

MOOC Course

1 Fundamental facts of Synthetic Biology

- What is Synthetic Biology and the Central Dogma of Biology?
- Engineering parts and genetic devices.
- A model organism: *E. coli*.
- Main basic techniques that are used in iGEM.

2 Science project management at iGEM

- Building a team.
- Brainstorming.
- Choosing the project: from ideas to experiments.
- Organizing the iGEM team.
- Funding options for iGEM teams.
- The iGEM project wiki.

3 Bioethics at iGEM

- History of bioethics in Synthetic Biology.
- Data collection and sharing with the public.
- Informed consent.
- Patentability.
- Open access to research outcomes and concerns of bioterrorism.
- Open discussion and bioethics education.

4 Human practices at iGEM

- Advertising your iGEM project to the general public.
- Measuring public opinion about your project.
- Science vulgarisation: presentations and meetings.
- Giving back to the community.
- Collaborations between iGEM teams.