

**Biology 3000**

**Team-  
work**

DNA Fingerprinting

Relate

**LEARN**

Climate  
Change

**Discuss**

**News**

**Current  
Affairs**

Global  
Warming  
**Critical  
Thinking**  
Food

Nutrition

Water

**Collaborate**

Key  
Concepts  
Calories

GMOs

Viruses

Biome

Inheritability

Ecology

Vaccines

Habitat

Cancer

Population Pressures

Bacteria

Antibiotics

Genetics

Ecosystem

Forensics

Pollution

OFFICE HOURS

## BIOL 3000: Frontier in Biology

### Spring 2017 Syllabus

**LECTURE:** Biology 3000 (Section 001)

**PLACE:** Science Building, 135

**TIME:** T & R 3:30PM - 4:45PM

**TEXTBOOK:** *Biology: Science for Life (5th edition)* by Colleen Belk and Virginia Borden Maier (9780133897579) – buy or rent - **Compulsory**

**iCLICKER:** rent or buy - **Compulsory**

**INSTRUCTOR:** Dr. Kamal Dulai

**Phone:** 209 607 0304

**Email:** kdulai@csustan.edu

**Office:** N251

**Office Hours:** T&R 4:55pm-5:55pm; Also by appointment

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

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### 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 conduct an informed discussion on the topic. Students shall be expected to comprehend the information presented and quickly form an opinion, seek clarification, and answer questions following each concept.

### COURSE ORGANIZATION

Frontiers in Biology is primarily a basic biology lecture course presented as two 75 minute classes 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.

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

**Tuesday:** 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.

**Thursday:** Students break off into small groups and each group shall answer questions on the subject matter from the Tuesday lecture. 20 minutes to 60 minutes. 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
Exam (Midterms)	200 points	200	20.4%
Final Exam	300 points	300	30.6%
Group Answers	25 points each x 10	250	25.5%
Individual Answers	25 points each x 2	50	5.1%
Class Discussion Boards	15 points x 12	180	18.4%
	<b>Total</b>	<b>980</b>	<b>100%</b>
Attendance & Participation Bonus Points*		30	3.1%

**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 group questions and submit these for grading before leaving. The questions shall pertain to the contents of the lecture that day or the previous lecture. 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 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. This shall consist of a multiple-choice answer 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. Classroom Response devices (clickers) shall be used to record attendance and participation in other activities. It is YOUR responsibility to bring your clicker to class. Attendance shall be taken automatically at the start of each lecture, using clickers, 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. A further 10 bonus points shall be awarded automatically should you attend 80% of the lectures, for a maximum of 50 bonus points. It is YOUR responsibility to bring your clicker to class. If you forget it, or lose it, then please do not ask for compensation, as it will be denied. If your clicker malfunctions, either during class or outside class, take it back to the book store immediately. Your clicker is equivalent to a calculator – if it malfunctions or the battery expires, it is your responsibility to take corrective measures, not that of the instructor!

***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.

### ***Discussion Board Participation:***

180 points are devoted directly to one form of participation in the course, that being the weekly discussion boards managed through Blackboard.

Students must submit **2 meaningful statements/rebuttals to these forums**, for points to be awarded for each topic.

Classroom participation is strongly encouraged too, at the time of this class. Participation entails asking and answering questions.

### ***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 ZOO 2235 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 75 minute lecture, 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 passes 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](http://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 a 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 2017:**

L#	Date			Lecture Topic	Chp.
1	R	26	Jan	Introductions and Course Expectations	1
2	T	31	Jan	Can Science cure the Common Cold?	1
3	R	2	Feb	Can Science cure the Common Cold?	1
4	T	7	Feb	DNA Detective	8
5	R	9	Feb	DNA Detective	8
6	T	14	Feb	Is it Possible to Supplement Your Way to Better Health?	3
7	R	16	Feb	Is it Possible to Supplement Your Way to Better Health?	3
8	T	21*	Feb	Body Weight and Health	4
9	R	23	Feb	Body Weight and Health	4
10	T	28	Feb	Life in the Greenhouse	5
11	R	2	Mar	Life in the Greenhouse	5
12	T	7	Mar	Cancer – DNA Synthesis, Mitosis, and Meiosis	6
13	R	9	Mar	Cancer – DNA Synthesis, Mitosis, and Meiosis	6
14	T	14	Mar	Are you only as Smart as your Genes?	7
15	R	16	Mar	Are you only as Smart as your Genes? <b>Exam 1</b>	7
-	T	21	Mar	<b>SPRING BREAK</b>	
-	R	23	Mar	<b>SPRING BREAK</b>	
16	T	28	Mar	Genetically Modified Organisms.	9
17	R	30	Mar	Genetically Modified Organisms 2.	9
18	T	4	Apr	Where did we Come From?	10
19	R	6	Apr	Where did we Come From?	10
20	T	11	Apr	An Evolving Enemy: Natural Selection	11
21	R	13	Apr	An Evolving Enemy: Natural Selection	11
22	T	18	Apr	Who am I?	12
23	R	20	Apr	Who am I?	12
24	T	25	Apr	Is the Human Population Too Large?	14
25	R	27	Apr	Is the Human Population Too Large?	14
26	T	2	May	Conserving Biodiversity	15
27	R	4	May	Conserving Biodiversity	15
28	T	9	May	Where do you live?	16
29	R	11	May	Where do you live?	16
30	T	16	May	No Lecture	-
<b>E</b>	<b>T</b>	<b>23</b>	<b>May</b>	<b>EXAM - FINAL 2:00 pm to 4:00 pm</b>	