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)	School of Art (CART)

Submission Type

Mandatory Review

New Request: A request for a new designation, a change in designation, or to reinstate a designation that has been lost.

Mandatory Review: Only select if this course (or topic on a *permanent* course) is undergoing mandatory review in the current academic year. Not for omnibus topic use.

Modification: A request to modify the expected learning outcomes of the course, but not change any other aspect of the originally approved proposal.

ASU Request

Is this request for a permanent course or a topic?

Permanent Course

Subject Code	Course Number	Units/Credit Hours
ART	320	4

Course Information

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

Course Title

Science and Art of Botanical Design

Course Catalog Description

Discover the multifaceted practice of botanical design as a science and an art form. Students exercise plant maintenance, study botanical nomenclature and postharvest care, and review theories of biophilic design, botanical wellness, ecopsychology, sociohorticulture, and ecotherapy. To learn the

art behind the science, students learn to create botanical arrangements using the design process in each lab session. Explores topics including construction methodology, technique, and innovation as well as reviews the botanical design industry and its historical periods.

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

Prerequisite(s): minimum 45 hours; Credit is allowed for only ART 320 or ART 394 (Science and Art of Botanical Design) OR Visiting University Student

Is this a crosslisted course?

No

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

No

If you are requesting to change the existing GS Gold (not Maroon) designation, please check this box.

General Studies Gold Designation Request

General Studies Designation

Scientific Thinking in Natural Sciences (SCIT)

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

ART 320 Syllabus 2025.docx

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.

Most of the course content should align with the Gold category learning outcomes.

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.

The Plant Maintenance Log Experiment emphasizes the mastery of basic scientific principles by requiring students to practice autonomous behaviors through individually caring for a potted plant for the semester. Students collect weekly log quantitative and qualitative data on their living species in order to interpret findings based on physical plant observations. Log quantitative and qualitative data include scientific observations of: botanical identification and nomenclature, date, time, temperature, light quality, watering frequency and measurement, and physical plant observations. As a portion of the final in the course, a final submission synthesizes the collected quantitative and qualitative data to interpret the independent (temperature, watering, light data), dependent (physical plant observations: leave to soil) and controlled variables (plant species, location, soil) throughout the plant maintenance experiment. https://docs.google.com/document/d/1j-oaSxhIKQdBVp374pKKClxOc7HnSe0Y/edit?usp=sharing&ouid=112200502488040342581&rtpof=true&sd=true

The Postharvest Care Experiment challenges students to develop an experiment using the scientific method with cut botanicals. Students are required to select two cut botanical species to compare, research the botanical species' specific characteristics, and formulate a hypothesis on species with the presumed longest postharvest longevity based on their research. Daily quantitative and qualitative data collected throughout seven days of the experiment include: imagery, stem height, stem and petal hue, turgor pressure, room temperature, lighting observations, water flushing, plant fitness (bloom or senescence details), record of decay/death date. Through the use of the scientific method, students will learn the importance of finding empirical evidence relating to supporting or contradicting their hypothesis. To communicate their results through analyzing the data, students interpret the findings by comparing and contrasting both the quantitative and qualitative data; this synthesis poses the final question to students of why this gleaned knowledge is important to practicing botanical art. https://docs.google.com/document/d/1KOY6bYxPiNb49MeCD2AN-5M5Crq-wIZW/edit?usp=sharing&ouid=112200502488040342581&rtpof=true&sd=true

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

The Postharvest Care Experiment challenges students to develop an experiment using the scientific method with cut botanicals. Students are required to select two cut botanical species to compare, research the botanical species' specific characteristics, and formulate a hypothesis on species with the presumed longest postharvest longevity based on their research. Daily quantitative and qualitative data collected throughout seven days of the experiment include: imagery, stem height, stem and petal hue, turgor pressure, room temperature, lighting observations, water flushing, plant fitness (bloom or senescence details), record of decay/death date. Through the use of the scientific method, students will learn the importance of finding empirical evidence relating to supporting or contradicting their hypothesis. To communicate their results through analyzing the data, students interpret the findings by comparing and contrasting both the quantitative and qualitative data; this synthesis poses the final question to students of why this gleaned knowledge is important to practicing

botanical art. https://docs.google.com/document/d/1KOY6bYxPiNb49MeCD2AN-5M5Crq-wIZW/edit?usp=sharing&ouid=112200502488040342581&rtpof=true&sd=true

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

The Botanical Nomenclature Identification Quizzes and Final Exam are an integral, biological attribute of the course; the applied knowledge generates hermeneutic inquiry of the natural world (plant species). Learning binomial nomenclature (Latin, scientific names), common names, and design forms of cut botanicals is required to inform the student of the importance of proper plant identification. Learning scientific names (genus and specific epithet) is imperative as these names allow the world to communicate unambiguously and without contradiction of plant species without misidentification. Furthermore, identification of plant species is required for ordering flowers from the wholesale or retail floristry industry to procure the appropriate materials for the construction of botanical arrangements. Furthermore, plant identification methodology can be a helpful asset and practice to acquire in one's lifetime for personal recreation or enrichment and for a career in agriculture as well as for personal appreciation of our biosphere. Learning about plants reduces plant blindness, thus increasing awareness of the natural world and builds an appreciation for nature and botanicals.

Students are exposed to a variety of scientific, theory based research within their required **readings** relating to biophilia, ecotherapy, ecopsychology, and horticulture therapy. These theories are presented to assist students in answering the questions "why are we drawn to elements of botanicals/nature?," "why do we need botanicals/nature in our lives?," or "how are/is botanicals/nature a benefit to us?." These concepts are theories with a level of uncertainty to why we desire or require botanicals/nature in our lives for personal wellness. We may never definitively know the answer to these questions, but these theories provide a framework to consider to relate to our biological world.

In the **Weekly Lab** sessions, students design a botanical arrangement demonstrated by the instructor using botanicals covered in the botanical identification and nomenclature testing. Students will be hands-on with each species to create the arrangement while practicing their postharvest care procedures and the design process. This hands-on lab construction engages students with nature and its biological attributes to compound the new scientific facts and theories studied by putting them into practice. https://docs.google.com/document/d/12dNJhArubsA73cBKtPOT3ZwhecrUHeTx/edit?usp=sharing&ouid=112200502488040342581&rtpof=true&sd=true

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

In the **Weekly Lab** sessions, students design a botanical arrangement demonstrated by the instructor using botanicals covered in the botanical identification and nomenclature testing. Students will be hands-on with each species to create the arrangement while practicing their postharvest care procedures and the design process. This hands-on lab construction engages students with nature and its biological attributes to compound the new scientific facts (postharvest care, botanical identification) and ecological theories studied by putting them into practice. These lab designs are living sculptures of plant material, thus are live models of biophilic design that require students to observe phenomena of the natural world (live plant processes and botany: photosynthesis, respiration, transpiration, growth, and reproduction).

https://docs.google.com/document/d/12dNJhArubsA73cBKtPOT3ZwhecrUHeTx/edit?usp=sharing&ouid=112200502488040342581&rtpof=true&sd=true

Mandala Project requires students to venture into their natural biome and forage for botanicals. Students then apply a plant identification feature (APP) to assist in analysis of species from their biome to connect to their innate ecological environment. A design of a Mandala form is created through an ecotherapy based process. The construction, processing, and analysis are then completed for this personal project. https://docs.google.com/document/d/1Cuk6MTlJEWza8zeB7QGOx7lAUSSxV5qe/edit?usp=sharing&ouid=112200502488040342581&rtpof=true&sd=true

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

Both the **Plant Maintenance Log Experiment** and the **Postharvest Care Experiment** require scientific, mathematical data collection. For the Postharvest Care Experiment, students are required to log numerical data including time of day and room temperature and relate the interdependence of these observations to the current senescence stage of the cut botanical. For the Plant Maintenance Log, students are required to record numerical data including the date and time of day to synthesize, compare, and adjust data measurables including watering frequency and measurement as well as room temperature. For this experiment, students are required to record the quantity of water (oz) given to each plant and adjust the watering frequency and measured amount based on physical plant observations. Additionally for the Plant Maintenance Log, students are required to record the weekly temperature (degrees Fahrenheit) of the plant location and adjust based on physical plant observations. Both experiments require analysis and communication of results to interpret the findings.

Art in Nature Project requires students to create any form of art (medium) in a natural setting (in a park, by trees, near flowers, etc.) to practice the biophilic theories reviewed in the course. Students communicate their personal experience through this creation and highlight the theory of plant blindness most importantly in their review.

The **Comprehensive Lab Lookbook** requires students to analyze their Lab Models (botanical art) created in each lab within the course. This acts as a written-visual communicative portfolio of the models of live plant material and showcases their increased level of learning of botanicals throughout the semester.

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.

Foundational Knowledge
1. Comprehend the interconnectedness of science and art in botanical design through communication with peers and projects [SCIT LO1]
2. Recognize botanical nomenclature and recall plant maintenance [SCIT LO4]
3. Apply wellness therapies of horticulture and art to personal practice [SCIT LO3]
4. Define the fundamental construction methodologies and techniques to produce a botanical arrangement [SCIT LO4]

Application of Course Material
1. Apply botanical nomenclature and plant maintenance to models of a botanical arrangement to observe phenomena of the natural world [SCIT LO4]

2. Test scientific hypotheses through experiment in the construction of cut and potted botanicals [SCIT LO2]
3. Create artworks that reflect the use of nature either visually or manually [SCIT LO4]
4. Discover and Communicate nature as a model, muse and/or medium [SCIT LO5]
Integration of Course Material: Transferable Knowledge
1. Interpreting and Analyzing qualitative and quantitative data through botanical experimentation and observation (live and postharvest) [SCIT LO1] [SCIT LO5]
2. Synthesize the scientific and artistic components of botanical design [SCIT LO3] [SCIT LO4]
3. Applying online lecture content to lab sessions [SCIT LO5]
4. Connecting course content to personal experiences, knowledge, and practice [SCIT LO5]
Human Dimension
1. Employing theories of ecotherapy and ecopsychology [SCIT LO3]
2. Appreciate fellow artisans, ecology, and biophilic design [SCIT LO3]
3. Convert knowledge of plants into reduction of plant blindness [SCIT LO3] [SCIT LO1]

Provost Use Only

Backmapped Maroon Approval

No Response

Form Submission - Proposer

Submitted for Approval | Proposer

Kevin Godfrey (He/Him/His) - August 27, 2025 at 2:28 PM (America/Phoenix)

Department Approval

Approved

Hilary Harp

Melissa Button - August 27, 2025 at 2:40 PM (America/Phoenix)

GSC Coordinator Review

Approved

TJ Robedeau - August 27, 2025 at 3:03 PM (America/Phoenix)

April Randall

Assistant Vice Provost Review

Approved

Tamiko Azuma - September 9, 2025 at 1:48 PM (America/Phoenix)

All required components confirmed.

Pre-GSC Meeting

Approved

Kimberly Singleton

April Randall - September 9, 2025 at 6:40 PM (America/Phoenix)

Scientific Thinking in Natural Sciences (SCIT) Subcommittee

Acknowledgement Requested

Ralph Chamberlin

Michele Devine

Chao Wang

Ashli Morgan - September 30, 2025 at 5:05 PM (America/Phoenix)

The SCIT subcommittee recommends this course revise and resubmit. The assessments provided for LO3 and LO4 do not meet the requirements of the LO. The focus seems to be more on the art aspect of the assessment.

General Studies Council Meeting

Waiting for Approval

Kimberly Singleton

April Randall

Proposer Notification

Notification

Kevin Godfrey (He/Him/His)

College Notification

Notification

Karen Schupp