

Biology Lab Science - Capstone project 2020

Purpose

The capstone project provides students the opportunity to perform an independent scientific investigation. They will research, explore, analyze, evaluate and communicate results on a topic of their interest. The Capstone Project differs from a typical in-class lab investigation in that it allows students to investigate any topic of interest and provides sufficient time for a large set of data to be collected. Students are expected to collect sufficient numerical (quantitative) and observational (qualitative) data to support a valid conclusion. Students will engage in data processing and basic statistical analysis to help them assess the validity of their data. In the evaluation section, students will explain their interpretation of the data and relate it to underlying biological processes. Students will also critically self-reflect and evaluate their experimental design for potential weaknesses and propose solutions for improvement.

Final product

Full lab report including background research, data processing, conclusions and evaluation.

Assessment

- The capstone project represents 20% of the final grade for Semester 2.
- The capstone project takes the place of the final examination. Re-assessment of the capstone is therefore not possible.
- Capstone reports will be assessed according to a specific rubric which has been previously engaged with in their experimental design practice:

Timeline and Approximate Dates

Approximate dates are presented here for you to use in decision-making with regards to how long you have to complete your investigation. There is an assumption that the distance learning program will continue, now including Live Lessons, and that you should plan accordingly. With that in mind, please be aware when looking at dates that:

- Sections have their lessons on different days (A versus B), so look at dates for your section which refer to the date the lesson will be set (there remains 48hrs for completion of the lesson).
 - These dates **are approximate and subject to change** as we assess ongoing progress
 - There will be additional checkpoints added to assess your progress in lessons in between along the way that will account for lessons not listed here.
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- **Tue Apr 21 (A) / Thu Apr 23 (B)** – Introduction to the Capstone Project
 - **Tue Apr 28 (A) / Thu Apr 30 (B)** – Submit final research question for approval
 - **Thu May 7 (A) / Fri May 8 (B)** – If approved, begin Data Collection. There will be **one week** for Data Collection and you should plan accordingly. Data collection should be completed by ~Mon May 18th.