**SPRING 2018 CREDIT COURSES**

**CERTIFICATE IN NATIVE PLANT STUDIES**

*Click here to register online.*

**Geology for Botanists and Ecologists**  
*Mike Schafale, Ecologist, and Skip Stoddard, Geologist*  
Saturdays February 3, 10, 17, 24; 1:30 - 4:30 p.m. (Optional field trip: March 3)  
$130 ($117 Members)  
This course introduces students to the principles of geology, with an emphasis on the aspects that most affect the distribution of native plants and natural communities. Classes cover the different types of rocks, and their chemical and physical effects on the soils that form from them, addressing the geological processes that shape the earth’s surface, the landforms that result from them, and the way natural communities align with these patterns. This course is intended for a broad audience, but some familiarity with natural communities or native plants and some exposure to chemistry will be assumed. 1.0 Elective.

**Plant Ecology**  
*Jeffrey Pippen, Ecologist*  
Sundays February 4, 11, 18, 25; 1:30 - 4:30 p.m. (Inclement Weather Date: March 4)  
$130 ($117 Members)  
In this course, we will explore plant ecology from both a conceptual perspective and first hand field experience. Ecological relationships at the organism, population, community, and ecosystem levels will be examined, using examples from the rich and diverse North Carolina flora. Students will learn about nutrient and energy cycling within ecosystems, as well as about current threats and trends for the conservation of ecosystems. Students will also learn to recognize and identify local plant communities and species on daily class field trips. No prerequisites. Core.

**Botany**  
*Olivia Lenahan, Horticultural Scientist*  
Saturdays March 10, 17, 24; 9:30 a.m. - 4 p.m.  
$195 ($175 Members)  
This course is introductory in nature and designed for a broad audience. It covers basic principles of botany including taxonomy, anatomy, morphology and physiology. Class time is divided between lectures and examining/dissecting samples. There are also opportunities for making observations in the gardens. Core.

**Identifying and Controlling Invasive Plants**  
*Neville Handel, NCBG Land Manager*  
Sunday, March 11; 1:30 - 4:30 p.m.  
$32 ($29 NCBG members)  
This course is intended for a broad audience. Through classroom and field demonstrations, students learn the tools and methods needed to identify invasive species and effectively remove them under various scenarios. No prerequisites. 0.25 Elective.
Plant Taxonomy
Milo Pyne, Plant Ecologist
Fridays April 6, 13, 20; 1-5 p.m.
$130 ($117 Members)
This course builds on the fundamentals taught in Botany and prepares students for supplementary material covered in Flowering Plant Families. It is a core course for students enrolled in either of the NCBG certificate programs. Students learn the basic concepts of the taxonomy of vascular plants and how to identify plant families by making observations of selected characteristics. The use of taxonomic keys is introduced. Interesting examples are studied to illustrate current issues in plant taxonomy and nomenclature. Prerequisite: Botany. Core.

Spring Flora
Milo Pyne, Plant Ecologist
Saturdays April 7, 14, 21; 1-5 p.m.
$130 ($117 Members)
This course is intended for a broad audience as well as for students who are enrolled in either of the NCBG certificate programs. Field trips and exercises provide experience in the use of identification keys and recognition of plants in a natural setting. Upon completion of this course, students will have an understanding of basic plant morphology, naming conventions for plants and the history of scientific naming, how to identify the prominent plants of the season using a dichotomous key and field characteristics, all through a season-specific lens. No prerequisites. Core.

Plant Communities of North Carolina
Julie Tuttle, Ecologist
Sundays April 22, 29, May 6: 1:30 - 4:30 p.m.; Saturday, May 12: all-day field trip (8 a.m. - 6 p.m.)
This course introduces students to North Carolina’s rich diversity of plant communities. Variations in climate and soil types across the state as well as other factors have resulted in the creation of distinctive regions: subtropical maritime forests, salt marshes, longleaf pine savannas and sandhills, pocosins, oak-hickory forests, bottomland hardwoods, spruce-fir forests, rock outcrops and glades, relict prairies, and grasslands. Students explore the causes and history of North Carolina’s plant community diversity. Class sessions include nine hours of lecture and a full day field trip with Julie and UNC Herbarium director Alan Weakley. No prerequisites. Core.

Grasses, Sedges, and Rushes
Amanda Faucette, NCBG Conservation Botanist
Thursdays April 26, May 3, 10, 17; 1:30 - 4:30 p.m.
$130 ($117 Members)
This course is intended for a broad audience and explores many aspects of the evolutionary history, economic and ecological dominance, current distribution, biology, and identification of the “graminoids.” Through lectures, lab work, and short field trips, students learn to appreciate the subtle and detailed beauty of these plants with inconspicuous flowers. Students also learn materials and methods for identifying these distinctive and important members of our flora. No prerequisite. 1.0 Elective.
Flowering Plant Families
Olivia Lenahan, Horticultural Scientist
Saturdays April 28, May 5, May 19; 12:45 - 4:45 p.m.
$130 ($117 Members)
This course builds on the information covered in Plant Taxonomy and focuses on the study of plant diversity by targeting twenty major and fairly stable plant families found in North Carolina. Classroom discussions of evolutionary adaptations and relationships are combined with field studies in the Garden and close-up examination of representative examples. Prerequisite: Plant Taxonomy. Core.

Principles of Conservation Biology
Johnny Randall, NCBG Director of Conservation
Wednesdays May 2, 9, 16, 23; 9:30 a.m. - 12:30 p.m.
$130 ($117 Members)
This course is intended for an experienced audience and introduces students to the principles of biodiversity and conservation. Students learn about rare plants, conservation genetics, ecological restoration, conservation landscaping, and preserve design. Prerequisites: Botany, Plant Ecology. Core.

Fran Whaley, NCBG Garden Guide
Friday, May 4; 12 - 1:30 p.m.
$15 ($13 Members)
Bring your lunch and join us for a discussion of this book by Robin Wall Kimmerer, professor of environmental and forest biology at the SUNY College of Environmental Science and Forestry and member of the Citizen Potawatomi Nation. In Braiding Sweetgrass, Kimmerer draws on her life as an indigenous scientist, a mother, and a woman, to show how other living beings—asters and goldenrod, strawberries and squash, salamanders, algae, and sweetgrass—offer us gifts and lessons, even if we’ve forgotten how to hear their voices. In a rich braid of reflections that range from the creation of Turtle Island to the forces that threaten its flourishing today, she circles toward a central argument: that the awakening of a wider ecological consciousness requires the acknowledgment and celebration of our reciprocal relationship with the rest of the living world. 0.25 Elective.

Native Plant Propagation
Matt Gocke, NCBG Nursery Manager
Saturday, June 2; 9:30 a.m. - 12:30 p.m.
$32 ($29 Members)
This workshop is intended for a broad audience. Students learn fundamentals of vegetative propagation and techniques for propagating southeastern native plants by means of stem and root cuttings. Class includes hands-on propagation and a tour of the vegetative propagation facilities of NCBG. 0.25 Elective.
Entomology
Stephen Hall, Ecologist
Saturdays June 9, 16, 23; 9:30 a.m. - 12:30 p.m.
$97 ($87 Members)
This nine hour course is designed for a broad audience. Most aspects of insect biology will be covered, with an emphasis on the adaptations that have made them the most diverse group of organisms. The variety of orders, families, and species will be reviewed, using examples found in the local area. Observational techniques will be demonstrated in a field trip to Mason Farm, and a tour of the Garden’s display areas will be used to discuss how to improve habitats for insects in our own backyards. Moth Night (below), a non-credit course, is recommended as an accompaniment to Entomology. No prerequisites. 1.0 Elective.

Moth Night
Stephen Hall, Ecologist
Saturday, June 16; 9 - 10:30 p.m.
$12 ($11 Members)
Moths are among our most diverse, colorful, and ecologically important groups of organisms. Approximately 2,700 species occur in North Carolina. Most people, however, only ever see just a few and are often startled when they first see a Luna Moth or a Polyphemus Moth, never having suspected that there were such species flying around in the night. The Moth Night is intended to shine a stronger light on this amazing group of organisms. Two common techniques are used to sample moth populations – blacklights and baiting – to take a look at the local fauna. Bring your cameras, with best results obtained using a flash. Non-credit course: link here.
NATIVE PLANT STUDIES

<table>
<thead>
<tr>
<th>Course</th>
<th>Status</th>
<th>Hours</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>Botany</td>
<td>Core</td>
<td>18</td>
<td>None</td>
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<tr>
<td>Plant Taxonomy</td>
<td>Core</td>
<td>12</td>
<td>Botany</td>
</tr>
<tr>
<td>(Two) Local Floras: Spring, Summer, Fall, Winter</td>
<td>Core</td>
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<tr>
<td>Flowering Plant Families</td>
<td>Core</td>
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<td>Plant Taxonomy</td>
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<tr>
<td>Plant Ecology</td>
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<td>Principles of Conservation Biology</td>
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<td>Botany, Plant Ecology</td>
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<td>Plant Communities of North Carolina</td>
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<tr>
<td>Pollination</td>
<td>Core</td>
<td>6</td>
<td>(Effective Fall/2014) –Botany</td>
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<td>Bryophytes</td>
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<td>Ferns, Lycophytes, and 'Fern Allies’</td>
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<td>Grasses, Sedges, and Rushes</td>
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<td>Entomology</td>
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<td>Introduction to Mushrooms</td>
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<td>Lichens</td>
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<td>Native Plant Propagation</td>
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<td>Native Seed Propagation</td>
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<td>Native Southeastern Medicinal Plants</td>
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<td>Book Reviews</td>
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REQUIREMENTS
9 core courses*
4 elective credits
Independent study OR Capstone Experience

*Pollination moved from being an elective course to a core course in 2014. Students who enrolled before 2014 have two options: they may choose to complete the requirements as they stood when they enrolled, so 8 core courses (all of the above minus Pollination) and 5 elective credits, or they may choose to complete the current requirements.