

CHEM-E8125. Synthetic biology. Exam 29.5.2020

Write your answer preferably in Word format. Please, draw pictures and schemes whenever relevant. Use big letters, draw clearly. You can do this aside on paper and take a picture and insert it to the Word file.

Remember to write a logic story. Show that you understand the synthetic biology concepts and methods and use the terminology correctly.

Please, answer the 2 questions below.

1. Describe **your own idea** what you would like to do using synthetic biology. The idea can be application oriented, “save the world”-type, or a “blue sky” visionary idea without yet foreseen application. Describe how you would realize the idea, what the needed experimental steps would be, what type of know-how and synthetic biology techniques you would need. Make a logic story. *Take care that you use and describe well the synthetic biology concepts and tools.*
2. Describe a **case of synthetic biology where ethics and/or safety need to be considered**. You can select the example from the materials you have had on the course (lectures, homework, articles). Describe the case, the experiment and/or approach. Describe which types of safety or ethical issues this case may raise, also your own opinions are welcome. What type of safety/ethical actions or measures should be taken, how this type of work should be executed. Which could be the means to avoid harmful consequences.

DO **NOT** TAKE THIS EXAM QUESTION PAPER WITH YOU AFTER THE EXAM!
THANK YOU!