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Course Project Overview Biology 1400, General Biology II

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Kingsborough Community College

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Course Project Overview
Biology 1400, General Biology II
Prof. Kristin Polizzotto

Your coursework includes a project that will be worth 10% of your grade. This semester, the project will be to **make a 3 to 5 minute video explaining one concept from the course learning objectives**. As you may already know, the best way to learn something is to have to teach it to someone else! I'm excited for you to take a turn being the expert, and I know you can do it well.

To make the project manageable, you will have an assignment each week and work on it bit by bit. Getting feedback from me as you go will help you to create something you will be really proud of. While it is not mandatory, it's my hope that students will be willing to publish their content with other students via the CUNY Academic Commons or CUNY Academic Works. One goal of this project is for you to get published online, and share your knowledge and your unique perspective with the educational community. Licensing and sharing your work is an important part of being a biologist and a scholar, and you are getting an early start on learning these skills. Also, as you might already know sometimes it is easier to understand concepts explained from a student perspective, rather than the instructor's perspective. Sharing your work on an open educational platform can be a great benefit to other students. (It also looks great on your resume!)

Since this is a big project, I request that you work in partnerships of two (or three at most). If you prefer to work on this project individually, you can contact me to discuss it and get approval for your plans. I know that many students do not like to work in groups, but collaboration is an essential component of your learning and of your future careers. And don't worry—I have a pretty good system for making sure that each person in the group earns their own grade. You will not receive a poor grade just because your partner drops the ball on their part of the project (if that happens).

Learning outcomes

At the end of this project, students will be able to do the following:

- Effectively teach a concept from the course to a general audience
- Identify and correctly cite appropriate sources for a scientific presentation (both text and images), including at least one primary source
- Work collaboratively with peers to create something more than an individual could on their own
- Incorporate your unique perspective and relate your background to the course topics
- Provide constructive feedback to peers

What kind of video are we making?

The video should be 3-5 minutes long, and it should explain in detail one concept from the Bio 1400 learning objectives. For example, you might decide that you want to create a video to explain one of the following concepts:

- How biogeography (where organisms live) provides evidence of evolution
- How population genetics (genetics + math) can show whether evolution has occurred
- How life may have originated on earth
- How bacteria achieve genetic recombination without sex
- How fungi reproduce sexually when they don't have genders
- How plants know which way to grow
- Asexual reproduction in animals (the clones are already here!)

Your project can be a video of student(s) narrating, or a narrated animation, or a narrated slide show. You can make it on your phone, on Google slides or Power Point, or any other way you want as long as it's shareable. The following outline suggests how you might plan your video:

- Introduce the topic you will teach (15-30 seconds)
- Explain the concept, using appropriate documented sources (2 minutes)
- Give examples of how the concept applies (1-2 minutes)
- Describe at least one example or connection to the topic from your own experiences—how have you noticed this concept at work in the world around you? (30-45 seconds)

Here are two sample videos created by previous Bio 14 students at Kingsborough. You will see that each student's approach is different. Feel free to be creative and make it your own, but keep in mind that it's perfectly fine to keep it simple. I don't want you to worry and spend too much time on technical production—focus more on the quality and content of your explanations.

(Insert student work here, with permission)

[Let's Talk About SARS-CoV-2](#) by Victoria Flores-Almazan

[Let Your Food Be Your Medicine](#) by Zarina Gershovich

Here is another example—not a KCC student, but a young adult in NYC who made a simple but very informative video on a topic related to our course.

[The World of Birds: What is a Bird?](#) by Aurora Crooks, NYC Audubon Conservation Associate

Scaffolded assignments

As I mentioned above, to make the project manageable it is broken down into scaffolded assignments. There are nine assignments, and the semester is 12 weeks long. That's because sometimes you will get a break while I review what you've submitted and send you feedback, or you will be working on revisions but not necessarily submitting anything that week. Here's a list of the assignments, starting with the first week of class:

| Week | Assignment | Due date |
|--------------|--|----------|
| 1 | Select and submit topic (3 choices) | 3/12/23 |
| 2 | Submit project proposal | 3/19/23 |
| 3 | Find & submit appropriately cited sources | 3/26/23 |
| 4 | Create & submit an outline | 4/2/23 |
| Spring break | Work on script | |
| 5 | Submit script | 4/30/23 |
| 6-7 | Create & record your video | |
| 8 | Submit first draft of video | 5/14/23 |
| 9 | Review classmates' videos & submit peer feedback | 5/21/23 |
| 10-11 | Make revisions and submit project reflection | 6/4/23 |
| 12 | Submit final draft of video/present in class | 6/8/23 |

Grading

This project will count as 10% of your final grade in Bio 14. Your final project grade will be out of 100, compiled as follows:

| | |
|---------------------------|--------------------------------------|
| <u>Weekly assignments</u> | <u>25 points (lowest is dropped)</u> |
| Proposal | 5 points |
| Sources/references | 5 points |
| Outline | 5 points |
| Script | 5 points |
| First draft video | 5 points |
| Peer feedback | 5 points |

Please note that while each piece above is only worth 5 points, the real value is in the feedback you will get from me each week. This will keep you on track and ensure that your final draft is high quality. If you do not do these earlier in the semester, you cannot submit them at the end—you will simply lose those points.

| | |
|---|------------------|
| <u>Final video</u> | <u>70 points</u> |
| Proper format of citations/refs | 10 points |
| Organization, clarity & formatting ¹ | 10 points |
| Proper summarization without plagiarizing | 10 points |

| | |
|---|-----------------|
| Understanding & knowledge of the topic (college level) ² | 15 points |
| Clear, audible speech & sticking to time limits | 10 points |
| Quality of selected visual aids ³ | 10 points |
| Proper citation of images ⁴ | 10 points |
| Proper open licensing info | 5 points |
| <u>Project reflection</u> | <u>5 points</u> |

Notes:

¹ For organization and formatting, follow the guidelines given in this document and in the instructions you will receive for the scaffolded assignments. Regarding clarity, I am not overly concerned about spelling and grammar, as many of us speak and write in English dialects with varying rules. But please be sure that your meaning is clear and that you are choosing your words intentionally and thoughtfully to express what you want to say.

² The terminology and explanations you use should reflect an understanding of the topic at a college level (freshman/sophomore or above). Take a look at the learning objectives, readings, and videos I post each week—find the ones related to your topic and be sure that you are presenting at a similar level. If you need help with this, don't worry—I will be giving you feedback on your drafts.

³ The images you select for the presentation should be informative, not just decorative. They should be thoughtfully chosen to help express your main ideas. Images are an important component of effective communication—not just for fun!

⁴ When we get to the first draft, I'll give you more instructions on how to properly cite information and images found on the internet (as well as any images you create yourself). Information on how to openly license your work will also be provided.

Scaffolded assignment instructions
Biology 1400, General Biology II
Prof. Kristin Polizzotto

These are the detailed instructions for each scaffolded assignment. I am providing them here all in one place (and also so students can look ahead and work ahead if they wish), but the same instructions will also be provided each week when a scaffolded assignment is due.

Week 1: Select and submit topic (3 choices)

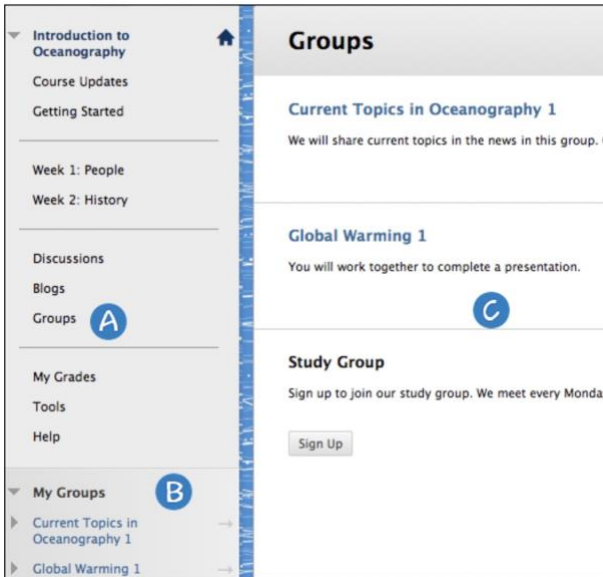
This week, please read through ALL the [learning objectives](#) for this course (click hyperlink or check syllabus posted on Blackboard). Then select at least three (or more, if you wish) that interest you for this project. Post your choices in order of preference on the week 1 discussion forum by 11:59 pm on **Monday March 13**.

If you want to combine two or more of the objectives into one topic for your project, simply indicate that in your post. Once everyone has posted their preferences, the instructor will create partnerships of two or three students based on your interests. The partnerships will be announced in class, and I will create a group for you and your partner(s) on Blackboard. You will work together to create the video, but each person will earn their own grade based on their contributions. If there is someone specific in the class that you want to work with, each of you should indicate that in your post.

Week 2: Submit project proposal

This week, you'll work with your group to create a proposal for your project. Please follow the instructions below:

1. As soon as possible, find your group on Blackboard and see which topic you were assigned from your preferences. In the left-hand menu, you will see "My Groups" as in the screenshot below (see B in the screenshot). Click there to open your group and see the topic, the names of group members, the list of group tools, and the group assignments. You can visit [Blackboard Help with Groups](#) for more info.



2. You should email your group **right away** (click “Send Email” in the group tools, unless someone else in your group already emailed everyone). If you do not know what email address Blackboard is using for you, go to your home page in Blackboard, scroll down to “Tools” and click “Update email.” You will see what email is being used and you can change it if you like. This will ensure that you receive emails from me and from your group. But I recommend that you figure out the best way to communicate (probably not email)—set up a group chat by text or on WhatsApp or however you prefer.

Once you are in contact, you need to figure out together who will do what for the project and write it all down to submit on Blackboard for instructor approval. (Item 3 below tells you what you must include in the proposal). I recommend creating a google doc for this. Once one person creates it, share it with the other students in your group. You’ll need to share it to their google/gmail account in order for them to be able to edit it. If you don’t have a google/gmail account, I recommend making one. It’s also ok to use Word, but if you do that, you have to find a way to share the document—email it to each other, or post it in the group file exchange on Blackboard. Using google docs can be a little faster and easier when collaborating.

3. Your proposal must include the following: your names, your topic, the type of video you want to make (students on camera, animation, narrated power point, etc), and a breakdown of who will do what. For example (feel free to use this example if it works for you):

Student 1 and Student 2 will be creating a video to explain how similar anatomical structures in different species provide evidence for evolution. The video format will be students explaining on camera, with some images shown to help illustrate the concepts.

- Both students will research the topic and find sources
- Student 1 will write the script and Student 2 will review and revise it

- Student 1 will shoot the video and Student 2 will present and narrate it
 - Both students will find or create images to use in the video
 - Both students will format their sources correctly for the references
4. When you are done with your proposal, you can share it with me (Kristinpolizzotto@gmail.com). In addition, **one partner must submit it on Blackboard so you can get feedback and a grade**. To do this, click on the heading of this assignment and then scroll down to “Assignment Submission” and click the button that says “Write Submission.” Then paste the link to share the google doc in the box. If you prefer, you can save the google doc as a Word file or pdf and then upload that file on Blackboard. Upload using the "attach file" button—remember that Blackboard can only read Word docs or pdfs.

Week 3: Find & submit appropriately cited sources

Submit a list of sources that you will use (you can always add more later). Each person in the group should add at least two or three sources (no repeats!). Put your name above or next to the sources you add so I can see who contributed. Use a google doc or combine your work with your partner(s) to submit one document with everyone’s contributions. Only one person in the group needs to submit—everyone in the group will be able to see it and to view my feedback. To submit, click the heading above and then use the “attach files” button to upload your group’s document.

At least one of the sources from each partner should be a **primary source** (that is, a peer-reviewed scholarly research article), and the other can be a reliable **secondary source** (other articles, videos, or websites). How can you find such sources? Begin with a simple internet search, using search terms that are as specific and precise as possible. That will help you find secondary sources, some of which may lead you to primary sources (see next paragraph for details on this). For scholarly research and primary sources, you can also try using the following:

[Google Scholar](#)
[KCC Library Database](#)

Your sources may be found on the internet, but all must be reliable, trustworthy sources. For example, while Wikipedia is not necessarily a reliable source, it may be a good place to find a list of links to valid references for your topic. Similarly, while YouTube is not always a reliable source, some of the authors who post content on YouTube are (depends on their credentials and in turn on their own sources). So how can you evaluate whether a source is reliable? Try watching this simple video (3:48 minutes) for some clear guidelines:

[How to Evaluate Sources for Reliability](#)

Learning to distinguish the validity of various sources is a vital skill for any student in the sciences (indeed, for any human). If you are not sure whether your source is considered a valid for the purposes of this project, please email me and ask.

The sources you include must be correctly formatted according to standards of practice in the scientific community. Simply **posting the web address is not enough**. There are several acceptable formats. If you are not sure how to correctly format a reference from a book, article, or an internet source, please search online for "proper format for internet references", or "proper format for scientific references" or something like that. Here are two resources illustrating some acceptable formats:

[How to Cite a Website in APA](#)

[How to Cite a Website in MLA](#)

The last link even has a "citation generator" tool. You can copy the web address into the tool, and it tells you the proper format for MLA citation. However, APA is more common in scientific writing.

Week 4: Create & submit an outline

Make an outline that shows the detailed plan for your video. This is like a bullet version of the full script that you will write for next week, to give me an idea of the sequence and the main points you plan to cover. You might recall this simplified outline from the project overview:

- Introduce the topic you will teach (15-30 seconds)
- Explain the concept, using appropriate documented sources (2 minutes)
- Give examples of how the concept applies (1-2 minutes)
- Describe at least one example or connection to the topic from your own experiences—how have you noticed this concept at work in the world around you? (30-45 seconds)

Here are some questions to answer in the more detailed outline that you will submit. You can use this as a template.

- Introduction to the topic
 - What would be a good hook or question to get the audience's attention?
 - Why is the topic interesting or important? How can you show that?
 - How does the topic fit into biology as a whole? What subfield is it in?
- Explanation of the concept(s)
 - What are the main points that should be covered?
 - What images would be helpful in explaining the concept?
 - What examples could you use to illustrate the concept?
- Conclusion
 - How does this topic relate to your or other people's lives?
 - What did you think was the most interesting thing about this topic?

- What topic should the audience explore next, if they want more information?
- References (AP format preferred)

Week 5: Submit script

Write and submit a script of what you will say in your video. This should be a complete draft of the audio you plan to include. You do not need to include any images or video yet, but if you have some images you are thinking of including and would like my feedback, please feel free to submit them as part of the script.

As part of this draft, you will also include in-text citations of your references just as you would in a research paper. In-text citations are acknowledgements of the sources you use, inserted in parentheses within the text. In scientific writing, this is mandatory for any and all information that is not common knowledge for the audience you are addressing. Some of you may already know how to use in-text citations effectively, but for many this will be a relatively new concept. I suggest reviewing the following sources for help. Each one will take about 4 minutes to view or read.

- [The Basics of APA In-text Citations](#) (video)
- [What is Plagiarism?](#) (video)
- [Citing Sources: In-text Citations](#)—APA (article)
- [A Complete Guide to APA In-text Citation](#) (article)

Week 8: Submit first draft of video

Shoot and record your video! You may do this on your phone, with a video camera, or on your computer or tablet—use whatever device works best for you. Remember, it's not the quality of the camera work or lighting that matters—it's the content of your explanations (both audio and visual).

It's required that YOU can be seen, or at least heard, on the video. If you are making a narrated slide show, I have included instructions for that below. If you are filming yourself, please click to review these [Tips for Recording Yourself on Video](#), courtesy of Professor Kadave from KCC's Department of Communications and Performing Arts.

Important tips:

1. If you plan to show images along with explaining on camera, the easiest way to do this is probably to use Zoom. Go to zoom.us to sign up for a free account. Set up a meeting, start the meeting, and then click the button to record the meeting (either to the cloud, or to your device—recording to the cloud may be easier to share later). Talk to the camera, and share the screen when you are ready to show images, and stop sharing to go back to your explanation.

It's not easy to edit zoom recordings though—so make sure you have your script and all your images ready!

2. At the end of your video, be sure to include “credits”—that is, the sources you used for your information. You can do this as a slide or other image that shows a list of sources, or you can read the sources out loud. Be sure to include all the necessary info for APA format, just as you would in a paper. If you use images that you did not create yourself, those should be cited as well. Include the source for each image as a small caption below the image. **This caption should include the artist/photographer name (if known), date of publication, the web address, and the title or subject of the image.** Click [here](#) for clear examples of how to cite images (State College of Florida library guides).

How to create audio for a slide presentation

Once you have created slides, you can add audio in several ways—choose whatever is easiest for you. I've described the process for Google slides first, but there are instructions for Power Point also further down the page. Power Point's “add audio” features are a bit easier to use (for me at least) but either is fine.

1. Add audio narration to your slides. To stay within the time limits, make sure that you talk for approximately 1-2 minutes per slide (or about 3-6 minutes total per person). To do this in google slides, follow these steps:
 - a. You must first record audio files for each slide (mp3 is best, but other formats should work). You can do this using the voice memo feature of your laptop or phone, or any other recording tool that comes with your device. If you're not sure your device has this feature, google it (for example, “how to record voice on an iPad”). You can also use a free online recorder and download the mp3 files. Try using [Vocaroo](#)—it's really easy! Make a separate file for each slide.
 - b. I recommend watching the first 4:15 minutes of “[How to Add Video to Google Slides](#)” for a clear explanation of what to do next. See also the steps below.
 - c. Once you have the audio files for each slide, upload them to your Google drive. If you don't do this, Google slides will not be able to access them. Make a folder on your drive and place all the audio files in it. Then **share the folder with me** (kristinpolizzotto@gmail.com). This is really important—if you don't share the audio files, I can't access them when I watch your presentation.
 - d. In google slides, go to your first slide and click “Insert” and then select audio. Then choose the correct audio file from your drive, and it will link to the slide. You will see an audio icon once it's linked. Test it to make sure it works!
2. Once you have created slides and added audio, share the presentation with me (kristinpolizzotto@gmail.com) and submit the link on Blackboard.

If you prefer to use Power Point, here are some tips: If you do not have Power Point already, CUNY students can get it for free. Please go to KCC's IT page and [read their FAQs](#) (scroll down and click on Office 365—Free Access). You can record audio directly if you **download Power**

Point to your device rather than using the online (web) version. Otherwise, you will need an alternate program (such as Vocaroo, mentioned above) to record audio before adding it to Power Point. This video may be helpful: [“How to add audio to a Power Point”](#) (1:37)

Other alternatives:

- Get a free Zoom account, and then create a “meeting” and record the meeting. You can share the screen to display any visuals you’ve made.
- Make a YouTube video: [“How to post your first YouTube video”](#) (4:56)
- Use free screencast tool at Screencast-O-Matic: [“How to create a screencast in 3 easy steps”](#) (1:17)

Week 9: Review classmates’ videos & submit peer feedback

For this week, you will review another group’s video and provide feedback. To do this each group should post a link to their video on the discussion forum for this week (only one partner needs to post the link). **This must be done today.** Then, choose **one** other video to review and use the grading rubric (copied below from the project overview) to give feedback by replying to their post. If there are already two reviews from other students, choose a different video to review. You don’t need to provide points, but you should indicate what you thought was well done or if you notice anything that’s missing or needs revision. You can make suggestions for improvement or ask a question if something was confusing. Be sure to note the time stamp in the video to make it easier for the creators to find it and fix it.

- Proper format of citations/refs: Were references included? Were they in APA format?
- Organization, clarity & formatting: Was the video organized and clear?
- Proper summarization without plagiarizing: Did the presenters speak in their own words, as far as you could tell?
- Understanding & knowledge of the topic (college level): Was the presentation at a college level?
- Clear, audible speech & sticking to time limits: Could you hear the presenter well, and did they stick to the time limits? (3-5 minutes)
- Quality of selected visual aids: Did the images help to understand the concept better?
- Proper citation of images: Were the images properly cited?

Note: you can also use this checklist for yourself, to make sure your own presentation meets the expectations of the project assignment.

Week 11: Submit project reflection

For this week, please write a reflection (at least half a page, but no more than one page) about this project. Answer the following questions, being as specific as you can:

- Do you feel like you learned the concept more deeply than you would have if you simply read about it or listened to the instructor teach about it? Why or why not?
- What did you like about this project? What would you do differently if you had to do it again?
- Besides the concept itself, what did you learn during this project? (skills like adding audio to slides, or in-text citations, or how to better collaborate with others)

When you are finished, please click on the link above and upload your reflection to Blackboard.

Week 12: Submit final draft of video/present in class

Based on the feedback you receive from the instructor and your classmates, make revisions to your video and produce a final draft. As the last step, you will apply a Creative Commons license to your work. This license is kind of like a copyright—it marks the content as your intellectual property, but allows others to share or use it, with some limitations that you can select. I am hoping that you will post your video on [CUNY's Academic Works](#), for other students' benefit. As you might already know, sometimes it is easier to understand concepts explained from a student perspective, rather than the instructor's perspective. In addition, publishing your video will make a great addition to your resume and portfolio!

Please visit the [Creative Commons licensing page](#) and watch the short video (2.5 minutes) to find out what the licenses are and how they work. Then go to their [Choose a license page](#) and answer the two questions there to select the license you want. Once you do, click on the selected license and create a hyperlink (or simply display the link on a piece of paper) in your video. Include the name of the license you selected and the web page address where the details of that license are posted. Although you are not required to share your video publicly, proper open licensing info is part of your grade on the project.

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