

BIOL 3600/5600 – LOCAL FLORA

[CRN 26252 (Sect. A), CRN 26253 (Sect. B)]

SPRING SEMESTER 2023

Instructor: Dr. Carter
 Office: BC 1040 or BC 1105
 Telephone: (229) 333-5763, ext. 5338
Office Hours: Mon. & Wed., 11:00 – 11:50 AM; Thurs., 1:00 – 1:50 PM; Fri., 3:00 – 3:50 PM; other times by appointment

<i>Weekly Lecture and Lab Schedule</i>		
Mon	LecAB	10:00 – 10:50 AM, BC 1024
Wed	LecAB	10:00 – 10:50 AM, BC 1024
Thurs	LabA	2:00 – 4:50 PM, BC 2040
Fri	LecAB	10:00 – 10:50 AM, BC 1024
	LabB	12:00 – 2:50 PM, BC 2040

Course Description

A field-oriented study emphasizing identification, distribution, and ecology of locally occurring seed-bearing plants. Identification using floristic manuals and sight identification of the common native woody flora will be stressed during laboratory. Pre-requisite: BIOL 1107 and BIOL 1108, or permission of instructor.

Course Outcomes

Following is a list of course outcomes linked to Biology Department Educational Outcomes (B) and Valdosta State University General Educational Outcomes (V).

- The student will be able to identify in the field common local native and naturalized plants by family and scientific names, including the indicators of the major plant communities.
- The student will demonstrate the ability to handle and analyze plant materials in the laboratory and in the field. [B1; V5, 7]
- The student will demonstrate proficiency using analytical dichotomous keys in a regional floristic manual to identify unknown plants.
- The student will collect, document, and prepare herbarium specimens, using proper ethical standards, especially regarding rare, threatened or endangered species.
- The student will demonstrate the ability to use scientific equipment effectively in the laboratory and in the field. [B1; V4, 5, 7]
- The student will demonstrate comprehension of basic concepts and the ability to use scientific terminology accurately through effective oral and written communication and use of dichotomous keys in a regional floristic manual. [B1; V4, 5, 7]
- The student will demonstrate the ability to follow oral and written instructions effectively. [V4, 7]
- The student will demonstrate the ability to access course resources and complete assignments on-line using computer technology (i.e., BlazeVIEW). [V3]
- The student will demonstrate the ability to complete assignments and tests ethically. [V8]

Required Texts

- *Manual of the Vascular Flora of the Carolinas* [RAB] by A.E. Radford, H.E Ahles & C.R. Bell, University of North Carolina Press, 1968 [ISBN 978-0-8078-1087-3, HARDCOPY ONLY].
- *Guide to Flowering Plant Families* [WBZ] by W.B. Zomlefer, University of North Carolina Press, 1995 [ISBN 978-0-8078-4470-0].

Supplementary References

- *Flora of the Southeastern United States* [ASW] by A.S. Weakley and the Southeastern Flora Team. University of North Carolina Herbarium, Chapel Hill, 2022 [freely available at <https://ncbg.unc.edu/research/unc-herbarium/floras/>. One may download the entire flora for the southeastern region or select a state, e.g., Georgia, to receive a subset of the flora.
- Other references and assigned readings will be provided electronically through BlazeVIEW.

Miscellaneous Required Items

- Pencils or pens for recording notes, etc.
- Spiral bound notebook convenient for field trips
- In addition to the preceding items, it is the student's responsibility to bring RAB and WBZ to all lab sessions, including field trips.

Additionally, the following are recommended for field trips.

- Old clothes, including long pants, and sturdy shoes or boots, and rain gear and warm clothing, as appropriate
- Insect repellant and bottled water
- *Immediately upon returning from field trips, students are urged to check their bodies thoroughly for ectoparasites (i.e. ticks) and, if possible, to shower.*
- Food and water for all-day field trips

COURSE POLICIES & REQUIREMENTS

Covid notes. Students are encouraged to remain current with their Covid vaccinations. This class will meet regularly in person as scheduled in Banner and summarized above in the Weekly Lecture and Lab Schedule. If a student is absent because of a quarantine or isolation requirement for Covid, then s/he must report this via the Covid Self Reporting Link in MyVSU and through the Dean of Students Office [DOSO]. Please bear in mind that we all must be as flexible and tolerant as reasonably possible and should be prepared to adjust schedules and modes of delivery of course content, assignments, assessments, tests, etc., should the need arise because of unforeseen circumstances related to Covid.

BlazeVIEW. A variety of course resources and materials will be made available through BlazeVIEW, and it will also be used to administer assignments and assessments and to post announcements and grades. Students should log onto BlazeVIEW daily in order to check for course announcements. Also, the Mail tool in BlazeVIEW provides a convenient means for students to contact one another and their instructor, and it should always be used to communicate about matters relating to the course. To access BlazeVIEW, select the link on the MyVSU page available through the Valdosta State University homepage. Students experiencing difficulties using BlazeVIEW should seek assistance through the VSU Information Technology HELP-Desk located in Odum Library.

General statement. In order to complete BIOL 3600/5600 successfully, one must be mindful of all policies relating to attendance, grading, etc. By 11:59 PM, Sunday, 17 January 2021, after reading the course syllabus and comprehending the policies presented therein, log onto BlazeVIEW and complete the course syllabus assignment posted in the course calendar. If any of the course policies is unclear, it is the student's responsibility to confer with the instructor for clarification, prior to completing this assignment.

Regular attendance of scheduled lecture and laboratory periods, daily preparation, and review are essential for success in this course. Students should prepare for each lecture session by reading the assigned sections from the textbook and other sources as assigned in the course syllabus and under Course Content in BlazeVIEW. Students should bring their textbooks to each scheduled lecture and laboratory period, since they will be used regularly during lecture and lab. Notes should be taken regularly during lecture and laboratory and should be used with the text and materials made available through BlazeVIEW in studying for examinations.

Attendance, punctuality, participation and cooperation. Regular attendance, punctuality, participation and full cooperation are expected. The student is responsible for all material missed, regardless of the reason for absence. Students arriving late for class should enter the lecture room or laboratory quietly and take the nearest seat to avoid disruption. Bear in mind that field trips normally require

prompt departure from campus and that tardiness could easily result in a student missing transportation to the field site and absence from the field trip, and that such absences will adversely affect the course grade. Attendance will normally be taken at the beginning of the period. Students who arrive after the roll is called are counted absent unless they inform their instructor immediately after class or lab of their tardiness. It is the student's responsibility to inform the instructor of her/his tardiness. Each three cases of tardiness will be counted as one absence, and cases of tardiness will be counted as absences thusly, unless a satisfactory explanation is provided to the instructor by the student. It is the instructor's prerogative to have the explanation in writing. Any scheduling problems or other extenuating circumstances necessitating chronic tardiness should be explained to the instructor in writing and properly documented at the beginning of the semester. In order to have an absence excused, the student must provide a written explanation with proper documentation immediately upon returning to class. Providing an explanation of absence or tardiness by the student does not insure that the absence or tardiness will be excused. The instructor shall determine the validity of all excuses. *Points will be deducted from the final course grade for excessive unexcused absence or tardiness and inadequate participation and cooperation.*

Laboratory. Most of the scheduled laboratory periods involve exercises that are to be completed indoors in the General Botany Laboratory (BC 2040) in order to develop descriptive, diagnostic, and analytical skills necessary to identify or "key out" unknown specimens using complex dichotomous keys in a regional floristic manual. The remaining laboratory periods involve field trips emphasizing identification of plant families and genera as components of communities in their natural habitats. Additional information about field trips can be found in the following section and in the Course Schedule. Both required textbooks [RAB, WBZ] will be used during lab, and students are required to bring them to each lab, including field trips.

Field trips. Field trips are an essential part of this course. Activities and assessments completed during field trips normally cannot be made up; therefore, attendance of all scheduled field trips is essential. In addition to insect repellent and water and any other items listed previously, students should bring both textbooks, RAB and WBZ, a notebook, and pencils and pens for taking notes on all field trips. Students should bring water and food as needed for field trips. A separate field trip schedule will be provided by the end of the second week of classes.

Lecture examinations. Several lecture exams and tests will be given during the semester, at least one of these prior to midterm. Collectively, these exams and tests account for 40% of the final course grade.

Keying tests. Several keying tests will be given to measure

proficiency using analytical dichotomous keys in the *Manual of the Vascular Flora of the Carolinas* [RAB]. Substantial lab time will be devoted to supervised determination of unknown specimens using these keys. These keying exercises are an integral component of the course. They emphasize use of standard tools to dissect plant materials, critical observation and interpretation of plant structure, reinforcement and expansion of concepts related to plant structure, application of terminology related to plant structure, diagnosis and analysis, and application of analysis and diagnosis to identify unknown plants using dichotomous keys in a comprehensive floristic manual. It is essential that the student attend lab and field trips regularly and practice identification of specimens in order to develop proficiency with these keys. Collectively, the keying tests account for 30% of the final course grade.

Laboratory reports. Students will be required to submit a number of written laboratory reports for work done during laboratory sessions, including field trips. The content, depth and length of these reports will depend on the nature of the activities and exercises completed during lab. These reports are due at the beginning of the scheduled lab period one week after the lab during which the exercise or activity was assigned. A penalty of at least one letter-grade will be assessed for any report submitted late, and a penalty of an additional letter-grade will be assessed for each additional day that the report is late, beyond the due date. Reports submitted after the end of the scheduled meeting they are due will be counted as submitted on the following day, including reports given directly to the instructor, slipped under the instructor's office door or the herbarium door, or left with a third party, or placed in the instructor's departmental mailbox. For example, if the due date is Wednesday and the report is submitted Wednesday after the period it was due, the grade will be reduced by at least one letter-grade; if the report is submitted after 5:00 PM Thursday, the grade will be reduced by at least two letter-grades; if the report is submitted after 5:00 PM Friday, the grade will be reduced by at least three letter-grades, etc. Saturday and Sunday are not normal work days and, therefore, do not count in assessing the late-penalty.

During "keying labs" when students key out specimens using RAB, subsequently, during the lab, as time allows, or after the conclusion of the lab, they are required to check the names used for the keyed taxa in RAB against those in ASW, noting any differences in the Discussion section of the lab report and through proper citation of synonymy in any accompanying appendices or lists of taxa. ASW is available electronically online at no cost, through the link provided in this syllabus and on the course page in BlazeVIEW. All reports shall be prepared according to the format detailed in the instructions and rubric provided by your instructor. Reports will be evaluated and graded based upon content and form, including completeness, accuracy, and clarity, according to the rubric provided by your instructor. Collectively, laboratory reports account for 10% of the final course grade.

Miscellaneous assessments. A number of miscellaneous course assessments and quizzes will be given during the semester. Some assessments will be graded S/U [satisfactory/unsatisfactory], some with letter grades, and some with numerical grades. Certain assessments will be assigned and will be completed via BlazeVIEW. However, those completed in class or during lab are mostly unannounced and most cannot be made up. Unless otherwise instructed, out-of-class assessments are due at the beginning of the lecture or laboratory period one week after they are assigned. Unless otherwise instructed, hardcopy of these assessments shall be submitted with your name [first name and last name], course number and title [BIOL 3600 – Local Flora], and due date at the head of the first page, and formatted as follows: 12-point Times New Roman font, double-spaced throughout, and one-inch margins (top, bottom, left, and right). If there is more than one page, then the pages shall be stapled together with the staple in the upper left corner and numbered sequentially with page number centered at the bottom of each page, starting with "1". Normally, miscellaneous assessments that are not formatted according to the preceding instructions will be returned to the student for resubmission, and such corrected assessments shall be treated as late submissions. Penalties for late submissions will be made according to guidelines detailed under Laboratory Reports. Miscellaneous assessments collectively account for 10% of the final course grade

Experiential learning. Each student shall work independently outside of the regularly scheduled lecture and laboratory periods to prepare a Powerpoint presentation with complete photographic documentation demonstrating the essential characteristics necessary for the accurate identification of five native or naturalized vascular plant species, i.e., species that are treated in Radford et al. (1968) or in Weakley et al. (2022). Each of the species selected shall represent a different plant family. Detailed instructions and requirements will be provided by your instructor. The deadline for completing this project is 5:00 PM on the official last day of class, by which time the Powerpoint presentations shall be submitted to each student's designated folder in the appropriate course folder on the V-drive. Experiential learning accounts for 10% of the final course grade.

Grading. A ten-point grading scale is normally used (i.e., A=90-100, B=80-89, C=70-79, D=60-69, F=<60). The final course grade will be determined as follows:

Lecture exams	40%
Keying tests	30%
Laboratory reports	10%
Misc. assessments	10%
Experiential learning	<u>10%</u>
TOTAL	100%

Meeting the minimum point requirement for a letter grade does not necessarily assure that the student will receive that grade. Assignment of the final grade is the prerogative of the instructor and will be based upon each individual student's

overall performance, including patterns of consistency, trends toward improvement, and positive attitude as demonstrated through attendance, participation, and cooperation. If a student thinks an error has been made in the grading of any assignment, s/he should communicate about this directly with the instructor *within one week* of the instructor's posting of the grade or returning the assignment.

Class conduct. Students are expected to comport themselves courteously at all times during lecture and laboratory. Disruptive behavior will not be tolerated, and students behaving in a disruptive manner will be asked to leave class or laboratory and will be referred to the Dean of Students for disciplinary action. Refer to Section I. Code of Conduct Policies of the Student Code of Conduct in the VSU *Student Handbook*, accessible through the following Internet address.
<https://www.valdosta.edu/administration/student-affairs/student-conduct-office/student-code-of-conduct/appendix-b-student-misconduct/non-academic-student-conduct-code.php>.

Consumption of food or drink (including water) is prohibited in the lecture room and the laboratory. Students should be punctual for all scheduled lecture and laboratory meetings, and, except in situations of emergency, students should not depart from lecture before being dismissed. Students are to direct their full attention to lecture and are to refrain from unnecessary discourse. Behavior contrary to these guidelines is disruptive.

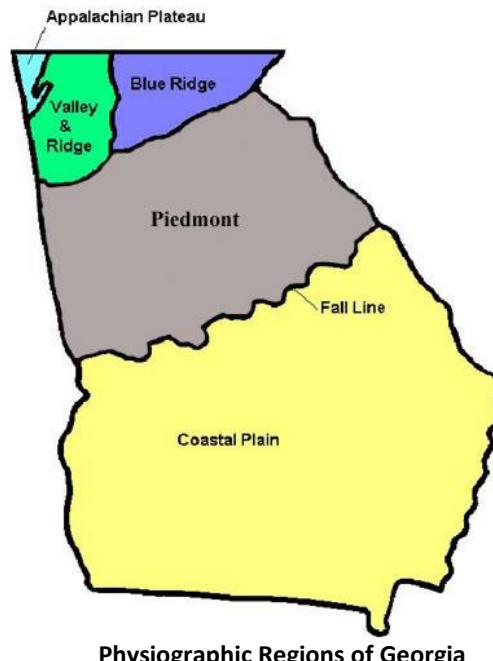
Academic integrity. Students are encouraged to work together and to learn from one another in an appropriate manner. Although cooperation between students is especially encouraged in study outside of class, so long as appropriate social distancing precautions are taken, students should bear in mind that most work ultimately must be done individually and independently.

All examinations and tests are given to students individually and are to be completed independently. Cooperation by students on tests or examinations is prohibited and constitutes cheating. Unless otherwise indicated, tests and examinations are taken strictly from memory without use of textbooks, notes, etc. Unless otherwise indicated, assignments and assessments are to be completed individually and independently. Behavior contrary to these guidelines is prohibited and constitutes cheating. Plagiarism and cheating will not be tolerated and will be prosecuted to the full extent allowed by University policy and the law.

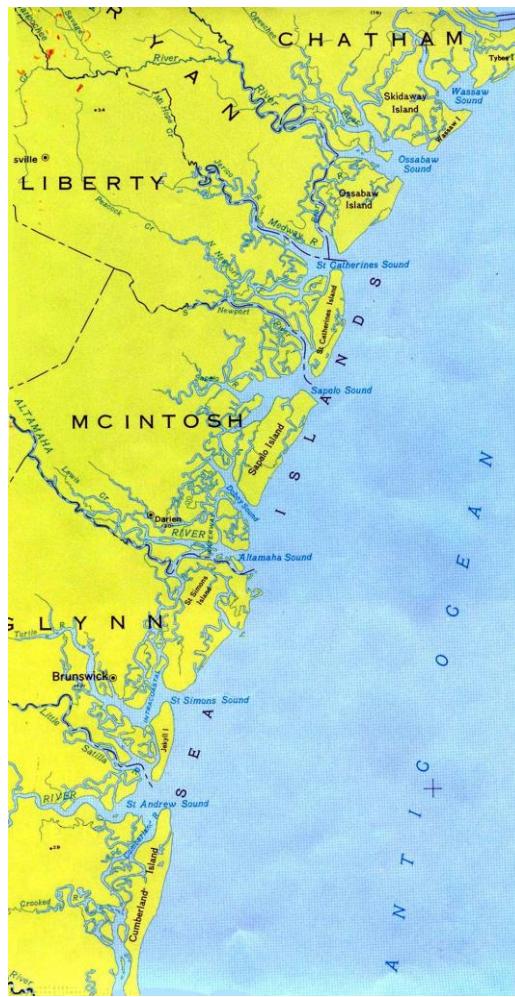
Students with disabilities. Students requiring classroom accommodations or modifications because of documented disabilities should discuss this need with their instructor at the beginning of the semester. Disabled students who are not registered with the Access Office for Students with Disabilities should contact the Access Office, Farber Hall-South, Telephone 229-245-2498 (V/VP), 229-219-1348 (TTY).

Graduate credit. At the beginning of the semester, graduate

students should discuss with the instructor additional course requirements for graduate credit.



Physiographic Regions of Georgia



Georgia's Coastal Barrier Islands

COURSE SCHEDULE WITH LIST OF MAJOR TOPICS**SPRING SEMESTER 2023**

Note: Reading and other assignments, PowerPoint lectures, eHandouts, and links to useful web sites can be found under Course Content in BlazeVIEW. Various special dates, including holidays, are shown in ***bold italics***, and field trips are underlined.

Week 1: 09 January

First Day of Class – Monday, January 09

Introduction

Preparation for Field Work: Biohazards in the Field
Identification, Classification, & Nomenclature
Structure & Terminology: Habit, Roots & Stems
Lab: Botany Lab (BC 2040)

Week 2: 16 January

Mon., 16 Jan. – Martin Luther King Holiday

Structure & Terminology: Stems, Leaves & Surface Features
Lab: Botany Lab (BC 2040) & VSU Campus

Week 3: 23 January

Structure & Terminology: Flowers & Inflorescences
Lab: Botany Lab (BC 2040)

Week 4: 30 January

Structure & Terminology: Fruits
Introduction to Plant Identification Using a Floristic Manual
The Herbarium & Floristic Botany
Voucher Specimens
Lab: Botany Lab (BC 2040)

Week 5: 06 February

Plant Family Survey: Pteridophytes & Gymnosperms
Lab: Botany Lab (BC 2040)

Week 6: 13 February

Plant Family Survey: ANA Grade & Magnoliids
Lab: Botany Lab (BC 2040)

Week 7: 20 February

Plant Family Survey: Eudicots
Lab: Field Trip to Wolf Creek Trout Lily Preserve

Week 8: 27 February

Plant Family Survey: Eudicots
Lab: Botany Lab (BC 2040)
Official Midterm Date – Thursday, March 02

Week 9: 06 March

Plant Family Survey: Eudicots
Lab: Botany Lab (BC 2040)

SPRING BREAK WEEK

Monday–Friday, March 13–17

Week 10: 20 March

Plant Family Survey: Eudicots
Lab: Botany Lab (BC 2040)

Week 11: 27 March

Plant Family Survey: Eudicots
Lab: Botany Lab (BC 2040)

Week 12: 03 April

Plant Family Survey: Monocots
Lab: Field Trip to Lake Louise Field Station

Week 13: 10 April

Plant Family Survey: Monocots
Lab: Botany Lab (BC 2040)

Week 14: 17 April

Plant Family Survey: Monocots
Lab: Botany Lab (BC 2040)
Sat., 22 Apr: Field Trip to Doerun Pitcher Plant Bog NA

Week 15: 24 April

Threatened & Endangered Flora
Non-Indigenous Flora
Lab: Botany Lab (BC 2040)

Week 16: 01 May

Last Day of Class – Monday, May 01
FINAL EXAMINATION – Tuesday, May 02, 10:15 AM–12:15 PM