### Biol 2061 021 Plant Form & Function (‘Botany’) Laboratory

**Spring 2024 Course Schedule**  
Dr. J. Van Kley ([jvankley@sfasu.edu](mailto:jvankley@sfasu.edu)); (936) 468-2068  
Thursdays 2:00-4:50pm (Sect. 21)  
Miller Science, Room 117

<table>
<thead>
<tr>
<th>Week (Th)</th>
<th>Laboratory Topic</th>
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<tbody>
<tr>
<td>Jan 18</td>
<td>Read syllabus, take Quiz 1 &amp; prepare for Lab 1</td>
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<tr>
<td>Jan 25</td>
<td>Course Introduction; Lab 1-The Plant Cell</td>
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<tr>
<td>Feb 01</td>
<td>Lab2 - Cells &amp; Tissues of the Plant Body</td>
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<td>Feb 08</td>
<td>Lab3- Cell Division &amp; Meristems</td>
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<td>Feb 15</td>
<td>Lab4- Root and Stem Form &amp; Function</td>
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<td>Feb 22</td>
<td>Lab5- Wood Anatomy</td>
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<td>Feb 29</td>
<td>Lab 6- Leaf Form &amp; Function</td>
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<td>Mar 07</td>
<td>Lab 7- Flower Form &amp; Function</td>
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<td>Mar 14</td>
<td><strong>Spring Break</strong></td>
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<td>Mar 21</td>
<td>Lab 8- Greenhouse Treasure Hunt: Using Plant Terminology</td>
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<td>Mar 28</td>
<td>No Lab, <strong>Easter Holidays</strong></td>
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<tr>
<td>Apr 04</td>
<td>Lab 9- Measuring Photosynthesis</td>
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<td>Apr 11</td>
<td>Lab 10- Spring Wildflowers of Nacogdoches: Using Keys to Identify Plants</td>
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<td>Apr 18</td>
<td>Lab 11- Plant Reproduction &amp; The Alternation of Generations Life Cycle</td>
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<td>Apr 25</td>
<td>Lab 12- Ecosystems: Observing Forest Vegetation Change</td>
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<td>May 02</td>
<td>Lab Amnesty Week</td>
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<td>May 06-10</td>
<td>Final Examination Week</td>
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Instructor: Dr. James Van Kley; Teaching Assistants: TBA

Email: jvankley@sfasu.edu (permanent) AND the D2L Brightspace email for this course.

Office Hours: T 12:30-4:00 pm, Th 12:30-2:00; Room 115 Miller Sci and Biology Greenhouse;
Phone: (JVK); (936) 468-2068; email: jvankley@sfasu.edu or the D2L BrightSpace email for our course.

Textbook and Lab Resources:

1) Lab Guide, digital Lab specimens, and Lab Worksheets, (Required): These will be provided (free!) in weekly installments through D2L Brightspace. ‘Loaner’ printed copies of the lab guide will be available in class. Have your copy open and available as you are doing the exercise; your Guide contains essential information and instructions that are not in the Specimens file or Worksheet. You are also strongly encouraged to bring a laptop to class so you can view online digital specimens that are posted in D2L.

2) Raven Evert & Eichhorn, 2013. The Biology of Plants, 8th edition: This textbook is required for Biol 2361 and we strongly recommend that you also use it as a companion for Biol 2061 lab. It contains numerous photo-micrographs and other visuals that will be very helpful -especially in the cells, tissues, and “Form ” labs. Several exercises refer to portions of this book.

Course Description: This course is the laboratory portion of Plant Form & function, an introduction to the fundamental principles of plant science or Botany. It is the required companion to Biol 2361, Worth 0 credit hours on it own, it contributes 1/3 of the grade to Biol 2361. You will receive the same posted grade for both Biol 2061 and Biol 2361. Typically students should expect to spend at least 4 hours per week on Botany lab activities out side of class.

This lab will provide you the opportunity to explore selected topics in plant biology in a more ‘hands on’, experiential, or in-depth way than can be presented in the lectures. During the course we will explore aspects of plant cells, tissues, external form, anatomy, physiology, reproduction, and ecology. Several investigations introduce data collection and hypothesis testing.

Laboratory Activities: Prior to coming to Lab, students must read and study the exercise (posted on D2L Brightspace) and take a pre-Lab quiz in D2L. A typical Wednesday or Thursday Lab session will begin with an introduction (‘pre-lab’) presentation and will continue with the first activity of the Lab exercise such as data collection or examining and drawing important plant structures. Upon completing the activity and turning in any required product, students will continue with the remainder of their weekly exercise. Bring your laptop or other device capable of accessing D2L or displaying downloaded copies of the Lab guide and lab Specimens. These will be needed to continue with your exercise (A limited number of hard copies of the Lab Guide will also be available). Teaching Assistants and/or myself will be standing by to answer any questions. Once completed you may turn your exercise in prior to leaving the Lab or or submit it in a digital form to the D2L Dropbox prior to a weekend deadline.

All exercises and activities (the lab Guide or Manual) will be posted on D2L Brightspace and each module includes the background information and instructions necessary to complete it an turn in the assignments. There is no need to purchase a lab manual or supplies. The activity for each given week is indicated in the course schedule and will also be announced in D2L news items.

• Weekly Quizzes: You are responsible for reading and understanding each exercise prior to coming to class and accordingly each lab is accompanied by a short quiz over the background information presented. The quiz will be on D2L and you must take the quiz for each week during a time-window that ends an hour before your scheduled lab time. Read and understand the lab material before taking the quiz; once started you will have a limited time for the quiz and if you need to look everything up you won’t finish! The quiz will count for 10% of a given week’s lab score. You will be allowed two attempts for the quiz with the highest score counted.

• Exercises: Once you take the quiz, do the exercise. Detailed instructions for each lab - what to do, what to turn in are provided in the Lab Guide for each exercise. A typical exercise begins with an activity that must be done during class time. You may finish the remainder of your assignment during scheduled lab time or at a later time but it must be turned in prior to the stated deadline. You must remain in the classroom for at least the first 2 hours of Lab unless you exercise is finished. Most students should be able to complete the entire exercise during the Lab period. Hardcopy submissions will only be accepted during the current Lab session; after that you must
submit electronically to a D2L Dropbox prior to the stated deadline. Teaching Assistants and/or myself will be standing by during the scheduled lab time to answer your questions and guide your activities. Your completed exercise (all components) will count for 90% of a given week’s lab score.

**Grading:** Each lab will consist of a 10 point pre-lab quiz taken before starting the lab activity and a 90 point exercise turned in as a result of that activity. There are 12 exercises total; the lowest lab grade will be dropped. Exercises and quizzes not turned in by their ‘due date’ (typically the weekend after the Lab) suffer a 10% penalty; those not done by their ‘end date’ can no longer be completed and result in a score of zero. There is also a pool of 100 ‘participation points’ (=one Lab grade). These will be lost by missed deadlines, and by missing quizzes, activities, & course engagement-checks, etc. (see attendance below). Students with class-median ‘misses’ will receive a participation score of 85%; and the best score(s) will = 100. Your score will be calculated relative to these. Beware: extremely poor participation may result in a negative score!

A final lab percentage will be calculated on the basis of the 1200 possible points as follows:
- 12 lab Scores (100 pts each) 1200 pts.
- Participation Score 100 pts.
- Dropped Lowest Lab Score -100 pts.
- Total 1200 pts.

Final Lab percentage score = total earned points /12

The **final course grade** will reflect both lab (Biol 2061) and lecture (Biol 2361) and will be computed as follow: **2/3 final lecture score + 1/3 final lab score = final course score**. Posted letter grades will be the same for both Biol 2061 and Biol 2361. The lecture instructor computes final scores and has the ‘final word’ in determining letter grades for the course. There will be no ‘extra credit’ allowed in this lab.

**Attendance:** Regular participation in the course and engagement with the content is essential to success in this course. I will be monitoring course engagement and assigning ‘absences’ for missed activities and participation milestones. These will include 1) missing lab sessions (2 ‘absences’), 2) missing the deadline for a lab quiz (1 ‘absence’), 3) missing the deadline for turning in an assignment (1 ‘absence’; incomplete assignments also constitute a ‘miss’ for attendance purposes), 4) failing to take a quiz or to turn in an assignment at all and missing its ‘end-date’ (1 absence per ‘miss’). Thus each quiz and each assignment can potentially trigger 2 absences, one for missing the deadline, one for never doing it). A typical week thus represents about 6 participation milestones, two for attending Lab, two for making both the quiz & exercise due dates and two for submitting both the quiz & exercise before their end date.

Missed labs, quizzes, or assignments are considered ‘excused absences’ and that may be made up only in the case of:
- **Sickness** - If you are sick you must notify me through email and provide a doctor’s note (email) upon return.
- **Family emergency or death** - If there is a family emergency or death in the family you will need to contact the Office of Student Rights and Responsibilities (room) 315 Rusk Building, (936)-468-2703 and request an absence notification be sent to your instructors.
- **School functions** - If you will be absent due to a school-related function notify me at least 24 hours in advance (or have the organization do so) and provide (email) a note from the relevant facility member, coach, etc.

Additionally, unexcused lab absences from the classroom sessions equivalent to missing 3 weeks of lab constitute (at my discretion on a case-by-case basis) grounds for failure of the course (lab+lecture).

**Course evaluations:** Student evaluations help us improve courses; participation in the anonymous on-line course evaluation at the end of the term is required. Students who do not participate may receive a 1% deduction from their final score.

**Student Learning Outcomes for Biol 2061:**
SLO 1- Students will be able to gather and analyze data. Links to Core Objective 3.
SLO 2- Students will communicate complex data visually by making graphs or other visual presentations of data Links to Core Objective 2.
SLO 3- Students will be able use scientific terminology to describe and measure stem, leaf, flower, inflorescence, and fruit features of plant specimens. Links to Core Objectives 1, and 3.
SLO 4- Students will work together as teams to gather data and perform experiments. Links to Core Objective 4.

**Program Learning Outcomes for Bio 2061:** Each student learning outcome listed above corresponds to the Biology Department PLO 1- ‘to develop knowledge of biological concepts’.

**Texas Core Curriculum Objectives for Biology 2061:** The Texas Higher Education Coordinating Board has identified six core learning objectives: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. SFA is committed to the improvement of its general education core curriculum by regular assessment of student performance on these six objectives.
By enrolling in Biol 2361 you are also enrolling in a Core Curriculum Course that addresses some of the Texas State Core Curriculum Objectives (COs) below: All 12 exercises in this course (Biol 2061) relate to CO1 & CO3.

**CO1-** Critical Thinking Skills. Includes creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.
**CO2-** Communication Skills. Includes effective development, interpretation and expression of ideas through written, oral, and visual communication.
**CO3-** Empirical and Quantitative Skills. Includes analysis of numerical data or observable facts resulting in informed conclusions.
**CO4-** Teamwork. The ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

**Miscellaneous**

*Academic Integrity (See policy 10.4 and The University of Texas System Rules & Board of Regents’ Rule: 50101).*

Any student who commits an act of academic dishonesty in this class is subject to discipline which may include failing the course. Suspected students will be referred to the appropriate administrative authorities. The Dean of Students has primary authority and responsibility for the administration of the University process for students alleged to have engaged in conduct that violates this Policy.

Academic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person without giving sufficient credit, taking an examination for another person, or any act designed to give unfair advantage to a Student or the attempt to commit such acts.

**a. Cheating** is the following or attempt to do the following:
1. Copying from the test paper (or other assignment) of another Student, engaging in written, oral, or any other means of communication with another Student during a test, or giving aid to or seeking aid from another person during a test or on another assignment where doing so is prohibited by the Faculty member;
2. Possession and/or use during a test of materials which are not authorized by the person giving the test, such as class notes, calculators, electronic devices, books, or specifically designed “crib notes”;
3. Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters, but which will be used again either in whole or in part, without permission of the Faculty member; or accessing a test bank without Faculty permission;
4. Substituting for another person, or permitting another person to substitute for one’s self, to take a test;
5. Falsifying research data, laboratory reports, and/or other records or academic work offered for credit;
6. Using any sort of unauthorized resources or technology in completion of educational activities.)

**b. Plagiarism** is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

**c. Collusion** is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

**d. Misrepresenting facts for academic advantage to the University or an agent of the University.** This includes providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual; and providing false or misleading information in an effort to injure another Student academically or financially.

**Withheld Grades Semester Grades Policy (5.5)**
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the coursework because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course to compute the grade point average. For additional information, go to https://www.sfasu.edu/policies/course-grades-5.5.pdf.
**Students with Disabilities**
To obtain disability-related accommodations, alternate formats, and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004(TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services promptly may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

**Acceptable Student Behavior**
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

**Student Wellness and Well-Being**
SFA values students' overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:
The Dean of Students Office (Rusk Building, 3rd floor lobby) www.sfasu.edu/deanofstudents
936.468.7249 dos@sfasu.edu

SFA Human Services Counseling Clinic Human Services, Room 202 www.sfasu.edu/humanservices/139.asp 936.468.1041
The Health and Wellness Hub “The Hub” Location: corner of E. College and Raguet St.
To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:
• Health Services
Updated: February 2023
• Counseling Services• Student Outreach and Support• Food Pantry• Wellness Coaching• Alcohol and Other Drug Education
www.sfasu.edu/thehub
936.468.4008 thehub@sfasu.edu

Crisis Resources:
• Burke 24-hour crisis line: 1.800.392.8343
• National Suicide Crisis Prevention: 9-8-8
• Suicide Prevention Lifeline: 1.800.273.TALK (8255) • johCrisis Text Line: Text HELLO to 741-741

**Educator Certification**
This course meets educator preparation standards for one or more certification programs; a complete listing of all the educator preparation standards this course meets can be found at: https://sfasu.edu/docs/jacksteach/jacksteach-standards-alignment-chart.xlsx

**Masks & COVID19 Precautions**
COVID19 has not disappeared although vaccines and prior infections have resulted in many cases being milder than during the pandemic. Those who are at high risk (unvaccinated, immunocompromised, with underlying health conditions, etc.), or are concerned about getting COVID are strongly urged to wear masks in class or office meetings. If you are not already, get vaccinated and boosted. The vaccines are effective: the current vaccines (with boosters) are highly protective against hospitalization with severe COVID! Don’t be fooled by reports that COVID cases resulting from the current variants are not as serious as those of earlier strains: This is not true; recent cases have tended to be milder only due to vaccination or to previous COVID exposure!