 Course Name and Number: Biology Lab

80-058-01

**Type of course :** Frontal Lab

**Year of Studies:** 2022-23 **Semester** Spring **Hours/credits**: 1

**The courses objectives:** Learn how to use biology laboratory equipment, and understand how these tools are utilized in everyday life, while also engaging with college level biology content

**Course Description:** A hands-on, engaging lab to expose students to real laboratory work, using authentic equipment and tools that are used by all biologists and doctors across the world.

**The Process of the Course:** Lab will begin with a 15 min presentation, followed by an exam related to the required reading. This is followed by the wet lab work, which will entail hands-on student work.

**Detailed Lesson plan:**

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| --- | --- |
| **Topic of the Lesson** | **Number of Lesson** |
| Gel electrophoresis | 1 |
| PCR and coronavirus | 2 |
| CRISPR and genetic engineering | 3 |
| DNA cloning | 4 |
| Dissections | 5 |
| Student presentations | 6 |
| Final exam | 7 |

**Course requirements:** The course requires participation in all labs, and attendance is mandatory. Students who join the lab will be required to take the final exams, whether for credit or not.

**Pre-requisites:** There are no requisites.

**Requirements/ Assignment/Tasks**

**Grade Components (Number grade or pass/fail):** Number grade, composed of attendance+ TA evaluation+ Quiz scores + Final exam

#### Bibliography: (Required/ Elective)

**Required material for the final:** Material for the final exam will primarily be composed of quiz questions/ very related questions, as well as larger conceptual biology questions. Everything on the exam will be covered in depth in the lab.