

10 October 2019

ASU General Studies Council

Natural Sciences Subcommittee Report

ART 394: Science and Art of Botanical Design

The Natural Sciences (SQ/SG) Subcommittee reviewed the proposal for the course *ART 394: Science and Art of Botanical Design*, for the SQ General Studies requirement. ART 394 is an upper-division 3-credit Special Topics course with lecture and laboratory sessions but not a paired 1-credit laboratory course. A review of the SQ proposal, syllabus, and example curriculum materials for this course show that it does not fulfill the SQ Critical Criteria and is not appropriate for SQ designation for these reasons:

- None of the mandatory criteria in Table III are met by this course.
- Criterion I.C (“Includes coverage of the methods of scientific inquiry that characterize the particular discipline”) is not met since the quizzes and final exam are focused almost completely on identifying and naming plant species. This may be important information for the field, but it does not correspond to “methods of scientific inquiry.”
- Criterion I.D (“Addresses the potential for uncertainty in scientific inquiry”) is not met because most questions posed to students are subjective and self-evaluative in nature (e.g., “Why do we need botanicals in our lives?” “How are botanicals a benefit to us?”) rather than an evaluation of uncertainty within the specific scientific inquiry. An example of this would be, for an experiment testing a hypothesis related to botanicals: “What are the uncertainties related to the findings?” or “What can and cannot be concluded, based on the results?”
- Criterion I.E (“Illustrates the usefulness of mathematics in scientific description and reasoning”) is not met because while students are tasked with making quantitative measurements (e.g., water volumes, temperature, frequency), they are not applying mathematical analyses to their findings in order to identify and interpret patterns in their data. It is noted that students will be tasked with adjusting plant-care activities based on their observations of plants, but there is no evidence that they will employ mathematical analyses in determining these adjustments.
- Criterion I.F (“Includes weekly laboratory and/or field sessions that provide hands-on exposure to scientific phenomena and methodology in the discipline, and enhance the learning of course material”) is not met because it is not apparent that all of the labs engage students in scientific phenomena and methodology, based on their titles (e.g., Budvase Arrangement, Lei, Wearable Flowers, etc.). These imply artistic or aesthetic work and products rather than scientific phenomena or methodology.
- Further, a standalone 3-credit course not paired with a 1-credit laboratory course does not provide sufficient units for the SQ designation.

The syllabus indicates a strong emphasis on design and therapy that might better suit it for a HU designation rather than SQ.

Recommendation: The Natural Sciences (SQ/SG) Subcommittee does not recommend that ART 394 be approved for the SQ General Studies requirement.