



Curricular Enhancement Program Smith College Botanic Garden

Program Information

Program Goal

The **Curricular Enhancement Program** at the Smith College Botanic Garden provides stipends and supplemental course funds for faculty to develop courses or portions of courses utilizing the Botanic Garden and its resources. The goal is to encourage teaching that helps students connect with plants and the botanic garden environment as part of their liberal arts education.

The Garden has traditionally had a close relationship with teaching in the biological sciences. We seek to strengthen this work and to expand connections with other sciences and with the arts, humanities, and social sciences.

Applications

Application guidelines may be found at:

www.smith.edu/garden/Academics/curricularenhancement-guidelines.pdf.

Deadlines are **October 15** and **March 31** each year, for courses to be taught in any of the subsequent three semesters.

For further information

Please contact the Botanic Garden Curricular Enhancement Consultant, Nancy Rich, at bgcourse@email.smith.edu.

Resources for Teaching

Accessing the Garden

The Botanic Garden includes the Lyman Plant House and Conservatory, the Campus Arboretum, and specialty gardens around campus. The Lyman Plant House is open weekdays and weekends 8:30 a.m. to 4 p.m.. Faculty may bring their classes (reservations two weeks in advance are required), and students are welcome to come on their own. Outdoor areas are, of course, available any time.

To learn about the Botanic Garden, faculty may wander through the indoor and outdoor areas (species are clearly labeled) or take the audio tour, which is available in the Lyman Plant House lobby and is free for anyone with a Smith ID. For specific plants, faculty may consult the online Plant Database and Plant Images Database (accessible from www.smith.edu/garden/collections/collections.html), or the plant locator kiosk in the Lyman Plant House lobby.

The website www.smith.edu/garden presents a wealth of information about Botanic Garden history, research projects, efforts to preserve biodiversity and manage invasive species, stories of specific plants and trees, cultivation issues, and archives of past exhibitions in the Church Exhibition Gallery. Records on the history of the Garden and associated people and events, and the teaching of botany at Smith, are located at the College Archives.

The Curricular Enhancement Consultant, and other Botanic Garden staff as needed, are available for consultation. Written guides to the collection are available from staff on such topics as economically valuable plants, plants of the ancient Roman world, medicinal plants, ferns, campus trees, and more.

Collection Focus

The plant collection has developed around goals for teaching of horticulture and plant science, aesthetics, preservation of rare species, representation of different biomes and different plant uses (economic, medicinal, culinary, aesthetic), and research. The plants come from Asia, Australia and New Zealand, Africa, Latin America, and North America, and in certain areas of the greenhouses are grouped biogeographically. Desert, tropical, and warm and cool temperate biomes are represented.

Outdoors, the Systematics Garden displays plants according to botanical classification, contrasting with the aesthetic design of the Ruth Brown Richardson perennial border. The small pond adjacent to the Lyman Conservatory includes wetland indicator species. The Rock Garden hosts some 2,000 types of alpine, dwarf, and woodland plants. The Mary Maples Dunn Garden joins Wright Hall with Burton Lawn. Capen Garden is designed as a series of outdoor garden rooms with a rose arbor, a knot garden, an outdoor classroom area, and a formal garden with gazebo; Capen Garden is sometimes used as the site of small dance or theater performances. Rock formations at the Japanese Garden for Reflection and Contemplation and Tea Hut on Paradise Pond below the President's House are arranged to depict events from the life of the historical Buddha. Nearby is the Woodland/Wildflower Garden. The President's Residence Gardens includes the Herb Garden with medicinal, culinary, fragrance and dye plants.

The Campus Arboretum, a living museum of woody plants, creates a pastoral environment for academic endeavors and is also documented and labeled. The shores of Paradise Pond and the Mill River are home to many trees and plants native to Western Massachusetts.

For further information and images, see www.smith.edu/garden/Gardens/gardens.html (outdoor collections) and www.smith.edu/garden/Conservatory/conservatory.html (greenhouse collections).

Classrooms

Space and schedule permitting, faculty may use Lyman Plant House teaching facilities, which include three classrooms seating 25 students each. One of these classrooms has low magnification dissecting microscopes; another has two computer terminals. Facilities for potting and propagating plants are available.

Exhibition facilities, class-organized exhibitions, and other options

The Church Exhibition Gallery presents changing exhibitions on topics related to botany and horticulture. Archives of past exhibitions can be found at www.smith.edu/garden/exhibits/past-exhibitions.html . With sufficient advance notice, a class-organized exhibition may be proposed as part of a course. Exhibitions can be a highlight of a student's academic experience; they are also demanding in terms of time and teamwork. Discussion about mounting a class-organized exhibition should begin a year to a year-and-a-half in advance.

For classes or individual students interested in developing and presenting materials for the public but not at the level of intensity of an exhibition, there are other options. Students might develop online materials or a handout for the Lyman Plant House, or they might write narrative plant labels and place them in the Lyman Plant House as a temporary self-guided tour.

Related campus resources

The Herbarium of Smith College, housed at the Clark Science Center, is a collection of some 60,000 preserved and catalogued plant specimens.

Many connections can be made between the Botanic Garden's collections and materials at the Sophia Smith Collection and the College Archives. Women have been herbal healers, cultivators, creators of beauty, agriculturalists, landscape architects; records in the Sophia Smith Collection tell about women active in some of these areas. The College Archives tell about the history of the Botanic Garden, including the women who taught botany at Smith and Smith students who helped in local Victory Gardens during World War II. In support of the Curricular Enhancement Program, staff at the Sophia Smith Collection and the College Archives have been putting together lists of resources and topics for student research assignments.

The Museum of Art houses many paintings, drawings and prints related to plants and landscapes. The Mortimer Rare Book Room has an outstanding collection of early herbals and other rare and important botanical books from Renaissance through contemporary periods. Visits to these collections may be included in course plans.

Staff assistance

The staff of the Botanic Garden are ready to assist. The Curricular Enhancement Consultant's primary job is to work collaboratively with faculty as needed, on making use of the collections, connecting with botanical or other expertise, structuring assignments, and suggesting links with related collections and resources.

Teaching topics, ideas for assignments

Gardens and plants connect with the arts, humanities, social sciences, and sciences. While gardens are often associated with leisure-time and the decorative, these aspects are only part of a more complex picture. Some examples follow.

The Botanic Garden presents opportunities for the teaching of history, politics, and cultural survival. For example, the presence of many Asian specimens, thousands of miles from their origins, points not only to similarities of climate and the history of land mass evolution or tectonic plate movement, but also to relationships between two nations at a particular moment of history. Plant labels referring to "rare" and "endangered" species "once used as traditional medicine" announce a poignant story about the impact of declining biodiversity on indigenous peoples. Trade relationships, colonialism, and migration patterns can be studied in the movement of plants throughout the world.

Many of the medicinal and economically valuable plants represented at the Garden—rice, sugar, papyrus, cacao, coffee, tea, spices, rubber, quinine, etc.—influenced the course of history. Author Jamaica Kincaid tells a story about admiring a beautiful flower and then coming to realize it is a cotton plant, with all its associations in the history of her people; the story is a powerful illustration of the degree to which plants carry significance beyond the merely decorative.

Some gardens are designed around a cultural theme—the Japanese garden at Smith, for example, or gardens containing Holocaust memorials. Students could write labels for plants that illustrate a cultural theme such as plants important in Native American cultures; students could also take a field trip to a specialty garden. Gardens are sometimes sites of community-building; a class could connect with a community garden project off-campus.

In the arts and humanities, plants and gardens have served as symbols, settings, subjects and artists' materials. Class activities might involve drawing, botanical illustration, photography, writing, developing online materials. Students might do imaginative writing in the Palm House in the middle of winter. The growth cycle of plants might serve as a metaphor of change or healing in a philosophy or religion class. An art class might explore plant dyes, woods used in sculpture, plant fibers that make up paper or fabric. An English class might compare literary descriptions of flowers with live examples, or place poems with certain plants for a temporary self-guided tour. Students might compare live flowers with illustrations in a Renaissance herbal at the Rare Book Room. Foreign language study may be complemented by learning about the culture's plants. Students might explore the meanings of culturally-significant plants such as the white pine as the

Mohawk tree of peace, corn in many Native American cultures, the lily in Christian art, the laurel wreath in Greek culture, the bitter herbs of Passover.

The classrooms offer space for students to conduct experiments, propagate plants, view plants under magnification, or prepare a hands-on teaching activity for children.

Conservation and biodiversity issues could be explored by learning about the Botanic Garden's seed exchange program, and other activities to help preserve rare and endangered species. Outdoors, students might study wetland indicator plants around the pond as part of understanding soils and hydrology. A recent exhibition focused on mathematical properties of plant patterns or phylotaxis.

Engineering students might find the greenhouses an intriguing study in heat, light, and ventilation, or might look to plants for design ideas (the design of the Crystal Palace was inspired by the veining of giant water lily leaves, for example).

Because the Botanic Garden hosts thousands of visitors every year, it is also a place to study human behavior. Future educators might study children's responses to plants or what they learned from a guided tour.

Supplemental course funds and other supports

The supplemental course funds may be used in many ways—to bring in an outside speaker, to take field trips (perhaps to another garden, or perhaps to a less cultivated area for a contrast), to purchase books or videos for the library, to purchase supplies for a class project. Funds may also be used for a related community-based project, for example, for a stipend for a community partner or to subsidize transportation to a community project.