

**BIO10: Introduction to Principles of Biology (sections 8811 & 8892)**  
**Santa Rosa Junior College – Petaluma Campus**  
**Summer 2018**

**Lecture for both sections:** PC 639; MTuWTh, 9:00 – 10:55 a.m.

**Lab Section 8811:** PC 313; MW, 11:30 – 2:30 p.m.

**Lab Section 8892:** PC 313; TuTh, 11:30 – 2:30 p.m.

**Instructor:** Dr. Kristylea Ojeda

**Office:** PC 683

**Office Hours:** MTuWTh, 2:30 p.m. – 3:00 p.m. or by appointment

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**Science Lab Instructional Assistant:** Danielle DeFever

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**Profile and BIO10 Review Materials:** <https://profiles.santarosa.edu/danielle-defever>

**Course Description:** This is an introductory course intended to introduce students to basic topics in biology including: scientific method, chemistry of life, cell and molecular biology, genetics, evolution, biodiversity, ecology, and physiology and anatomy.

**Prerequisites:** Completion of MATH150A or higher, and ENGL100B or higher.

**Required Materials:**

1. Jay Phelan. 2018. **What is Life? A Guide to Biology with Physiology (4<sup>th</sup> ed.)**. (While the page numbering will be different, the 2<sup>nd</sup> and 3<sup>rd</sup> editions of the textbook are also fine.)
2. **Biology 10 Laboratory Manual** - Petaluma Campus.
3. Four (4) Scantron sheets (50 question) for the four lecture exams.

**Reserved Material:** The 4<sup>th</sup> edition of the textbook is available on reserve at the Petaluma campus library.

**Course Objectives:** Upon successful completion of this course, students will be able to:

1. Apply the scientific method to investigating and evaluating biological phenomena.
2. Summarize the concept of evolution including the historical development, evidence and mechanisms, and apply these to patterns of biodiversity.
3. Integrate basic principles as they apply to biological systems, such as cellular processes, anatomy, physiology, genetics, ecology, and evolution.
4. Investigate how humans are impacted by ecological processes and relationships and how humans affect these.
5. Perform laboratory techniques, including microscopy, with a high level of expertise without assistance or instruction.

**Important Dates:**

1. The last day to drop and receive a refund is June 21<sup>st</sup>, 2018.
2. The last day to drop without any type of grade is June 27<sup>th</sup>, 2018.
3. The last day to drop with a grade of “W” is July 29<sup>th</sup>, 2018.

**Accommodations for Students with Disabilities:** If you need disability related accommodations for this class, please provide the Authorization for Academic Accommodations (AAA letter) from the Disability Resources Department (DRD) to the instructor as soon as possible. If you have not received authorization from DRD, please contact them directly. DRD is located in Analy Village on the Santa Rosa campus, and Jacobs Hall on the Petaluma Campus.

**Academic Honesty:** SRJC is an academic community. Students, faculty members, administrators, and staff are expected to adopt standards of behavior that place a high value on respecting the ideas of others. All intellectual accomplishments — examinations, papers, lectures, experiments, and other projects — should adhere to the highest standards of academic integrity and ethics. **Students should avoid academic dishonesty in all of its forms, including plagiarism, cheating, and other forms of academic misconduct – all submitted work MUST be your own. Students found cheating or students found assisting others in cheating will receive zero credit on that exam/assignment and further disciplinary action may be pursued.** Any breach of academic integrity will be reported to the college. Review the complete SRJC Academic Integrity at the following link: <https://www.santarosa.edu/polman/3acadpro/3.11P.pdf>

**Emergency Evacuation Plan:** Dial 527-1000 from a cell phone or 1000 from any campus phone.

1. **Evacuation/Fire Alarm Sounding:** In the event of an emergency that requires evacuation of the building, please leave the class immediately, but calmly. Our class will **meet in the Rotary Plaza** to ensure everyone got out of the building safely and to receive further instructions. If you are a student with a disability who may need assistance in an evacuation, please see me during my office hours to discuss an evacuation plan. **DO NOT LEAVE** the designated area before you have been accounted for.
2. **Earthquakes:** Take shelter under a desk, table, or doorframe to protect yourself. Once the shaking stops – if there is damage – collect your belongings and evacuate the area. Again, we will meet in the Rotary Plaza, and I will take roll.
3. **Power Outage:** If there is a power outage for 10 minutes, we will evacuate the building and meet at a pre-determined area. At that point we will attempt to locate another classroom with power to resume class.

**Grading:** Student learning will be assessed based on performance of students on (1) four lecture exams, (2) three lab exams, (3) weekly homework assignments, (4) various lab quizzes and activities, and (5) daily attendance and participation in lecture and lab.

1. There will be four lecture exams (see course schedule for dates).
  - a. Each lecture exam is worth 100 points.
  - b. Lecture exam format will include multiple-choice, true-false, and matching questions.
  - c. **Scantron (50 questions) sheets ARE required for lecture exams.**
  - d. Students will not be allowed to leave the room, for any reason, during examination.
  - e. The exam material will be taken from lecture, assigned book readings, and in-class activities and discussions. Required reading assignments are provided and should be used as a reference for studying. However, material covered in the textbook and not in lecture will not appear on exams.
  - f. An unexcused absence from any exam will be recorded as a zero. **NO** make-up exams will be provided for unexcused absences.
  - g. Students that are absent from an exam for extenuating circumstances (incapacitating illness, incapacitating injury, or death in the family) **must receive official documentation** (i.e.: note from doctor) and **must contact the instructor prior to the next lecture** in order to make up the exam.
  - h. There will be **NO** opportunity to redo exams questions for a better grade.
2. There will be three lab exams (see course schedule for dates).
  - a. Each lecture exam is worth 100 points.
  - b. Students will not be allowed to leave the room, for any reason, during examination.
  - c. Lab exam format will be stations set up around the lab, with each station having objects or pictures about which questions will be asked.
  - d. The lab exam material will be taken from lab introductions, the lab manual, lab procedures, lab equipment, lab results, lab discussions and activities, and related lecture content.
  - e. Handwriting on exams must be legible. If I cannot read your answer, it is wrong.
  - f. Lab exams **CANNOT** be made up (regardless of excused or unexcused absences).
  - g. There will be **NO** opportunity to redo exams questions for a better grade.
3. There will be seven homework assignments.
  - a. Each homework is worth 14 or 15 points, and collectively will account for 100 points in your final grade (see grade summary below).
  - b. Homework format will be multiple-choice questions, and assignments will be accessed and completed on the course Canvas page.

- c. Students are expected to complete homework assignments **individually**.
- d. The topics for the homework questions each week will come from lecture material and assigned book readings for that given week.
- e. Each homework will be made available to students the Monday of each week and must be **completed AND submitted by 11:59 p.m. on the Sunday of each week**, except for the last week of class.

	Available to students on:	Must be submitted by 11:59 p.m. on:
Hmwk #1	Monday, 6/18	Sunday, 6/24
Hmwk #2	Monday, 6/25	Sunday, 7/1
Hmwk #3	Monday, 7/2	Sunday, 7/8
Hmwk #4	Monday, 7/9	Sunday, 7/15
Hmwk #5	Monday, 7/16	Sunday, 7/22
Hmwk #6	Monday, 7/23	Sunday, 7/29
Hmwk #7	Monday, 7/30	Sunday, 8/5

- f. **Late submissions will NOT be accepted, and there are no makeup homework assignments.**
- g. There will be **NO** opportunity to redo homework questions for a better grade.
- 4. There will be various lab quizzes and assignments.
  - a. Lab quizzes:
    - i. Quiz dates will be announced in lab, and quizzes will vary in point values.
    - ii. Quizzes will be administered in the **FIRST** 10 minutes of lab. There are **NO** makeup quizzes if a student is more than 5 minutes late to lab or is absent from lab.
    - iii. Students will not be allowed to leave the room, for any reason, during a quiz.
    - iv. An unexcused absence from any quiz will be recorded as a zero. **NO** make-up quizzes will be provided for unexcused absences.
    - v. Students that are absent from a quiz for extenuating circumstances (incapacitating illness, incapacitating injury, or death in the family) **must receive official documentation** (i.e.: note from doctor) and **must contact the instructor prior to the next class period** to make up the quiz.
    - vi. There will be **NO** opportunity to redo quiz questions for a better grade.
  - b. Lab assignments:
    - i. Details and due dates for assignments will be discussed, as necessary.
    - ii. Assignments will vary in point values.
    - iii. Late assignments will **NOT** be accepted.
    - iv. Assignments will only be accepted from students that attended and participated in the corresponding lab activity. **NO** make-up assignments will be provided.
    - v. There will be **NO** opportunity to redo assignments for a better grade.
- 5. Attendance, participation, and proper classroom etiquette is **required for each lecture and lab**.
  - a. Attendance:
    - i. There is a one-hour, fifty-minute lecture four days a week and a three-hour lab two days a week. **If you have more than three absences, you will be dropped from the course.**
    - ii. If you cannot attend lecture or lab due to illness or emergency, notify the instructor by email of your absence, preferably before the start of class but certainly **by the next class period**.
    - iii. If you miss a lab, **you will not be able to make up the lab activity or any assignment associated with that lab**. It is not the responsibility of the instructor, or your lab group, to help you catch up on missed work during class time. You must come see me in my office hours.
    - iv. **On-time attendance is mandatory**. Arriving late to class or leaving early will result in loss of points.
    - v. Important instructions are often given at the start of each lab. If you are late arriving, you will miss this information, and the instructor reserves the right to deny a student the ability of completing that lab and earning participation points for that lab.

- b. Participation:
  - i. During the laboratory activity, students will be working in small groups to complete the experiment. Active discussion is required among students during lab activities.
- c. Proper classroom etiquette:
  - i. **Turn OFF cell phones and keep in backpack/purse.** Use of cell phones or other electronic devices, including the use of headphones, is inappropriate during class and is distracting to other students. **Using a cell phone (calling or texting) will result in loss of points.** However, you may use your cell phone as a recording device, timer, and/or camera for documenting lab results.
  - ii. If you wish to use a laptop to take notes, do not use the internet or other programs in class. If this privilege is abused, laptops will not be allowed during class.
  - iii. If a student disrupts the learning environment or jeopardizes the safety of others in any way, the student will be asked to leave the class and will be subject to loss of participation points for that class and subject to further disciplinary action.
  - iv. Students will respect others at all times. Differences in ability, gender, race, ethnicity, religion, and sexual orientation will be embraced. Any disrespect will not be tolerated.
  - v. At the end of labs, all materials should be returned and disposed of properly and that you leave your bench/work area in the same condition as you found it at the beginning of lab.

**Grade Summary:** Final course grades will be based on your total number of points divided by the total number of points possible for the entire semester. The following is an approximate breakdown of points.

	Each	Total
4 Lecture Exams	100pts	400pts
3 Lab Exams	100pts	300pts
7 Weekly Homework Assignments	14-15pts	100pts
Lab Quizzes and Assignments	vary	~50pts
Attendance and Participation		100pts
<b>Total:</b>		<b>~950pts</b>

**Grading Scale:** Grades are determined on a straight grading scale.

A	100% - 90%	B	89.9% - 80%	C	79.9% - 70%	D	69.9% - 60%	F	< 59.9%
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#### Policies for Lectures:

1. Lecture slides and any supplemental readings, assignments, or materials will be provided on the course Canvas site, which can be accessed via the instructor's homepage or the section homepage.
2. Attend all lectures and arrive on time. Regular attendance is essential for doing well in this class.
3. Come prepared to class! This includes arriving on time and having **read the assigned text BEFORE each lecture (see course schedule)**. Because I will not be testing on material that is not cover in lecture, I recommend that you first skim the sections of the assigned reading before you come to class. Then, following the lecture read in detail those specific areas that were covered.
4. Take good notes. I do not provide students with notes or outlines of lecture material, nor do I provide study guides.
5. If you miss a lecture, either excused or unexcused, it is your responsibility to access the lecture slides on the course Canvas page, to get notes from someone that was in class, and to come to my office hours with questions.

#### Policies for Labs:

1. Attend all labs and arrive on time and be prepared to stay for the whole lab time - take the time to answer all lab questions completely and thoroughly.
2. Come prepared to lab! This includes arriving on time and having **read the lab procedure and the associated sections from the textbook BEFORE each lab (see course schedule)**.

3. Use the information from the reading and from lecture to fill in some of the answers in the lab manual prior to coming to lab.
4. Your textbook is not required for lab, but you may find it helpful to have with you.

#### **Additional Course Policies:**

1. It is the policy of the Biological Sciences Department not to return exams to students. Exams will be available for review after they are graded. If a student has any questions or concerns about a specific exam or grade, they must make an appointment to discuss the exam with the instructor within two weeks of the date the exam grades are made available.
2. If a student has any questions or concerns about a specific exam or grade, they must make an appointment to discuss it with the instructor **within two weeks** of the date the grade was made available. If you feel that a mistake has been made in the grading of an assignment or exam, a viable “regrade” will include the specific question(s), your “wrong” answer, and your argument for the “right” answer with support from lecture notes and/or the textbook. After that timeframe, your grade will remain as given.
3. After final course grades are submitted, students have two months to request an appointment to review any exams or assignments from the previous semester.
4. Students who choose not to continue in the course are responsible for turning in a drop card to the admissions office or online. Failure to officially drop the course may result in an “F”.

**Tips for Doing Well in this Class:** Many students find this class overwhelming, particularly as a summer course or for those who English is a second language. Although this is an introductory course, you will be asked to learn a great deal of vocabulary, concepts, and pathways. Here are a few tips for doing well in this course:

1. Attend all lectures and labs.
2. Come prepared to class by arriving on time and having done the assigned readings.
  - a. For Lecture Readings: Because I will not be testing on material that is not cover in lecture, I recommend that you first skim the sections of the assigned reading before you come to class. Then, following the lecture read in detail those specific areas that were covered.
  - b. For Lab Readings: Read the lab procedure and the associated sections from the textbook before each lab. Then, use the information from the readings and from lecture to fill in some of the answers in the lab manual prior to coming to lab. It will also be helpful to have your textbook in lab.
3. Establish good note-taking skills. Since the lecture slides are provided on Canvas, you **should NOT copy the text on each slide**. Rather, you should **paraphrase what the instructor is explaining about each slide**. Your notes may very well be sloppy so it is a good idea to **recopy your notes after each lecture**. As you recopy, make sure you understand the words and ideas. If you are still confused in a particular area, consult the textbook, lecture slides, and/or the instructor for clarification.
4. **Actively participate** in class and ask questions (in class and/or come to my office hours)!
5. Set aside time to read the book and **study every day!** For college classes, you are expected to dedicate 2-3 hours per week outside of class for every 1 hour spent in lecture. For BIO10 in the summer, that is about 16-24 hours each week - summer courses have a compact schedule and move quickly. It is easy to fall behind!
6. Come to my office hours.
7. Make flash cards for the vocabulary, and then practice with them often.
8. Do the practice problems in the textbook that are associated with the lecture material.
9. Form a study group with other students.
10. **DO NOT wait until the end of the semester to seek help!**

**Tentative Course Schedule (Summer 2018):**

Week:	Date:	Lecture Topic:	Lecture Reading:	Lab Topic (related reading):
1	Mon, 6/18	Introduction Scientific Thinking	Ch. 1.1-1.10	Basic Biological Concepts (Ch. 1.1-1.10)
	Tues, 6/19	Chemistry and Water	Ch. 2.1-2.6	
	Wed, 6/20	Macromolecules	Ch. 3	Properties of Water (Ch. 2.3-2.6; Ch. 4.8-4.9)
	Thurs, 6/21	Cell Structures and Functions	Ch. 4.1-4.12	
2	Mon, 6/25	Cell Structures and Functions cont.	Ch. 4.13-4.22	Enzymes (Ch. 3.12-3.14)
	Tues, 6/26	Energy: Photosynthesis	Ch. 5.1-5.10	
	Wed, 6/27	Energy: Cellular Respiration and Fermentation	Ch. 5.12-5.17	<b>Lab Exam #1 (Concepts, Water, Enzymes)</b>
	Thurs, 6/28	DNA Structure and Function	Ch. 3.15-3.17 Ch. 6.1-6.4	
3	Mon, 7/2	Gene Expression: Transcription and Translation	Ch. 6.5-6.11	Microscopes and Cells (Ch. 4)
	Tues, 7/3	<b>Lecture Exam #1 (through Fermentation)</b>		
	Wed, 7/4	<b>No lecture – July 4<sup>th</sup> Holiday</b>		<b>No lab – July 4<sup>th</sup> Holiday</b>
	Thurs, 7/5	Cell Division: Mitosis	Ch. 8.1-8.8	Open lab
4	Mon, 7/9	Cell Division: Meiosis	Ch. 8.9-8.17	Mitosis (Ch. 8.2-8.7)
	Tues, 7/10	Genetics and Inheritance	Ch. 9.1-9.13	
	Wed, 7/11	Evolution	Ch. 6.9-6.11 Ch. 10.1-10.8	Meiosis (Ch. 8.9-8.13) <b>* Microscope quiz (10pts)</b>
	Thurs, 7/12	Natural Selection and Evidence for Natural Selection	10.9-10.22	
5	Mon, 7/16	Speciation	Ch. 12	<b>Lab Exam #2 (Microscopes, Mitosis, Meiosis)</b>
	Tues, 7/17	Microbial Diversity: Bacteria, Archaea, Protists, and Viruses	Ch. 15	
	Wed, 7/18	Diversity of Plants and Fungi	Ch. 14	Genetics (Ch. 9.1-9.13)
	Thurs, 7/19	Plants: Structures and Functions	Ch. 19	
6	Mon, 7/23	<b>Lecture Exam #2 (DNA through Genetics)</b>		Evolution and Natural Selection (Ch. 10.5-10.13)
	Tues, 7/24	Plants: Growth and Reproduction	Ch. 20.1-20.16	
	Wed, 7/25	Introduction to Animals	Ch. 13.1, 3, 13 Ch. 21.1-21.6	Fungi Kingdom (Ch. 14.13-14.15)
	Thurs, 7/26	Animals: Circulatory and Respiratory Systems	Ch. 22.1-22.10 Ch. 22.12-22.17	
7	Mon, 7/30	Animals: Digestive System and Nutrition	Ch. 23.1-23.12	Plant Kingdom (Ch. 14.1-14.11; 19.1-19.14; 20.3-20.16)
	Tues, 7/31	Animals: Nervous System	Ch. 24.1-24.13	
	Wed, 8/1	<b>Lecture Exam #3 (Evolution through Plants)</b>		Animal Kingdom (Ch. 13.1-13.13; Ch. 22.1-22.4, 22.12; Ch. 23.1-23.2, 23.8-23.9)
	Thurs, 8/2	Population Ecology	Ch. 16	
8	Mon, 8/6	Ecosystem Ecology	Ch. 17.1-17.14	<b>Lab Exam #3 (Fungi, Plants, Animals)</b>
	Tues, 8/7	Biodiversity and Conservation	Ch. 18	
	Wed, 8/8	Review		Protist and Pond Water (Ch. 15.13-15.15)
	Thurs, 8/9	<b>Lecture Exam #4 (Animals through Conservation)</b>		<b>* Pond Water Drawing worksheet due (15 pts)</b>

**Disclaimer:** This syllabus is subject to modification. If changes occur, an amended syllabus will be provided.