

UNH Project SMART Summer Institute – 2022

July 11 – July 29, 2022

Biotechnology and Society Module

Major topics to be covered – The program will be live via Zoom

Genes and Genetics – From there to here

Genes and Genetics - What Makes Genetic Engineering Possible?

DNA, RNA and Proteins

Working with DNA – Cutting and splicing, and additional technologies Genetic Engineering of Bacteria

Plant Cloning and Genetic Engineering

Genetically Modified Organisms (GMOs)

ART-Assisted Reproductive Technologies - Spheroids and Organoids and Genes on chips

Stem Cells, Chimeras, and Designer Babies

Biotechnology and Aging

Biotechnology applications & implications (societal, environmental, legal, ethical & moral)

Biosensors, bioremediations & the Environment

Planning for the final day activities

Things we can't see but they matter – the microbiome

Nanotechnology and its biological/biomedical applications

Discussions – Intellectual property and Patenting of Genes

A perspective on viruses

COVID-19 - What, how, from where and to where, and What else?

Guest Speaker*, Student Presentations – and Good-Byes!!!

- We always have an eminent scientist to meet with the students on the final day, to share his/her thoughts with us on topics related to the program. Two years ago, it was a two-time International Space Station Astronaut).