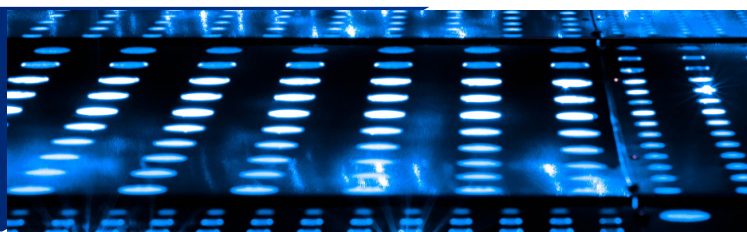# BEST (VIRTUAL) SUMMER INSTITUTE
July 27-29, 2021

TOPICS IN COMPUTATIONAL BIOLOGY AND BIOINFORMATICS

PSC's 15th Annual BEST Summer Institute will be virtual for 2021. It will be held Tuesday July 27 through Thursday July 29 using the Zoom platform. The BEST curriculum was developed in collaboration with teachers as an introduction to bioinformatics and is now being offered in over 15 local high schools. The purpose of this workshop is to present critical topics and new tools in the field. Teachers will receive useable lessons and classroom activities that can be used as curriculum supplements for any Biology classroom, including AP Biology, as well as updates to the current BEST curriculum. For new teachers this year, we are offering an optional short introductory session on Monday July 26 that will cover basic terminology, the curriculum outline and the essential websites that are used.

We invite all secondary science, math and technology teachers to attend. As an actively evolving STEM area, course materials are updated every year.

Workshop Overview

- Day 1 – DNA/Protein structure and function
    - o   Intro to Bioinformatics and overview of BEST curriculum
    - o   DNA structure and function tools
    - o   Protein production, structure and function

- Day 2 – Introduction to NCBI; Evolution, Genomics
    - o   General overview of NCBI
    - o   Introduction to Genome Data Viewer
    - o   Genomics topics

- Day 3 – Sequence Analysis, Clinical Relevance
    - o   Application of the tools in real life
    - o   Sequence analysis
    - o   Evolution topics
    - o   Classroom exercises

Daily Schedule

8:00am – 10:00am	Instruction and material review
10:00am – 10:30am	Break
10:30am – 12:30pm	Instruction and material review
1:00pm – 3:00pm	Hands-on Exploration on your own with instructors available for questions

Workshop Details

- All materials are free to workshop participants. Teachers new to BEST will have access to the full BEST
- Bioinformatics curriculum. You will need a computer and internet access to participate.
- ACT 48 hours will be provided to participants.
- To register, or for questions, send email to eotinfo@psc.edu.