 23, 2024 at 3:55 PM (America/Phoenix)

Department Approval

Approved

Dennita Sewell

Miguel Barragan - August 26, 2024 at 11:13 AM (America/Phoenix)

Amanda Osman

GSC Coordinator Review

Approved

Alicia Alfonso - August 29, 2024 at 11:44 AM (America/Phoenix)

April Randall

Assistant Vice Provost Review

Approved

Tamiko Azuma - August 29, 2024 at 12:01 PM (America/Phoenix)

All required components confirmed

Pre-GSC Meeting

Approved

Alicia Alfonso

April Randall - September 9, 2024 at 3:34 PM (America/Phoenix)

Scientific Thinking in Natural Sciences (SCIT) Subcommittee

Acknowledgement Requested

Ralph Chamberlin

Megha Pillai

Michele Devine

Chao Wang

Ashli Morgan - October 2, 2024 at 12:14 AM (America/Phoenix)

The SCIT subcommittee recommends that this course revise and resubmit. This recommendation is for the co-requisite, FSH 201, as the lab seems to meet the learning objectives. FSH 201, however, does not seem to have any assessments that meet the learning objectives.

General Studies Council Meeting

Waiting for Approval

Alicia Alfonso

April Randall

Registrar Notification

Notification

Courses Implementation

Implementation

Approval

Rebecca Flores

Lauren Bates

Alisha Von Kampen

Proposer Notification

Notification

Regan Fisher

College Notification

Notification

Stephani Etheridge Woodson

ATCS Notification - ASU Course

Notification

Bryan Tinlin

Jessica Burns

Michele Devine

DARS Notification

Notification

Leticia Mayer

Peggy Boivin

EdPlus Notification

Notification

Sarah Shipp

Bronson Cudgel