Syllabus—Spring 2023
BIOL 2XXX—Overview of Bioinformatics (1 cr)

Instructor
Randy Klabacka
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Office hours: MW 2:30–3:00 pm

Time and place
Wednesday 3:00–3:50 pm (1 cr)

Course prerequisites
None

Course materials
There is no textbook required for this course.

Course description
This course provides students with exposure to broad themes in bioinformatics. Specifically, it is focused on (1) the objectives of bioinformatics, (2) the overarching techniques of bioinformatics, and (3) bioinformatics-related career opportunities.

Course Objectives and Outcomes
The primary goal of this course is for students to be able to explain how bioinformaticsis used in diverse research fields and describe bioinformatics-related career opportunities.
By the end of this course, our goal is for you to learn the following skills:

Course website
The syllabus, grades, announcements, and some class materials will be posted on the Canvas website for this course. Search around and familiarize yourself with this site.

Some class materials will be available elsewhere on the web (e.g., http://klab-ut.github.io/coursemat/OB).

Course Assignments and Grading
Course points

Item	Points
Attendance	30
Interview Project	30
PackBack	20
Final Exam	20
Total:	100

Letter grade distribution

Percentage	Grade
>= 90.0	A
80.0 – 90.0	B
70.0 – 80.0	C
60.0 – 70.0	D
<60.0	F

Interview Project

You will interview an individual that uses bioinformatics in their research / career and prepare a 12-minute presentation about (1) who they are, (2) how they decided to pursue a bioinformatics-related education / career, (3) what kind of research / work do they do, (3) future plans for their career, and (4) recommendations they have for a budding undergraduate student.

Packback

Participation on the Packback Questions platform will be used for online discussion about class topics. Packback is an online community where you can ask open- ended questions to build on top of what we are covering in class and relate topics to real-world applications.

Packback Requirements

Your participation on Packback will count toward 10% of your overall course grade. PackBack activities will have a Sunday at 11:59 PM (central time) deadline for submissions. In order to receive your points per week, you should submit the following per each deadline period:

- 1 open-ended Question per week with a minimum Curiosity Score of 50, worth 33.33% of each assignment grade
- 2 Responses per week with a minimum Curiosity Score of 50, worth 66.67% of each assignment grade
- Half credit will be provided for questions and responses that do not meet the minimum curiosity score.
- The instructor will decide the grade for each PackBack assignment considering (but not depending on) the Curiosity Score.

Helpful Tips

In order to get full credit on your PackBack activities, make sure to use the following hints:

1. Look to the left of your screen when you reply. Make note of the Curiosity score under the Instant Feedback tab. This will need to be a minimum of 50 on both the question and 2 responses in order to receive full credit (10 points)
2. One way to help your curiosity score is to cite a reference. Either a reputable website or your book would help to add to the curiosity score.
3. Don't post closed questions. Start with words like "Why" or ask for opinions if you question is thrown out for being a "closed question".
4. Check your post before the due date (Sunday at 11:59 pm central time) to make sure your question/response was not flagged or moderated for not meeting the community standards (plagiarism, closed ended question, class logistics or low effort/detail post).

5. When you have trouble, the best thing to due is contact the Packback support team. I know that usually these support services brag about their quick service, but Packback actually does have a relatively quick response time to issues.

Packback Registration

An email invitation will be sent to you from help@packback.co prompting you to finish registration. If you don't receive an email (be sure to check your spam), you may register by following the instructions below:

1. Create an account by navigating to https://questions.packback.co and clicking "Sign up for an Account" Note: If you already have an account on Packback you can log in with your credentials.

2. Then enter our class community's lookup key into the "Looking to join a community you don't see here?" section in Packback at the bottom of the homepage. (Community Lookup Key: ea7dfd57-6bd8-474e-8275-b7f1041ae619)

3. Follow the instructions on your screen to finish your registration.

Final Exam

The final exam is open-note with no time limit, and will be focused on material from pre-class reading, in-class discussions, and the PackBack discussion platform.

Schedule

Week 1: Introduction	Jan 11	Do in class:	Syllabus introduction
Week 2: What is bioinformatics?	Jan 18	before class: in class:	PackBack assignment 1 Overview of aims in bioinformatics and computational biology
Week 3: What can someone with a bioinformatics degree do?	Jan 25	before class: in class:	PackBack assignment 2 Overview of education / career options for someone with bioinformatics degree
Week 4: Meet a bioinformatician in industry	Feb 1	before class: in class:	PackBack assignment 3 Talk with bioinformatician that works in industry
Week 4: Meet a bioinformatician in academia	Feb 8	before class: in class:	PackBack assignment 4 Talk with bioinformatician that works in academia
Week 5: Meet a bioinformatics graduate student	Feb 15	before class: in class:	PackBack assignment 5 Talk with a bioinformatics graduate student
Week 6: Our bioinformatics program	Feb 22	before class: in class:	PackBack assignment 6 Overview of the bioinformatics degree at Utah Tech University
Week 6: Grad school options	Feb 28	before class: in class:	PackBack assignment 6 Overview of grad school options for a student with a Bioinformatics degree
Week 7: How to get accepted for grad school	March 1	before class: in class:	PackBack assignment 7 Best practices for preparing a solid graduate school application
Week 8: NO CLASS:	Spring Break		
Week 9: Bioinformatics in practice	Mar 22	before class: in class:	PackBack assignment 8 Discussion of an instance of bioinformatics being put to practice in society
Week 10: Bioinformatics in practice	Mar 29	before class: in class:	PackBack assignment 8 Discussion of an instance of bioinformatics being put to practice in society
Week 11: Bioinformatics in practice	Mar 29	Watch before class: Do in class:	Recursion Recursion interactive discussion
Week 12: Student presentations	Apr 5	Do in class:	Students present interview project
Week 13: Student presentations	Apr 12	Do in class:	Students present interview project
Week 14: Student presentations	Apr 19	Do in class:	Students present interview project
Week 15: Course Summary and Exam Prep	Apr 26	Do in class:	Exam review

Policies

Class inclusiveness

It is our intent that students from all backgrounds and perspectives be well-served by this course. We are committed to creating an inclusive space that fosters diversity along its many axes: ethnicity, race, sex, gender, disability, age, socioeconomic status, nationality, and culture. As your instructors and as a student in this class, it is our shared responsibility to develop and maintain a positive learning environment for everyone. Any type of discrimination or aggression toward your peers or instructors will not be tolerated. If you experience any form of discrimination in this course, either from us (the instructors) or your peers, please let us know by submitting an anonymous message via the Feedback tool in Canvas.

Excused absences

Students are granted excused absences from class for the following reasons: illness of the student or serious illness of a member of the student's immediate family, the death of a member of the student's immediate family, trips for student organizations sponsored by an academic unit, trips for university classes, trips for participation in intercollegiate athletic events, subpoena for a court appearance, military orders, and religious holidays. Students who wish to have an excused absence from an exam for any other reason must contact the instructor in advance of the absence to request permission. The instructor will weigh the merits of the request, and render a decision. When feasible, the student must notify the instructor prior to the occurrence of any excused absences, but in no case shall such notification occur more than one week after the absence. Appropriate documentation for all excused absences should be provided by the student, when possible.

Disability accommodations

If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the dissability resource center at https://drcenter.utahtech.edu/accommodations-available/.

Academic honesty

All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Utah Tech University Academic Integrity Committee.

Emergency contingency

If normal class and/or lab activities are disrupted due to illness, emergency, or crisis situation, the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials.