BENG 183. Applied Genomic Technologies

Course evaluation

Please make sure to have read this entire document at the beginning of the quarter.

Homework assignments

- Homework 1: post by: 10/08 at 5:00pm, due Fri 10/11 at 5:00pm, solution posted at 6:00pm.

- Homework 2: post by: 10/17 at 5:00pm, due Fri 10/25 at 5:00pm, solution posted at 6:00pm.

- Homework 3: post by: 10/24 at 5:00pm, due Fri 11/01 at 5:00pm, solution posted at 6:00pm.

- Homework 4: post by 11/05 at 5:00pm, due Fri 11/08 at 5:00pm, solution posted on at 6:00pm.

- Homework 5: post by 11/12 at 5:00pm, due Mon 11/18 at 5:00pm, solution posted at 6:00pm.

- All times are US Pacific Time (San Diego Time).

Exams

- Midterm I: posted on CANVAS on 10/29 at 12:30pm, due 10/30 at 12:30pm, solution posted on 10/30 at 2:30pm. This is a take-home exam. Please turn in using Gradescope (see below). There is no lecture on 10/29.

- Midterm II: posted on CANVAS on 11/19 at 12:30pm, due 11/21 at 2:00pm, solution posted on 11/21 at 2:30pm. This is a take-home exam. Please turn in using Gradescope (see below). There is no lecture on 11/19.

- Final project. The final project is composed of a final presentation and a final paper. The final presentation will be on 11/21, 11/26, 11/28, 12/3 and 12/5. The final paper is due 12/10 at 11:59pm.

- All times are US Pacific Time (San Diego Time).

Final project

1. Teamwork. The final project will be finished in teams. Teams are self-assembled. You can choose your team or team members.

    a. Each team must have 3 students. All the efforts of recruiting the third team member must be made. A 2-member team is not allowed, unless (1) all the other students in this class have formed 3-member teams (this is the last 2-member team); or (2) a team-member dropped out of this class (an initially 3-member team becomes a 2-member team).

b. The <u>deadline</u> for forming teams is 10/18. Please notify the TAs by email of your team members. Students are encouraged to form teams well before the deadline. TAs will notify all teams the date of their final presentation by 10/22.

2. Project goal. The goal of the final project is to produce the materials for a mini-discussion session to a BENG183 class in the future. Your team will give this mini-lecture (the final presentation) and produce the slides and the class handout (the final paper).

3. The content of your presentation and paper. You can use this mini-discussion to solve a problem, or introduce a highly useful function from a software or an entire software package, or show a data analysis application that is highly related to the lectures of this course. To discuss a data analysis application, you can and you are welcome to use published papers and results. It is helpful to make your content very focused. For example, the topics of "Normalization of RNA-seq read counts" or "Detection of differentially expressed genes" are excellent topics because they are sufficiently focused.

4. The final presentation.

   a. Each team will make a 6-minute final presentation as if giving a mini discussion session to your fellow classmates. Please prepare the slides for your presentation. All team members are expected to present in these 6 minutes. (A tip: "According to the National Center for Voice and Speech, the average conversation rate for English speakers in the United States is about 150 words per minute."). Please provide your presentation slides to TAs 24 hours before your presentation.

   b. What are expected for an outstanding final presentation? A presentation rubric is attached to the end of this document. Please use this rubric to prepare your presentation.

   c. Grading of the final presentation. The final presentation will be graded by your fellow classmates. Every team will score every other team, in a scale of 0-25 with 25 being the best. Every team please use the presentation rubric to guide how you score other teams. TAs will release a google form for you to use for recording your scores. Please attach the filled score sheet to you the end of your final paper.

   d. The average score of a team will be the score of that team for the final presentation. All team members will receive the same score.

5. The final paper.

   a. The final paper is the "class handout" you would give to your future class who attend your mini-lecture. Please use the book chapters of 3D Genome as examples of a final paper. An outstanding final paper should read like a book chapter or a section of a book chapter for a future textbook.

   b. File format: Please use Markdown (.md) files are accepted for the final paper. You can include texts, figures, hyperlinks, references, and any multimedia content (if feasible). Please see this tutorial for writing or converting your paper into a .md file: https://github.com/Zhong-Lab-UCSD/BENG183/blob/master/markdown_tutorial.md

   c. There is not restriction of the length of the final paper. However, we do not recommend more than 2500 words in total.

d. To submit the final project, please follow these steps:

    i. To start, fork the repository.

    ii. Clone the repository to your computer.

    iii. Upload your files and commit changes to complete your solution.

    iv. Push/sync the changes up to GitHub.

    v. Create a pull request on the original repository to turn in the assignment.

e. Grading of the final paper. The final paper will be graded by 3 TAs. Each TA will give a score in 1-10 to each paper. The average score will be the score of this final paper of this team. All team members will receive the same score.

Methods of Evaluation

The final class grade will be based on the maximum from the following two grading options:

Class Grade: Option 1

- Homework assignments (25%; 5 homework assignments each 5%)

- Midterm exams (30% = Midterm I: 15% + Midterm II: 15%)

- Final presentation and paper (45% = presentation: 25% + paper 20%)

Class Grade: Option 2

- Final presentation and final paper (95%)

All students are encouraged to submit all homework assignments and to take the midterm exams, i.e., option 1. In principle, option 2 should be regarded as a safety option that allows receiving a higher grade even if the student's performance throughout the quarter was suboptimal.

Final Grades

The letter grade, P/NP grade (undergraduate students only), or S/U grade (graduate students only) for the class will be based on the final class grade, i.e., the <u>maximum of options 1 and 2</u>. The table below provides the minimum scores required for different grades. <u>The default grade is the letter grade and you can change it to P/NP grade or S/U grade up to week 10.</u>

Letter Grade	Score	P/NP	S/U
A+	95		
A	90		
A-	85		Satisfactory
B+	80		
B	75	Pass	
B-	70		
C+	65		

C	60		Unsatisfactory
C-	40		
D	35	No Pass	
F	0		

Class Policies

- Homework assignments must be written clearly and neatly. Illegible homework will not be graded. Homework assignments may be discussed in groups but must be worked individually and not copied. The homework assignments are to be <u>submitted via Gradescope as PDF files</u>. No late homework will be accepted or graded.

- A solution to each homework assignment will be provided on Canvas an hour after the homework assignment is due. Similarly, a solution to each midterm exam will be provided on Canvas an hour after the exam's due date and time.

- All homework assignments will be graded within a week of the due date. Similarly, both midterm exams and the final exam will be graded within a week of completion of the exams. <u>All grading will be done via Gradescope.</u>

- Submissions of homework assignments and exam need to follow the submission guidelines (see below). <u>Importantly, if a Gradescope submission lacks page numbers for a given problem, the student will receive 0 points for that problem even if the problem is included in the submission.</u>

- In fairness to all students, work will only be re-graded after consideration of a request made through Gradescope when there is an evidence of a grading error. We reserve the right to re-grade an entire piece of work, which may result in an overall grade that is lower or higher. The deadline for re-grade requests is <u>within 48 hours from the date the assignment is returned</u>. Please note that partial credit given for any unsolved problem will not be changed.

- If a student does not take a midterm exam or does not submit a homework assignment, the final exam will be weighed more heavily. Please see the two Class Grade options above.

- Academic dishonesty will not be tolerated. According to UCSD policy, <u>consulting any unauthorized material that contains answers to any assignment</u> is academic dishonesty. Any suspected incident will be dealt with in accordance with UCSD policy, including reporting the misconduct to the Dean of Student Affairs. More information on UCSD's Policy on Integrity of Scholarship can be found at: <u>https://academicintegrity.ucsd.edu/process/policy.html</u>

- All examinations will be conducted as "take-home" exams based on the honor system. Exams will become available at the scheduled time. Students will have 24 hours to submit them. The 24 hours include any time needed for scanning and uploading the exam. As per the Office for Students with Disabilities (OSD), <u>no additional time</u> is allowed for "take-home" exams to students with disabilities.

- All exams are open textbook; however, students cannot use any other online resources or other printed materials. Students must work on exams individually. Any group work will be treated as academic dishonesty.

- For fairness to all students, no question about any exam question will be individually answered during the "take-home" period of any exam. However, if any student feels any question lacks clarity, the student can raise a question using the Discussion function in Canvas. Please note that the Discussions in Canvas can be seen by all students, the TA, and the lecturer. Unless there are mistakes in the exam questions, the instructors will not answer

these questions. However, the TAs and the lecturer will use such questions to re-evaluate if any exam question lacks sufficient clarity to most students. If the TAs recognize that any exam question lacks the sufficient clarity to most students, all students will be given the full score for that question.

Homework Assignments and Exams Submission Guidelines

All homework assignments and exams must be written legibly. Any submissions not following these requirements will not be graded. This includes dark clear writing on clean white paper. The following information must appear on the first page of the submission:

- Name and date
- Course number
- Homework number

Uploading Assignments

1. Login to Gradescope (https://www.gradescope.com/). Gradescope is a platform that enables efficient and faster grading and feedback for both students and instructors. Gradescope enables students to upload images or pdf's of their homework to submit at any time. Gradescope is free and no download is required.

2. Select "BENG183_FA24_A00" or get the course access code from the TA.

3. Select the appropriate assignment or exam.

4. Select PDF file that contains your work. See Section 3, Scanning Options, for resources.

5. For each problem, you need to designate which pages contain your solution. You may repeat pages, such that page 1 can have parts of #1 and #2. You may also have multiple pages for a single problem's solution.

6. When you have finished, remember to hit submit. You may re-upload at any point before the deadline. Submissions past the deadline will not be accepted.

7. **Do not wait until the due date to submit an assignment.** Late assignments and physical assignments will not be accepted.

Scanning Options

There are many applications (such as TinyScanner, TurboScan, CamScanner, etc.) that can be used to scan a handwritten submission. Below the use of Adobe Scan is described:

- Adobe Scan is free and available on any iOS or Android Device.
- Use Adobe Scan to take photos of each page under good lighting
- Follow instructions to drag the edges of the blue box to cover the entire page
- Continue taking photos of each page
- Share Document with self via link or email
- Download document and submit into Gradescope.

Please do not use regular photos, they are generally much harder to read.

Tablet or direct PDF

If you do your homework on a tablet or a computer, you do not have to use a scanner and may upload a PDF directly to Gradescope. Compatibility with all devices is not ensured, please leave ample time to test Gradescope with your setup.

Presentation rubric

Point Range	Presentation Skills	Organization + Media
25	Presenter doesn't rush, shows enthusiasm, and avoids verbal fillers. Uses complete sentences, high-level vocabulary and word choice. Keeps head up, does not read slides, and makes eye contact with the whole audience. Stands up straight, faces audience, and doesn't fidget. Presenter is easily heard Answers questions in an appropriate manner, using clarifying tools when needed.	Information is constructed in a logical pattern. Multimedia is used to clarify and illustrate the main points. Format enhances the content. Presentation captures audience attention. Presentation is organized and well laid out. Figures and tables are well labeled.
20	Presenter doesn't rush and shows enthusiasm, may use some verbal fillers. Uses complete sentences and mostly high-level vocabulary and word choice. Keeps head up and makes eye contact with the whole audience, may read slides. Stands up straight, may occasionally face away from audience or fidget. Presenter is easily heard Answers questions in an appropriate manner	Information is constructed in a somewhat logical pattern. Multimedia is used to illustrate the main points. Format is appropriate to the content. Presentation captures audience attention at times. Presentation is well organized. Figures and tables are labeled.
15	Presenter rushes but shows enthusiasm, may use some verbal fillers. Uses complete sentences and some high-level vocabulary and word choice. Reads slides and occasionally makes eye contact with audience. Stands up straight, may face away from audience and fidget. Presenter can be heard Answers questions	Information is has some focus but may not support points Multimedia loosely illustrate the main points. Format is inappropriate to the content. Presentation does not capture audience attention at times. Presentation has some organization. Figures and tables partially labeled or mislabeled.
0	Presenter rushes and uses verbal fillers. Does not use complete sentences or high-level vocabulary and word choice. Reads slides and makes no eye contact or looks at floor. Slouches, faces away from audience and fidgets. Presenter cannot be understood. Does not answer questions appropriately. **PRESENTER IS DISRESPECTFUL OF MEMBERS OF THE GROUP OR AUDIENCE.**	Information is unfocused and haphazard. Presentation appears sloppy and/or unfinished. Multimedia is overused or underused. Format does not enhance content. Presentation has no clear organization. Figures and tables have no labels.