



Course Catalog

Offered through Adult & Continuing Education Programs at The North Carolina Arboretum. This catalog contains descriptions of all core (required) courses as well as descriptions of each required elective category.

BRN Core Classes

Most Core Classes also have optional field experiences: Students should consider taking as many field experiences as possible for their Naturalist study. A minimum of four (4) field studies fulfills program recommendations.

Winter Native Tree ID

Instructor. Carlton Burke (February)

Trees take on a whole new dimension in winter. Learn to identify winter trees based on silhouette, bark, twigs and other characteristics. We will cover major concepts and terms, and review some of the best books for tackling this subject matter. *Separate field experience available.*

Vertebrate Zoology of the Blue Ridge I

Instructor. Carlton Burke (February - March)

The Southern Appalachian Mountain region is quite diverse in the many different species of vertebrate animals that make their home here. In this series of classes, students will learn the basic identification and natural history of many of our mountain wildlife species. Each week we will cover a different group of vertebrate animals – fish, amphibians, reptiles, mammals, and birds through the use of slide presentations and worksheets.



BRN Core Classes

Vertebrate Zoology of the Blue Ridge II

Instructor: Carlton Burke (February - March)

The Southern Appalachian Mountain region is quite diverse in the many different species of vertebrate animals that make their home here. In this series of classes, students will learn the basic identification and natural history of many of our mountain wildlife species. Each week we will cover a different group of vertebrate animals – fish, amphibians, reptiles, mammals, and birds through the use of slide presentations and worksheets.

Botany Basics

Instructor: Alexandra Holland (March - April)

Plants have many amazing abilities: they make their own food, pull water hundreds of feet in the air against gravity, and trick insects and other animals into helping them reproduce. They track the sun, recoil at a touch, and warn other plants of danger. In this class we will explore all these phenomena and more as we look at the basics of plant structure, function, evolution, classification, and ecology. The class is a Zoom-based lecture format. Discussion questions and practical exercises will be provided to reinforce the lecture material, including making observations in your own yard or neighborhood. Participants are encouraged to sign up for the complementary Botany Basics Walks for further reinforcement of the lecture material, but the walks are not a requirement. *Separate field experience available.*

Spring Native Tree Identification

Instructor: Carlton Burke (April)

When we think of flowers in the spring, our attention often is turned towards the numerous showy flowers found on herbaceous plants on the forest floor. If we look upwards however, we would notice the many species of mountain trees which also begin blooming at this time of the year as well. In this class, we will learn about identifying trees by their flowers, buds and bark, and investigate tree structures and pollination strategies. *Separate field experience available.*



BRN Core Classes

Spring Flora Identification

Instructor: Scott Dean (*April - May*)

Learn to identify native mountain flora using a non-technical keying system, while studying the characteristics of plant families, the basics of plant community and the natural and the cultural history of the flora of the Blue Ridge. Presented online with resources, quizzes and exercises provided for conducting observations in the “field,” meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use. *Separate field experience available.*

Water (Fluvial) Systems from the Blue Ridge to the Ocean

Instructor: Anton DuMars (*May - June*)

Water flow across a diverse geological framework shapes the Earth’s surface. The process of surface water flow and the earth’s response to this flow is investigated across three physiographic provinces, including the Blue Ridge, Piedmont, Coastal Plains/Continental Shelf. Processes and responses include erosion, sediment transport, and formation of associated depositional environments. *Separate field experience available.*

Summer Flora Identification

Instructor: Scott Dean (*June - July*)

Learn to identify native mountain flora using a non-technical keying system, while studying the characteristics of plant families, the basics of plant community and the natural and the cultural history of the flora of the Blue Ridge. Presented online with resources, quizzes and exercises provided for conducting observations in the “field,” meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use. *Separate field experience available.*



BRN Core Classes

Summer Native Tree Identification

Instructor: Carlton Burke (*July*)

Western North Carolina's lush mountain forests are home to dozens of species of trees. In this online class, students will learn how to identify many of the area's tree species based on their habitat preferences, individual characteristics, including leaves, and their uses both by humans and wildlife. *Separate field experience available.*

Geology of the Blue Ridge

Instructor: Steve Yurkovich (*August*)

Explore the geologic history of the Southern Appalachian Mountains in this Zoom-based class that includes lecture presentations, discussions and self-guided explorations in the field. The course begins with a discussion of the earth's interior and plate tectonics, progresses to a model for the formation of the southern Appalachians and then describes the surficial processes that generate the current mountain topography. Discussion will also include an overview of geologic processes that affect these mountains today: earthquakes, mass movements and floods. *Separate field experience available.*

Fall Flora Identification

Instructor: Scott Dean (*August - September*)

Learn to identify native mountain flora using a non-technical keying system, while studying the characteristics of plant families, the basics of plant community and the natural and the cultural history of the flora of the Blue Ridge. Presented online with resources, quizzes and exercises provided for conducting observations in the "field," meaning your own yard or neighborhood with nods to nearby trails reopening for recreational use. *Separate field experience available.*



BRN Core Classes

Ecology of the Blue Ridge

Instructor: Dan Lazar (*September - October*)

Discover why the Southern Appalachians are home to more tree species than all of Europe. Learn how ants and whitetail deer determine where trilliums grow. Take a virtual tour of the amazing natural ecosystems of Western North Carolina, from riverside amphibian breeding ponds to mountaintop Spruce-Fir forests. This Zoom-based class will include lecture presentations, discussions, self-guided explorations, and virtual field trips during which students will uncover the complex interactions between familiar organisms and their natural environment. *Separate field experience available.*

Climate Change Science

Instructors: NOAA & NCICS Scientists (*October*)

Learn how climate and climate change shape the seasons, the weather, extreme events, and about our preparedness for these events. The course covers four main areas: 1) basic climate and climate change, including what drives the seasons, climate, and what is known about climate past and present; 2) climate change and variability, including how scientists know the climate is changing, and how "teleconnections" like El Nino shape our seasons; 3) climate and weather, including how climate is, and is not shaping extreme events; and 4) adaptation, including strategies used to prepare for a changing climate.

Fall Color & Native Tree Identification

Instructor: Carlton Burke (*October*)

Many trees in Western North Carolina combine to create the spectacular foliage color show during the autumn months. This online class covers the biology of what causes seasonal color change and the basics of identifying trees by their leaves, bark, fruit and other characteristics. *Separate field experience available.*



BRN Core Classes

Natural History Interpretation

Instructor: Brad Daniel (*November, Possible Spring section if warranted*)

Natural history interpreters provoke interest and curiosity in our natural and cultural heritage. This online intensive course will introduce the basic principles of environmental interpretation and is designed for Blue Ridge Naturalists who will be leading nature walks, teaching natural history to adults or children, and delivering talks to community groups. Participants will learn how to create nature education talks or walks that are purposeful, enjoyable, informative and organized. Students will be given an opportunity to develop their own programs and practice their presentation and communication skills. This class fulfills a core requirement for the Blue Ridge Naturalist Certificate and is limited to students who are nearing the completion of their Naturalist certificate course of study and developing ideas for their final projects.



BRN Elective Categories

Astronomy and Meteorology

(Examples: In Season Treasures of the Night Sky, In Season Sky Watch)

Wildlife

(Examples: Birding Basics, Identifying Regional Frogs by)

Plant Studies

(Examples: Introduction to Permaculture, Late Season Ethnobotany, Marvelous Mushrooms of the Southern Appalachians, Tree Treks)

Appalachian Arts & Culture

(Examples: Reading Wilma Dykeman's The French Broad by Wilma Dykeman, Indomitable Women of Western North Carolina, Reading Horace Kephart's Our Southern Highlanders)

Growing in Place & Special Topics

(Examples: Loving Where You Live walks, Contemplative Photography retreats)

Service & Volunteerism

(Examples: ecoEXPLORE, Your neighborhood HOA - community landscape or invasive eradication, Asheville GreenWorks tree nursery / community tree giveaways, Waterfall Keepers)