

Biology 3000

**Team-
work**

DNA Fingerprinting

Relate

Climate
Change

KNOW

Discuss

News

**Current
Affairs**

Nutrition

Water

Global
Warming
**Critical
Thinking**
Food

Collaborate

Key Concepts

GMOs

Calories

Viruses

Biome

Inheritability

Ecology

Vaccines

Habitat

Cancer

Population Pressures

Bacteria

Antibiotics

Genetics

Ecosystem

Forensics

Pollution

Filter

CONVERSE

Learn

OFFICE HOURS

BIOL 3000: Frontiers in Biology

Spring 2020 Syllabus

LECTURE: Biology 3000 (Section 001) - (20187)

PLACE: Bizzini Hall 214

TIME: TuTh 3:30PM - 4:45PM

TEXTBOOK: *Biology: Science for Life* (5th edition) by Colleen Belk and Virginia Borden Maier (9780133897579) – buy or rent **Students need to purchase access to Mastering Biology for Belk - BIOLOGY:SCIENCE F/LIFE.-MASTERINGBIO.** (this is an access code that contains the e-book)
 ISBN#9780134819518. **You may do this via the bookstore or by calling the company – Pearson.**



BIOLOGY:SCIENCE F/LIFE W/PHYS.-W/ACCESS

REQUIRED | By BELK EDITION: 6TH 19 PUBLISHER: PEARSON ISBN: 9780134794679 <

This is for those who need a physical book with Access Code – Compulsory

Clicker App: A Reef app license is needed **if** you intend to elect for the attendance bonus – 5% bonus this semester – **Optional**

INSTRUCTOR: Dr. Kamal Dulai

Phone: 209 607 0304

Email: kdulai@csustan.edu

Office: N251

Office Hours: M 12:00pm-2:00pm; Also by appointment

All cell phones, pagers, or automatic watch alarms should be turned off before entering the classroom to prevent disruption.

Do NOT plan WEDDINGS/BIRTHDAYS/VACATIONS or other personal events during the semester, as you will not be permitted alternative assessment periods.

NO MIGRATION BETWEEN COURSE SECTIONS IS PERMITTED. POINTS ARE NOT TRANSFERABLE.

COURSE OBJECTIVES

Frontiers in Biology is structured to advance the basic knowledge of important and current hot topics in biology.

By the end of the course, the student should:

- Understand the key concepts of select biological systems
- Understand the biology behind current social and political topics
- Enhance critical thinking and problem-solving skills and the ability to effectively communicate and work with others.

COURSE GOALS

This class is designed for seniors, hence the 3000-level certification. At this level students are required to assimilate information and make informed decisions. Topics of current interest in biology shall be chosen by the instructor. The aim is to educate each student with enough knowledge to develop/conduct an informed opinion/discussion on the topics. Students shall be expected to comprehend the information presented and quickly form an opinion, seek clarification, and answer questions following each concept. This knowledge may then be applied beyond the classroom to engage in conversation and inform others.

COURSE ORGANIZATION

Frontiers in Biology is primarily a basic biology lecture course focusing on intercalating current affairs, presented as two 75-minute lectures each week. The purpose shall be to discuss and understand select topics of interest in Biology. Demonstrations will be used to illustrate principles, as applicable. The course content is modular in structure. Each topic shall be presented as a module. Team-work is essential.

The weekly lectures should be divided (in most cases) as follows;

First lecture: Student opinions. Presentation of material in the form of a lecture. Students should take notes and ask questions as necessary. Some support video or other multimedia presentation when possible.

Second lecture: Students break off into small groups and each group shall answer questions on the subject matter from the primary lecture. 20 minutes to 40 minutes, in the form of worksheets/activities. Conclude chapter understanding.

It is also recommended that students retain and consult this syllabus, visit the supporting web site (Blackboard), and read recommended materials. Each exam shall be **comprehensive** in that it will encompass material covered up until that point from the start of the course. Questions shall appear in the form of any of the following: multiple-choice, best answer, short and/or long answers.

POLICIES & PROCEDURES

Please carefully familiarize yourself with the policies below. It is assumed that you have read and understood them.

Course Scoring:

Assignment	Point Allocation	Total Points	% of Total Points
Midterm Exam	100 points	100	10%
Final Exam	200 points	200	20%
In-class Assignments	20 points each x many	Total 200	20%
Assignments - on Mastering	Various points x many	Total 300	30%
Homework – on Mastering	20 points x 10	Total 200	20%
	Total	1000	100%
Attendance & Participation Bonus Points*		30	3%

Letter Grades:

The final distribution of grades in BIOL 3000 is given below. Sorry, no exceptions shall be made!

Course Point Score	Letter Grade	Course Point Score	Letter Grade
88.00% to 100.00%	A	68.00% to 70.99%	C
85.00% to 87.99%	A-	65.00% to 67.99%	C-
81.00% to 84.99%	B+	61.00% to 64.99%	D+
78.00% to 80.99%	B	58.00% to 60.99%	D
75.00% to 77.99%	B-	55.00% to 57.99%	D-
71.00% to 74.99%	C+	0.00% to 54.99%	F

Information on grade appeals, incompletes, etc. can be found in the *CSUStan Grading Policy* available from the Registrar.

Quizzes:

Almost every week, students will be required to answer individual/group questions and submit these for grading either in-class or online. The questions shall pertain to the contents of the lecture that day or the previous lectures. **With any group activities, the entire group shall receive the same grade.**

BEWARE: A score of zero shall be awarded should you be absent or fail to submit as scheduled. **Leaving early, or arriving very late, without the consent of the instructor, constitutes a failure to submit work.**

Mid-term Exam:

A mid-exam will be given during the indicated lecture period (see timetable below). This shall consist of multiple-choice questions. Please bring with you a green Scantron (Form 882-E) with your name and student number correctly filled in, a pencil and your student ID. A simple calculator may also be required.

Exams are cumulative. You are expected to be familiar with the material covered in previous assessments, and shall be tested on it. Study guides are NOT offered – as all content is important!

Lecture Attendance

Students should attend all lectures. Attendance shall be taken automatically at the start of each lecture, and bonus points shall be awarded for attendance and participation (1 point/lecture). Please arrive on time or risk missing on this activity. If you leave the lecture before it concludes do not expect to be awarded these points! No further opportunity shall be afforded to regain these points. All who attend 80% of the lectures this semester, will earn the full 30 bonus points.

Team-based Learning:

At the beginning of the term, students shall be surveyed. Based on the analysis of this data, each student shall be placed in a team, whose members shall sit together, discuss

and work solutions, and provide consensus answers to select questions for the remainder of the semester. Each team shall comprise six members. It is imperative that you learn to cooperate in a positive manner with other team members. Learn to identify strengths in others and yourselves and use these to your advantage.

Bonus Points

During the semester occasions, may arise where the instructor may offer the entire class an opportunity to earn a limited number of bonus points. This activity, the number of bonus points, and periodicity is at the sole discretion of the course instructor.

Independent Study Groups

Although not mandatory, students are strongly encouraged to form large (6-15) member study groups, which should meet outside official course hours to tackle course material. Based on data from previous years, these study groups have provided an 18-point advantage on average. You are encouraged to meet with the lecturer early in the course and discuss your learning methodology.

Make-up exams will not be offered for any midterm assessments.

No make-up mid-term exam is offered under any circumstances. Students who miss the midterm will receive a zero for the entire exercise unless they provide documentation, within 7 days of their return, for one of the following acceptable excuses:

1. Incapacitating illness or accident -- requires a note from student's physician (not a family member) or from UC Merced Health Services.
2. Death or serious illness of an immediate family member—requires proper documentation.
3. State or federally accepted religious observance or an academic activity (you will be sent to the Office of Student Life to supply proof). This also must be acceptable to the instructor of record, and you must present your case well ahead of time.

Students with a documented excuse (only as above) shall receive a provisional grade on the midterm report based on their final exam score. Appropriate official written proof must be supplied in all cases to the instructor, either prior to the event or in any case within 7 days upon your return. Failure to do so will result in a zero score.

Final Exam

The final exam is comprehensive and shall test you across all materials. This exam shall be composed of 100 multiple choice questions.

No make-up of the final exam is permitted. MISSING THE FINAL EXAM IS A SERIOUS ISSUE. Students who miss the final exam shall receive a grade of "F" for the course. You will not be permitted an alternative exam schedule, and will fail the class. Students with an acceptable excuse (as provided in the list above), and if the student was achieving a passing grade (C- or better) in all course work up until the final exam, can arrange with the instructor for a process to remove the incomplete (I grade), that shall be awarded, from their records within the period stated by University policy.

Course Materials and Handouts:

In addition to the textbook and class handouts, computer and internet access shall be required for this class. For students who do not otherwise have access to a computer or the internet, computers **may** be available at several campus locations including the main

reading room in the library. Copies of the lecture PowerPoint's will also be available in Acrobat format (.pdf files) at the BIOL 3000 BLACKBOARD site after the lecture has taken place.

Homework and Revision:

Plan to devote approximately 3 hours per lecture hour, on average. This does not include classroom time. So, for each approximately 60-minute lecture time, you should spend 4 quality revision hours!

Electronic Aids:

The use of electronic devices is prohibited during exams and assessments. The only exception shall be simple calculators, which must be declared and checked by the staff prior to use. No cell phones (or cell phone calculators), no iPads, or any other electronic devices are permitted. Leave all cell phones in your bags during examinations and tests (best not to bring them for security reasons). **Turn any ringers off!**

During other periods, please prevent your electronic devices from interfering with instruction. If you must take a phone call, please have the courtesy to step out. The use of electronic aids to circumvent the spirit of any assessment is a very serious violation of policy, and is not permitted.

Regrade policy:

Regrade requests will only be accepted within **one week (7 days)** from the date a scored assessment is returned. For each question requiring attention, you must submit a written explanation describing why you believe your response should be reevaluated. Please know we reserve the right to regrade your **entire assessment**. As a result, your score could either increase or decrease.

BEWARE: A random sample of all assessments will be photocopied after initial grading. If a comparison of the photocopy to the exam submitted for regarding indicates any alteration, the case will be forwarded to the Office of Judicial Affairs. **Never alter any exam, quiz, or other assessment material returned to you.**

Student Services:

There are many resources on campus. For more information please visit, <http://www.csustan.edu/tutoring/>. Tutoring Services are in the Library building, room L112. Every student should make an effort to visit with them and at a minimum have understanding of what services are available.

Student and faculty tutors, who have previously passed this class or administered similar material, are available from 8 am – 6 pm daily. This resource is available to all and is in room Naraghi 124. No appointment is necessary and walk-ins are most welcome.

In addition, there is The Biology Club, which encompasses a group of former/present biology students who are available for consultation and advice. Check with the Biology Office in Naraghi Hall.

Disability Services:

If any student with any form of learning disability wishes or has registered for this course, they should contact the instructor as soon as possible so rapid arrangements can be made to address those needs. CSU Stan and this instructor are committed to making our courses accessible to all students, including students with limited mobility, impaired hearing or vision, and learning disabilities. Students who may need academic

accommodation(s) services should visit the Disability Services web site at <http://www.csustan.edu/drs/contactus.html> and contact the Disability Services Coordinator at the Disability Resource Services office (209) 667-3159 located in the Mary Stuart Rodgers Educational Services Gateway, Room MSR 210 or visit <http://www.csustan.edu/drs/> as early as possible in the semester so that appropriate arrangements can be made.

Group and independent assignments in BIOL 3000:

Many activities in BIOL 3000 involve group work and we encourage you to discuss any of the materials in the text, lectures, and/or discussion sessions with the instructors and other students, **but the work you submit must be your own for all of the following:**

- Quizzes
- Midterm and final assessments

That is, each student must generate their own answers **written in their own words** to all written questions. At the first instance of copied answers on assignments, no credit will be given *to all students with duplicate answers* and the assignments will be forwarded to the Vice-Chancellor for Undergraduate Affairs and the Office for Judicial Affairs. Subsequent copied assignments could lead to dismissal from course or the university (see section on Academic Integrity below).

Academic integrity:

Academic integrity is the foundation of an academic community and without it none of the educational or research goals of the university can be achieved. All members of the university community are responsible for its academic integrity. Existing policies forbid cheating on examinations, plagiarism and other forms of academic dishonesty. The current policies for CSU Stanislaus are described on the *Student Responsibilities web site pages* and also available from your instructor. The following general guidelines are adapted from Office of Judicial Affairs

(www.csustan.edu/JudicialAffairs/.../Student_Judicial_Process-Academic.pdf):

Examples of academic dishonesty include:

- **receiving or providing unauthorized assistance on examinations**
- **using unauthorized materials during an examination**
- **plagiarism – using materials from sources without citations**
- **altering an exam and submitting it for re-grading**
- **fabricating data or references**
- **using false excuses to obtain extensions of time or to skip coursework**

The ultimate success of a code of academic conduct depends largely on the degree to which the students fulfill their responsibilities supporting academic integrity.

These responsibilities include:

- Be honest at all times.
- Act fairly toward others. For example, do not disrupt or seek an unfair advantage over others by cheating, or by talking or allowing eyes to wander during exams.
- Take group as well as individual responsibility for honorable behavior. Collectively, as well as individually, make every effort to prevent and avoid academic misconduct, and report acts of misconduct that you witness.
- Do not submit the same work in more than one class. Unless otherwise specified by the instructor, all work submitted to fulfill course requirements must be work done by the student specifically for that course. This means that work submitted for one course cannot be used to satisfy requirements of another course unless the student obtains permission from the instructor.

- Unless permitted by the instructor, do not work with others on graded coursework, including in class and take-home tests, papers, or homework assignments. When an instructor specifically informs students that they may collaborate on work required for a course, the extent of the collaboration must not exceed the limits set by the instructor.
- Know what plagiarism is and take steps to avoid it. When using the words or ideas of another, even if paraphrased in your own words, you must cite your source. Students who are confused about whether an act constitutes plagiarism should consult the instructor who gave the assignment.
- Know the rules – ignorance is no defense. Those who violate campus rules regarding academic misconduct are subject to disciplinary sanctions, including suspension and dismissal.

Flexibility Clause:

Circumstances may arise during the course which may prevent the staff from fulfilling each and every component of this syllabus; therefore, the syllabus may be subject to small adjustments. Students will be notified prior to any changes, if possible.

Welcome & Great Learning!

Timetable BIOL 3000 Spring 2020:

Theme	No.	Date			Lecture Topic
Introduction	1	T	28	Jan	1-Introductions and Course Expectations. Introduction to the Scientific Method
	2	R	30	Jan	1-Introduction to the Scientific Method
	3	T	4	Feb	2-Science Fiction, Bad Science, and Pseudoscience
	4	R	6	Feb	2-Science Fiction, Bad Science, and Pseudoscience
Metabolism	5	T	11	Feb	3-Is It Possible to Supplement Your Way to Better Performance and Health?
	6	R	13	Feb	3-Is It Possible to Supplement Your Way to Better Performance and Health?
	7	T	18	Feb	4-Body Weight and Health
	8	R	20	Feb	4-Body Weight and Health
	9	T	25	Feb	5-Life in the Greenhouse
	10	R	27	Feb	5-Life in the Greenhouse
Genetics	11	T	3	Mar	6-Cancer
	12	R	5	Mar	6-Cancer
	13	T	10	Mar	7-Fertility
	14	R	12	Mar	7-Fertility
	15	T	17	Mar	8-Does Testing Save Lives?
	16	R	19	Mar	8-Does Testing Save Lives?
-	-	T	24	Mar	SRING BREAK
-	-	R	26	Mar	SRING BREAK
-	-	T	31	Mar	Cesar Chavez Day
	17	R	2	Apr	MID-TERM EXAM
Evolution	18	T	7	Apr	9-Biology of Wrongful Convictions – DNA Profiling
	19	R	9	Apr	9-Biology of Wrongful Convictions – DNA Profiling
	20	T	14	Apr	10-Genetically Modified Organisms
	21	R	16	Apr	10-Genetically Modified Organisms
	22	T	21	Apr	11-Where Did We Come From?
	23	R	23	Apr	11-Where Did We Come From?
	24	T	28	Apr	12-An Evolving Enemy
	25	R	30	Apr	12-An Evolving Enemy
Ecology	26	T	5	May	15-Is the Human Population Too Large?
	27	R	7	May	15-Is the Human Population Too Large?
	28	T	12	May	16-Conserving Biodiversity
	29	R	14	May	16-Conserving Biodiversity
	Fin	R	21	May	EXAM FINAL T, May 21 From 2:00-4:00 p.m.