



Syllabus: **BIO 100N Biology Concepts**

Course Information:

Course Prefix/Number: BIO 100N-1
Semester: Spring 2020
Class Days/Times: Monday and
Wednesdays, 1:10pm – 3:45pm

Credit Hours: 4 (includes lab)
Course Title: Biology Concepts
Room: Gewkdag Şon Ki: (GSK) Room 3,
S-Cuk Du'ag Maşcamakuđ (Main
Campus)

Instructor Information:

Name: Kimberly Danny, MS
Phone/Voice Mail: (520) 383-0040 Ext
1040
Cell Phone: (928) 380-5536

E-mail: kdanny@tocc.edu
Office location: Ha-Maşcamdam Ha-Ki:
(Ed/Faculty Building) Room 121
Office hours: Mon/Wed 4-5pm, Tues
10am-1pm | or by appointment

Course Description:

Basic principles and concepts of biology. Includes methods of scientific inquiry, cell structure, chemistry, metabolism, reproduction, genetics, molecular biology, evolution, ecology, and current issues in biology.

Student Learning Outcomes:

- After completion of the course students will be able to
1. Perform activities to demonstrate improvement in the general education goals of communication, critical thinking and mathematics.
 2. Describe characteristics of living organisms that distinguish them from non-living constituents of the biosphere.
 3. Utilize scientific methods to formulate and answer questions and discuss its strengths and limitations.
 4. Describe and explain the properties and roles of biologically important molecules, including proteins, carbohydrates, lipids, and nucleic acids.
 5. Describe the structure and function of cells and cellular components in single and multicellular organisms.
 6. Describe how energy is acquired and used by living organisms.
 7. Describe how traits are inherited and apply patterns of inheritance.
 8. Explain the molecular biology of genes and their expression.
 9. Describe potential impacts of genetic technologies on society.
 10. Explain how the flow of energy through an ecosystem influences its structure.

11. Describe how organisms interact with each other and their environment.
 12. Apply biological and ecological principles to discuss current issues in human health, and human impact on the environment.

Course Structure:

Please see the Course Outline at the end of this syllabus for the general structure. Individual assignments include reading the text, answering questions in the chapter reviews, exams, research, and presenting two research projects. Students will also be expected to work in groups for laboratories held in class and for peer review of the Project 2 presentation. Exams, projects, chapter reviews, and research are meant to ensure a student's understanding of the student learning outcomes discussed above.

Texts and Materials:

Required Texts:

Essentials of Biology – 2018 – 5th Edition
 by Sylvia Mader & Michael Windelspecht
 ISBN 978-1-259-94837-4

***** A copy of the book is on the Course Reserve Shelf in the main library**

Evaluations and Grading & Assignments:

Your grade will be determined by the following.

Percentage	Points	Grade
90-100%	900-1000	A
80-89.9%	800-899	B
70-79.9%	700-799	C
60-69.9%	600-699	D
0-59.9%	0-599	F

Evaluation	Total Points	Number of Assignments	Percentage of Points
Attendance	150 pts	30 classes x 5 pts each	15%
Chapter Reviews & Homework	310 pts	~20 assignments x 15 pts each	31%
Lab Reports	240 pts	8 labs x 30 pts each	24%
2 Research Presentations	100 pts	1 st = 30 pts, 2 nd = 70 pts	10%
Exams: Best 4 out of 5	200 pts	4 exams x 50 pts each	20%
TOTAL	1000 pts		100%

Himdag Cultural Component:

Tohono O'odham traditions and cultural beliefs will be discussed as relevant course topics, and only as appropriate to the Tohono O'odham Nation's traditional standards for sharing information as determined by the *Himdag* committee.

Policies and Expectations:

Canvas: (<https://tocc.instructure.com/login/canvas>)

- I recommend downloading the "Canvas Student" app onto your phone or device.

- All chapter reviews, homework, lab reports, and presentations must be submitted via Canvas. I will not be excepting any assignments via email.
- Please refer to Canvas for the most up-to-date due dates.

Contacting instructor:

- If you need to get a hold of me, email or Canvas works best for me. I will try to reply within 2 days.
- I also accept text messages or voice calls to my cell phone. However, I may not respond right away.

Attendance & Participation:

- Students are expected to attend each class and arrive on time, except in the case of an excused emergency.
- Students are expected to contact instructor prior to absences, late arrival or leaving class early.
- Students are expected to come to class prepared and complete any preliminary work required as per the course schedule.
- Excused and unexcused absences, late arrivals or early departures will count against a student's attendance record. Attendance point criteria is outlined in Canvas.

Assignments:

- If you are not able to submit an assignment on time due to an emergency or hardship, please let me know prior to the deadline so arrangements can be made.
- If you are absent on a lab day, please make an arrangement with other students to get the data you need for the lab reports.
- All chapter reviews are due 2 days before the respective exam. At 11:59 pm two days prior to the exam, the chapter reviews will close and the correct answers will appear at 12 am.

Late Work:

- Chapter reviews and homework assignments will not be reopened after their due date without prior arrangements.
- I will allow lab reports to be submitted late. However, I will grade it as if it was turned in on time, then minus 5 points for every day past the due date. On the 6th day, the report will be marked 0.

Presentations:

- Please upload the final draft of your presentation by 3:45pm on the due date.
- If you are expecting to be absent on the day of presentations, please reschedule with me prior to the due date.
- If you are absent on a presentation day without rescheduling with me beforehand or choose not to present, half of the points will be automatically deducted.

Exams:

- Exams will be conducted in class. If you plan to be absent or experience a hardship (e.g. weather, transportation), please let me know as soon as possible.

- A missed exam with no communication prior or during the class period will be marked 0.
- Make-up exams will be proctored in the main library and must be taken with 2 days of the original exam date.

Cell Phone Use:

- Excessive cell phone use (e.g. watching videos) is not allowed during class, unless permitted by instructor.
- If a student needs to respond to a phone call, please step out of the class room.

Classroom:

- Food and beverages are allowed in classrooms at the discretion of the instructor.
 - Students creating disturbances that interfere with the conduct of the class or the learning of others will be asked to leave.
 - Possession of drugs, alcohol or firearms on college property is illegal.
 - Student behavior is also detailed in student handbook under Student Code of Conduct Violations.
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Attendance Policy:

You are expected to arrive to class on time and be prepared to participate in each class period. 4 unexcused absences may result in withdrawal and a “W” or “Y” will be recorded. You may request to be excused from class for religious observances and practices, for illness, for school or work-related travel or for personal or family emergency. If you will be absent, please notify the instructor as soon as possible (approved by Faculty Senate April 2014).

Course Feedback:

E-mail and phone messages will be returned within 2 days. Worksheets, presentations, general homework, quizzes, and exams will be graded and entered into Canvas within 24 hours not including Saturday, Sunday, Holidays, and Spring Break. Certain items, such as exams, will be returned after all students are able to complete it. Major papers and projects that require analysis will be graded and entered into Canvas within 5 days, not including Saturday, Sunday, Holidays, and Spring Break.

A student or the instructor may request a student conference at any time during the semester. Quarterly grade reports will be provided to each student, either in person, by email or via the electronic system of Canvas.

Instructor Withdrawals:

Students who have missed four consecutive classes (or the equivalent) not submitted any assignments nor taken any quizzes by the 45th day census report, due on February 27, 2020, are assumed NOT to be participating in the class and may be withdrawn at the faculty member’s discretion.

Student Withdrawals:

Students may withdraw from class at any time during the first 2/3 of the semester without instructor permission and without incurring any grade penalty. Please be sure

to withdraw yourself by March 30, 2020, if you do not expect to complete the class, otherwise you may receive an "F" grade.

Incomplete Policy:

Incomplete (I) grades are not awarded automatically. The student must request an "I" from the instructor who can choose to award an Incomplete only if all three of the following conditions are met:

- The student must be in compliance with the attendance policy.
- The student must have unavoidable circumstance that would prohibit the student from completing the course.
- The student must have completed over 75% of the course requirements with at least a "C" grade.

Incompletes are not a substitute for incomplete work due to frequent absences or poor academic performance. Incomplete grades that are not made up by the end of the ninth week of the following semester will be automatically changed to an F if the agreed upon work, as stipulated on the written form signed by the instructor and the student when the I grade is awarded, is not completed.

Special Withdrawals (Y) Grade:

The "Y" grade is an administrative withdrawal given at the instructor's option when no other grade is deemed appropriate. Your instructor must file a form stating the specific rationale for awarding this grade. "Y" grades are discouraged since they often affect students negatively. Your instructor will not award a "Y" grade without a strong reason.

Academic Integrity:

Violations of scholastic ethics are considered serious offenses by Tohono O'odham Community College, the Student Services Department, and by your instructor. Students may consult the TOCC Student Handbook sections on student code of conduct, on scholastic ethics and on the grade appeal procedure. Copies are available at Tohono O'odham Community College.

All work done for this class must be your own, or the original work of your group. While you may discuss assignments with other class members, the final written project must clearly be original. You may use work from books and other materials if it is properly cited. Copying from a book without proper reference or from a person under any circumstances will result in an "F" for the assignment, and at the instructor's discretion, possibly an "F" for the course. If you are uncertain about proper citations, ask your instructor or the librarian.

Equal Access Statement/Disability Accommodations:

Tohono O'odham Community College seeks to provide reasonable accommodations for qualified individuals with disabilities. The College will comply with all applicable regulations, and guidelines with respect to providing reasonable accommodations as required to ensure an equal educational opportunity. This process includes self-identifying as a student with a disability, providing supporting documentation of their disability, and being approved for services through the Disability Resources Office

(DRO). It is the student's responsibility to make known to their instructor(s) the student's specific needs within the context of each class in order to receive appropriate accommodations. We will work together in order to develop an accommodation plan specifically designed to meet the individual student's requirements.

For more information or to request academic accommodations, please contact: Anthony Osborn, TOCC Disabilities Resource Coordinator, aosborn@tocc.edu, or 520-360-5044 for additional information and assistance.

Title IX:

Tohono O'odham Community College encourages each student to have the knowledge and skills to be an active bystander who intervenes when anyone is observed or being harassed or endangered by sexual violence. Sexual discrimination and sexual violence can undermine students' academic success and quality of life on campus and beyond. We encourage students who have experienced or witnessed any form of sexual misconduct to talk about their experience and seek the support they need.

Confidential support and academic advocacy can be found with: Student Services Title IX Coordinator/Counselor, Alberta Espinoza, M.Ed. located in I-We:mta Ki: Room 18. Phone 520-383-0033. mail: aespinoza@tocc.edu

Conduct: Bias, Bullying, Discrimination and Harassment

Tohono O'odham Community College faculty and staff are dedicated to creating a safe and supportive campus environment as a core value. Harassment based on age, class, color, culture, disability and ability, ethnicity, gender, gender identity and expression, immigration status, marital status, political ideology, race, religion/spirituality, sex, sexual orientation, and tribal sovereign status will not be tolerated.

Course Outline: Important Dates

DISCLAIMER: This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of changes to the schedule via Canvas.

Course Outline Key

WK = Week	CR-# = Chapter Review	LR-# = Lab Report
M = Monday	T = Tuesday	W = Wednesday
Th = Thursday	F = Friday	S = Saturday
Sun = Sunday		

WK	DATE	TOPIC	HOMEWORK
1	M 1/13	Syllabus Overview Ch. 1 The Nature and Science of Biology <i>Guest: Camillus Lopez</i>	CR-1 due S 2/1
1	W 1/15	Finish Ch. 1 Lab 1 & How to write a lab report	LR-1 due W 1/22

Friday 1/17: Last day to add/drop without instructor's signature			
Monday 1/20: Martin Luther King Jr's Day – College Closed			
2	W 1/22	Ch. 2 The chemical basis of life	CR-2 due S 2/1
Friday 1/27: Last day to add/drop with instructor's signature			
Tuesday 1/28: Last day to drop with a full refund			
3	M 1/27	Ch. 3 The organic molecules of life Lab 2	CR-3 due S 2/1 LR-2 due M 2/3
3	W 1/29	Ch. 4 Inside the cell	CR 4 due S 2/1
4	M 2/3	<i>Review Chapters 1-4</i> EXAM 1: Chapters 1-4	
4	W 2/5	Ch. 5 The Cell Lab 3	CR-5 due T 2/18 LR-3 due W 2/12
<i>4-week progress report</i>			
5	M 2/10	Ch. 6 Energy for life	CR-6 due T 2/18
5	W 2/12	Ch. 7 Energy for cells	CR-7 due T 2/18
Monday 2/17: Presidents Day – College Closed			
6	W 2/19	<i>Review of Chapters 5-7</i> EXAM 2: Chapters 5-7	
7	M 2/24	Ch. 8 Cellular reproduction	CR-8 due T 3/10
7	W 2/26	Ch. 9 Meiosis and the genetic basis of sexual reproduction Lab 4	CR-9 due T 3/10 LR-4 due W 3/4
Friday 2/27: 45-Day Census			
8	M 3/2	Ch. 10 Patterns of Inheritance	CR-10 due T 3/10
8	W 3/4	Ch. 11 DNA Biology Lab 5	CR-11 due T 3/10 LR-5 due W 3/11
<i>8-week progress report</i>			
9	M 3/9	Ch. 12 Biotechnology & Genomics Go over Project 1 <i>Review: Chapters 8-11</i>	Project 1: Biotechnology Research Presentation Due W 3/25
9	W 3/11	Library visit & research basics Exam 3: Chapters 8-11	Project 1 Outline due Sun 3/15
Monday 3/16 – Friday 3/20: Spring Break			
10	M 3/23	No Class (TBD) - Instructor at AIHEC Spring Conference Visit the library staff or tutors to review your presentation on either M 3/23 or T 3/24.	Upload handout with library signatures to Canvas by T 3/24
10	W 3/25	Project 1 Presentation Due Ch. 14 Darwin & Evolution	CR-14 due S 4/4
Monday 3/30: Last day to withdraw from classes with a "W"			
11	M 3/30	Ch. 15 Evolution on a small scale	CR-15 due S 4/4
11	W 4/1	Ch. 16 Evolution on a large scale	CR-16 due S 4/4

		<i>Review: Chapters 14-16</i> Lab 6	LR-6 due W 4/8
12	M 4/6	EXAM 4: Chapters 14-16 Go over Project 2 <i>Guest Lecture</i>	Project 2 Outline due M 4/20 Project 2 Presentation due W 5/6
12	W 4/8	Ch. 30 Ecology and Populations	CR-30 due M 4/20
<i>12-week progress report</i>			
13	M 4/13	Ch. 31 Communities and Ecosystems	CR-31 due M 4/20
13	W 4/15	Ch. 32 Human Impact on the Biosphere Lab 7	CR-32 due M 4/20 LR-8 due W 4/22
14	M 4/20	<i>Review: Chapters 30-32</i> Library Research & APA	Project 2 Outline due today (Instructor edits provided F 4/24)
14	W 4/22	EXAM 5: Chapters 30-32	
15	M 4/27	Library Research	
15	W 4/29	Library Research Project 2 peer reviews	Project 2 peer reviews due F 5/1
16	M 5/4	Library Research	
16	W 5/6	Project 2 Presentation Due	