

BIOLOGY 1411(4:3:3)

GENERAL BOTANY

BIOLOGY

Division of Arts & Sciences

South Plains College

Fall 2017

Iris W. Keeling

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Office Hours

MTWR 8:00-9:30

F 8:30-10:30

General Course Syllabus

Department: Biology

Discipline: Botany

Course Number: BIOL 1411

Course Title: General Botany

Credit: (4:3:3)

Satisfies a core curriculum requirement: Yes – Lab Science

Core Objectives addressed:

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

Prerequisites: TSI compliance in Reading

Available Formats: Conventional classroom and Online with Conventional Lab classroom

Campuses: Levelland Only

Textbook: STERN'S Introductory Plant Biology, 13th edition, Bidlack Jansky

Lab Manual: Published by individual SPC instructors

Supplies : See instructor Course Information sheet

Course Specific Instructions: Each instructor will attach his/her Course Information sheet

Course Description: Study of structure and function of plant cells, tissues, and organs. Includes an evolutionary survey and life histories of the following representative groups: algae, fungi, mosses, liverworts, ferns, and seed producing organisms. Plant reproductive and functional interaction with their environment and with humans. Selected laboratory exercises.

Course Purpose:

- A. To meet the requirements for an Associate of Arts or Associate of Science degrees.
- B. To meet the requirements for transfer students working towards a Bachelor of Arts or Science degrees.
- C. To provide students with a basic understanding of living systems, using plant biology.

Course Requirements: To maximize the potential to complete this course, a student should attend all class and laboratory meetings, complete all assignments and examinations including final projects and/or examinations.

Course Evaluation: See instructor Course Information sheet for specific items used in evaluating student performance.

Attendance Policy: See instructor Course Information sheet for specific attendance criteria.

Student Learning Outcomes/Competencies - Lecture

Upon successful completion of this course, students will:

1. Compare and contrast the structures, reproduction, and characteristics of plants, algae, and fungi.
2. Describe the characteristics of life and the basic properties of substances needed for life.
3. Identify the principles of inheritance and solve classical genetic problems.
4. Describe phylogenetic relationships and classification schemes.
WAAR 8.20.2012
5. Identify the major phyla of life with an emphasis on plants, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
6. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
7. Identify the substrates, products, and important chemical pathways in photosynthesis and respiration.
8. Describe the unity and diversity of plants and the evidence for evolution through natural selection.
9. Compare different sexual and asexual life cycles noting their adaptive advantages.
10. Describe the reasoning processes applied to scientific investigations and thinking.

Student Learning Outcomes/Competencies - Lab

Upon successful completion of this laboratory-based course, students will:

1. Be able to apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of investigations.
4. Compare and contrast the structures, reproduction, and characteristics of plants, algae, and fungi.
5. Describe the characteristics of life and the basic properties of substances needed for life.
6. Identify the principles of inheritance and solve classical genetic problems.
7. Describe phylogenetic relationships and classification schemes.
8. Identify the major phyla of life with an emphasis on plants, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
9. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
10. Identify the substrates, products, and important chemical pathways in photosynthesis and respiration.
11. Describe the unity and diversity of plants and the evidence for evolution through natural selection.
12. Compare different sexual and asexual life cycles noting their adaptive advantages.
13. Describe the reasoning processes applied to scientific investigations and thinking.

**Botany Sections 01, 02, 03
Fall 2017**

| | | | |
|------------------------|--------------------------|----------------------|--|
| Instructor: | Iris W. Keeling | Classroom: | S-188 |
| Office: | Science Bldg. S-182 | Labroom: | S-192 |
| Phone: | Office 716 – 2309 | Cell | 806-786-5738 |
| Class Schedule: | MW 9:30-12:00 | E-Mail | ikeeling@southplainscollege.edu |
| | MW 1:00- 3:30 | Office hours: | MTWR 8:00 - 9:30 |
| | TR 9:30-12:00 | | F 8:30 – 10:30 |

Required Materials: 1. **Lab book: *Required!! Must buy at the Bookstore!!!! Will need code for Connect***
2. **Text:** Stern's Introductory Plant Biology, 13th edition Bidlack-Jansky reduced version paperback:
McGraw-Hill Publishers (in bookstore)
OR online at www.coursesmart.com (search for Stern) ISBN # will be 978-0-07-336944-0

FINAL EXAMINATION: Section 01 Dec 11 (Monday) From 10:15 A.M. - 12:15 P.M. *****
Section 02 Dec 11 (Monday) From 1:00 P.M. - 3:00 P.M. *****
Section 03 Dec 12 (Tuesday) From 10:15 A.M. - 12:15 P.M. *****

***** Used Lab time to schedule Final exam

Policies, Procedures and Rules: This course will be conducted according to the policies and procedures of the South Plains College Student Handbook and General Catalog.

Attendance policy: Attendance policy: Punctual and regular class and lab attendance is required. Attendance is taken every day by students checking in with quizdom in lecture, in lab by completed lab work. If you are not checked in you will be counted absent. A student with **5 absences** can be dropped from the class (**missing lecture and lab on the same day will constitute 2 absences**). Being allowed to stay in the class is totally at the discretion of the Instructor. Informing the instructor why there was an absence is appreciated but does not change the fact that you are absent. To contact the Instructor use the phone number or e-mail listed above.

ABSENCES: You must check in every day. Checking in and leaving or checking in for someone else is not allowed and is considered under the same guidelines as cheating.

It is your responsibility to take care of the paperwork necessary to withdraw from the class if you decided to drop. Any student that has not been attending class based on the above guidelines may be dropped by the discretion of the instructor and assigned a grade based on their grade average at that time. If a student is still on the roll (has not dropped but is not attending classes) when final averages are due, will receive an **F** in the course.

Academic Integrity: It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his own work, that which he has not honestly performed is regarded by the faculty and administration as a most serious offense. Likewise lying, cheating and stealing will not be tolerated. The result of this behavior will result in immediate withdrawal of the student from this class.

Behavior: A high standard of conduct is expected of all students. It is assumed that obedience to the law, respect for authority, personal honor, integrity and common sense will guide the actions of each member of this class. Any student who fails to perform to the expected standards or exhibits behavior that is disruptive, inappropriate or demeaning to other students and/or the instructor will not be tolerated. The result of this behavior may result in immediate withdrawal of the student from this class.

Any cell phones or other electronic devices must be put up and turned off in this class. Non compliance with this policy in class will result in 5 points being deducted from student's exam grades. No notification of deductions will be given to you.

Lab grades & Quizzes: Work sheets over lab and lecture material will be given throughout the semester. You are graded every day for work performed. Possible exceptions are school related absences these will be evaluated on a case by case basis. The decision rests solely with the instructor. Leaving class will be considered an absence. 2 lab/quiz grades will be dropped. **(excluding the Greenhouse quiz grade which cannot be dropped)**. Quizzes will also be given almost every day during the semester unless there is an exam that day. **(You will not be reminded.)** The quizzes will be given at the beginning of class. You will have 10 minutes or less to complete them. If you are late, even though quizdom is still running, you will not be allowed to count the grade for this quiz and you will receive a 0. **No excuses are acceptable.** The average of these grades (lab and quizzes) will count as 15% of your final average.

Greenhouse Quiz: There will be a quiz over knowing the names of plants in the greenhouse. The day of this quiz is listed on your Tentative Schedule for This Class. **This grade cannot be dropped.**

Major Exams: There will be four major exams given this semester that will cover lab and lecture material. The final exam is 1 of the 4 major exams. The final exam (#4) **will not be comprehensive.** However, students must take the Final Exam. Any student that does not take the final exam will earn an **F** for their grade for this course, unless they qualify for an exemption.

EXAM AND QUIZ PAPERS: Must be turned in when you are finished taking the exam or quiz. If your paper is not turned in even though it is recorded on quizdom you will receive a 0 (zero) for that assignment.

Grade Average and Make-up policy: No make up lab, quiz or exams will be given. If you must miss an exam due to extreme circumstances, such as a serious illness, death of an immediate family member, or official school business, the option of a **comprehensive exam** may be taken to replace the missed exam. In circumstances where you know ahead of time that you will be absent you must make arrangements with me prior to the test to be allowed to take it at a different time again **this option is solely the discretion of the instructor.** In all extenuating circumstances **verification must be provided** by the student. If not, exceptions will not be considered.

Handouts will be available on the South Plains College Website through the Blackboard program.

Extra assignments will not be given to replace or improve your final average. However there will be opportunities available to earn extra credit points to improve an exam grade.

Missed material will be available during the week it is covered for you to answer questions over this information, should you miss the lab. However it may not be turned in for a grade.

Extra Credit: For each major exam there will be an opportunity to earn up to **5 points** that can be added to exam grades. The assignments and due dates will be given at the beginning of the semester.

Connect Assignments: Are optional and only available to you if you choose to purchase the access code to the McGraw Hill web site. There will be **2 points** given per section of material for completing all assignments in that section. If a student completes all 4 sections they will earn an additional **2 points** making it possible to earn a total of **10 points** for this optional assignment for the semester.

It will be the responsibility of the student to do the work and be tested by the assigned due date. **It is not the responsibility of the instructor to remind you to do the work.**

Grading policy:

| Grade Type | Percentage of Grade |
|--------------------|---------------------|
| Major Exams | 80% |
| Quizzes/lab grades | 15% |
| Greenhouse Quiz | 5% |

90-100A
80- 89B
70- 79C
60- 69D
< 59F

Example: A grade of 89.45 will be rounded up to a 90; however, a grade of 89.44 will not.

Grades will not be curved. The last day to drop a course is **April 27.**

Students for me to even consider any exceptions to your final grade average you must have completed all the extra credit assignments, have no more than 2 absences and exhibited a work ethic and attitude conducive to a successful outcome in this class.

Lab Safety: It is assumed that all students will handle the equipment used in this course properly. It is also of utmost importance that safe lab techniques and good judgment are used when working with lab partners and the materials that are used in labs.

Disabilities: ADA Statement

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) & Lubbock Center 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Peer Tutors: The Student Assistance Center provides, free of charge to SPC students, tutors for most classes that are offered at SPC. To arrange for tutoring call the Center 894-9611 Ext.2241 or go by the center located on the third floor of the library. For this Class check with the Instructor.

Final Exam Exemptions:

-No absences for the Semester*

-Must Pass the Greenhouse Quiz with a 70 or above **

1. To be exempt with an **A** average.

A. you must do the following

1. pass all lecture and lab quizzes in the last section of material**

2. To be exempt with a **B** average

A. you must do the following

1. work through the prepared Lab Review materials that will be available in the Lab prep room,***

2. this work must comply with the rules listed in the extra credit assignment

3. the work must be done individually by each person in the lab prep room,

3. To be exempt with **C** average

A. you must do the following

1. Have completed all of the extra credit assignments

2. All exams must be a C or above

3. work through the prepared Lab Review materials that will be available in the Lab prep room,***

4. this work must comply with the rules listed in the extra credit assignment

5. the work must be done individually by each person in the lab prep room,

***/** Extenuating circumstances may allow exceptions to these 2 requirements but will be solely the decision of the instructor.**

*****Anyone caught copying off another student while working on the lab review will not be exempt from the final.**

Note: the lab work also counts as the last Extra Credit assignment. So if you complete this assignment it could also possibly raise your average a letter grade.

Note: If the student is not participating and performing work in class to meet the expectations of the class requirements and/or the student has any absences during the last 3 weeks of the semester this exemption will no longer be available to you. (Unless there are extenuating circumstances.) In this case verification must be provided, and the final decision as to whether or not the student is exempt is that of the Instructor.

Botany 1411, Tentative Schedule Fall 2017

| Date | Lecture Topic |
|---------|---|
| Week 1 | General Biology, Plant & Seed Structure, Mitosis, Survey of Domains Bacteria, Archea, & Eukarya, |
| Week 2 | Plasma Membrane, Osmosis |
| Week 3 | Plant Cell Structure & Function |
| Week 4 | EXAM #1 SEPTEMBER 20th & 21st |
| Week 5 | Plant Morphology & Anatomy of Stems |
| Week 5 | GREENHOUSE QUIZ SEPTEMBER 27th & 28th |
| Week 6 | Plant Morphology & Anatomy of Roots |
| Week 7 | Morphology & Anatomy of Leaves (Fall Break October 14 th) |
| Week 8 | EXAM #2 OCTOBER 18th & 19th |
| Week 9 | Flower Morphology, Plant Classification |
| Week 10 | Meiosis, Sexual Reproduction of Seed Plants |
| Week 11 | Fruits & Seed Dispersal, |
| Week 12 | Seed dormancy & Longevity |
| Week 12 | EXAM #3 November 15th & 16th |
| Week 13 | Kingdom Plantae: Phylum; Bryophyta, Ecology (Thanksgiving Holiday November 23 rd & 27 th) |
| Week 14 | Kingdom Plantae: Phylums; Psilophyta, Lycophyta, Equisetophyta, Polypodiophyta, Ecology |
| Week 15 | Kingdom Plantae: Phylums; Gingophyta, Cycadophyta, Gnetophyta, Pinophyta, Magnoliophyta, Ecology |
| Week 16 | 9:30 MW CLASS FINAL EXAM DEC 11TH 10:15-12:15**** **** used Lab time to schedule this exam 11-12:15 |
| Week 16 | 1:00 MW CLASS FINAL EXAM DEC 11TH 1:00-3:00 **** used Lab time to schedule this exam 2:30-3:45 |
| Week 16 | 9:30 TR CLASS FINAL EXAM DEC 12TH 10:15-12:15**** **** used Lab time to schedule this exam 11-12:15 |

Extra Credit Assignments - Fall

1. All extra credit assignments have specific due dates. After the assigned due date, extra credit **will not, under any circumstances** be given to a student.
2. It is the responsibility of the student to come in on their own and make arrangements with the instructor to do the necessary work to earn the extra credit points.
3. There will be **4** extra credit projects. Each project is worth up to **5 points** that will be recorded as exam points.

Extra Credit Project #1 Due date September 27th/28th (the day you take the GH Exam)

You will need to write the name of each of the plants on the list, then look at it in the greenhouse/power point, draw it and write a description of its identifying characteristics. This is worth a maximum of 4 points. If you complete the drawing assignment and make a **90** or above on the Greenhouse exam on you will receive 1 additional point for a possible total of 5 points. **If you do not make a 70 or above on the Greenhouse Exam you will not receive any extra credit.**

Extra credit project #2 Final due date October 18/19th (By the end of your exam time)

A video on pruning will be put on reserve in the library. It will be available to you anytime by checking the video out at the front desk. To earn your extra points

1. Watch the video and answer all the questions on the handout.
2. Know the information required on the handout.
3. Make an appointment with the instructor to **take a test** over the information on the handout.
4. Turn in the completed information sheet at the time of the appointment/**TEST**.

If any of these items are not completed, points will not be given. If the pruning techniques are not explained satisfactorily (as determined by the instructor) points will be deducted from the total 5 possible points.

Extra Credit Project #3 Due date November 20/21st (between your Lec/Lab time)

Campus Plants The instructor will show you actual campus plants & slides of different plants used for landscaping on the SPC campus in class. The class will take a tour of campus to see these plants. A power point presentation will also be available on the Instructor's MySPC Web page.

To receive the extra credit you will be shown slides of 5 different plants. You will not be able to use a word bank. **They must be ID'ed & spelled correctly.** You can take the test over the slides any time after they are shown in class until the due date. 1 point for each plant ID'd from the slides & spelled correctly for a possible total of 5points. You will be tested over these on your final exam.

Extra Credit Project #4 Due Dec 7/8th

Lab Review There are 4 sections to this review. **You must complete all 4 sections on time to receive credit.**

No Credit will be given unless all 4 section are completed. The work must be done individually, not as a group. Getting answers from another student is considered cheating. If any student if caught in this situation:

1. **No credit will be given for the assignment.**
2. **The exemption option if applicable will be withdrawn.**
3. **Punishment for cheating will be invoked.**

To receive the 5 points on the assignment 90% of the answers must be correct.

No Credit will be given if all 4 sections have not been completed.

Note: If you qualify, this assignment must also be completed correctly to be exempt from the final and it will also give you 5 extra credit points.

CONTRACT
BIOL1411- 01, 02, 03

I, _____, understand that if I miss an exam, I will not
(please print your name)
be allowed to take it at a later date and will receive a zero for my grade on
that exam. To complete this course I must take the Final Exam. If I do not
I will earn an F for the semester. Only in extreme circumstances will I be
allowed to take a comprehensive final exam that would replace a zero (0)
I received on a missed exam. I understand that the decision as to whether
or not I will be able to take the comprehensive exam rests solely with the
instructor. In all cases I understand it is my responsibility to contact the
instructor to make any possible arrangements concerning missing an exam.
I also understand the daily grading policy; that being tardy for a quiz will
result in a zero, and an absence for any reason will also be recorded as a
zero for any work that is missed.

Your Signature

I, _____, understand the grading, attendance, electronic devices,
(please print your name)
tardy and behavior policies as explained in the Course Information for Biol 1411-01-02-
03. I understand that if I have excessive absences or inappropriate behavior as
described by this policy I can be dropped from this class and/or receive a **F as
my final grade** for absences after the final drop date. I understand that cheating
WILL NOT BE TOLERATED.

Your Signature

Student Information

Full Legal Name _____
 First Middle Last

Name you prefer to go by if different than your first: _____

Permanent Home Address _____
 Street City State Zip

Permanent Home Ph _____ cell phone/telephone at SPC _____

Major _____ Name of High School _____

Do you work? _____ How may hours per week? _____

Do you have any health conditions that your instructor should be made aware of?

Please explain: _____

Do you have a ~~disability~~ which requires special educational strategies or techniques?

Please explain: _____

LEARNING DISABILITIES MUST BE VERIFIED BY SPECIAL SERVICES.

Please fill in your class schedule below.

| Schedule: | MWF | Instructor | TR | Instructor |
|-----------|-------|------------|-------|------------|
| 8:00 | _____ | _____ | 8:00 | _____ |
| 9:30 | _____ | _____ | 9:30 | _____ |
| 11:00 | _____ | _____ | 11:00 | _____ |
| 1:00 | _____ | _____ | 1:00 | _____ |
| 2:30 | _____ | _____ | 2:30 | _____ |
| 4:00 | _____ | _____ | 4:00 | _____ |
| 5:30 | _____ | _____ | 5:30 | _____ |