

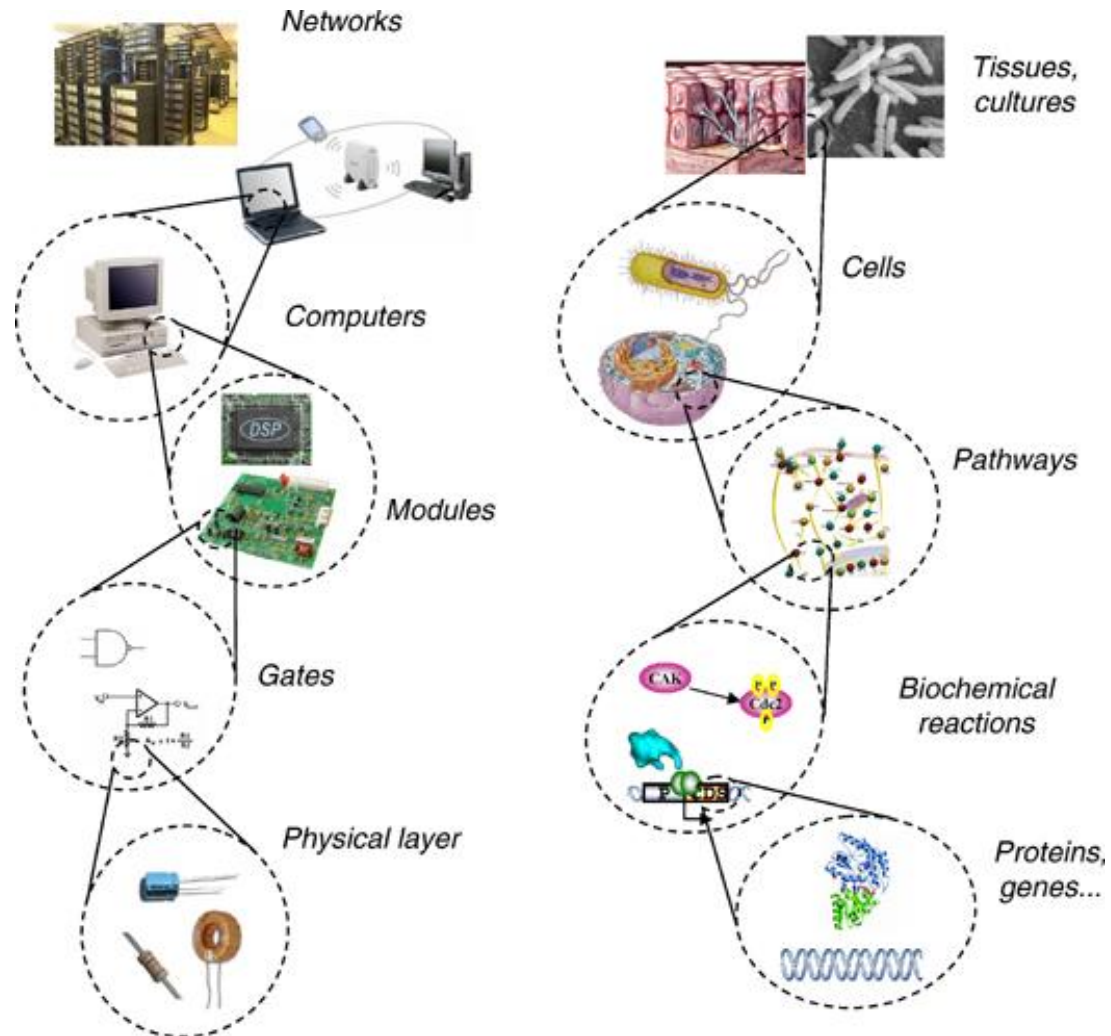
# Synthetic Biology



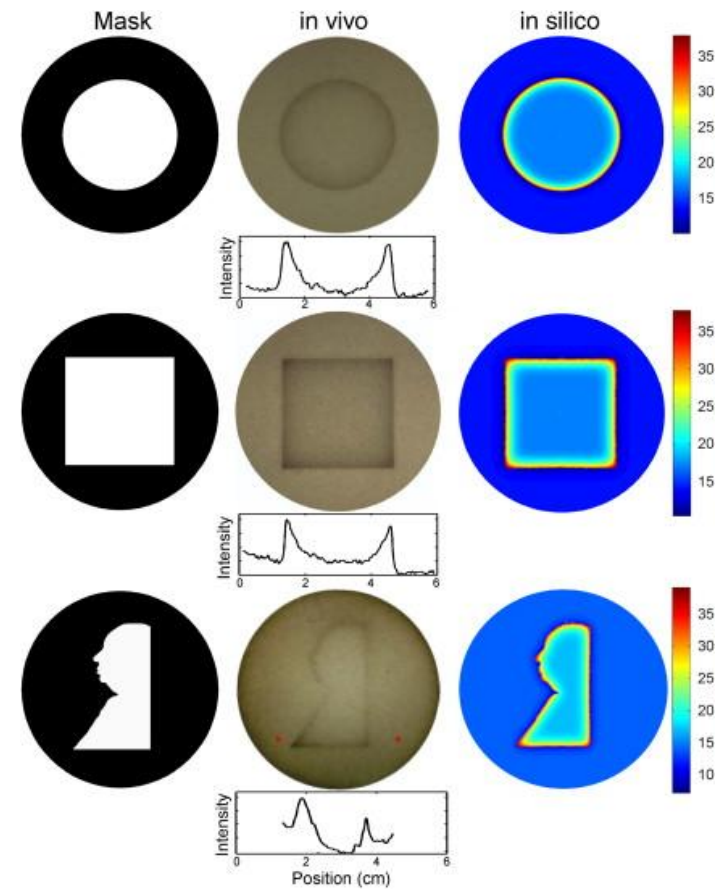
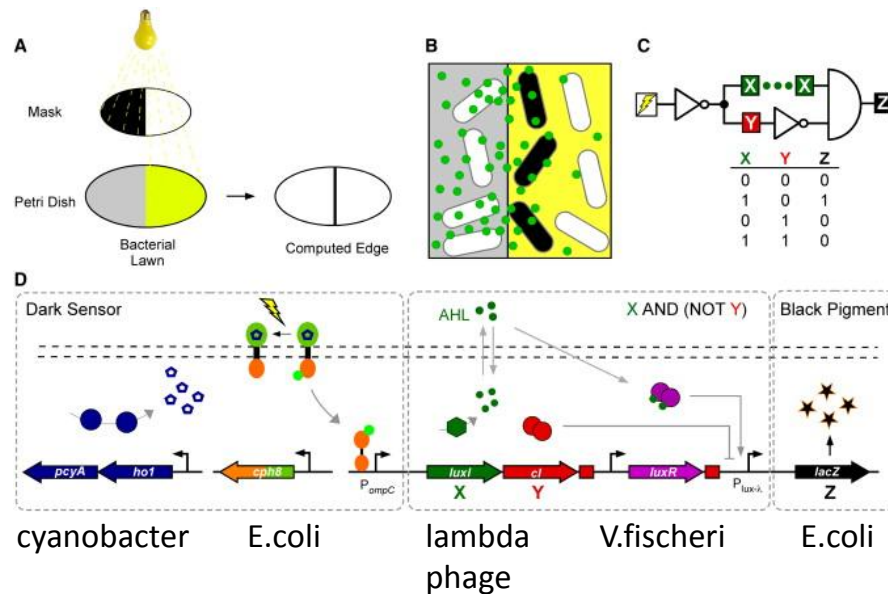
Synthetic biology is the **engineering** of biology: the synthesis of complex, biologically based (or inspired) systems which display functions that do not exist in nature.

*Source: High-level Expert Group European Commission*

# Engineering Biology

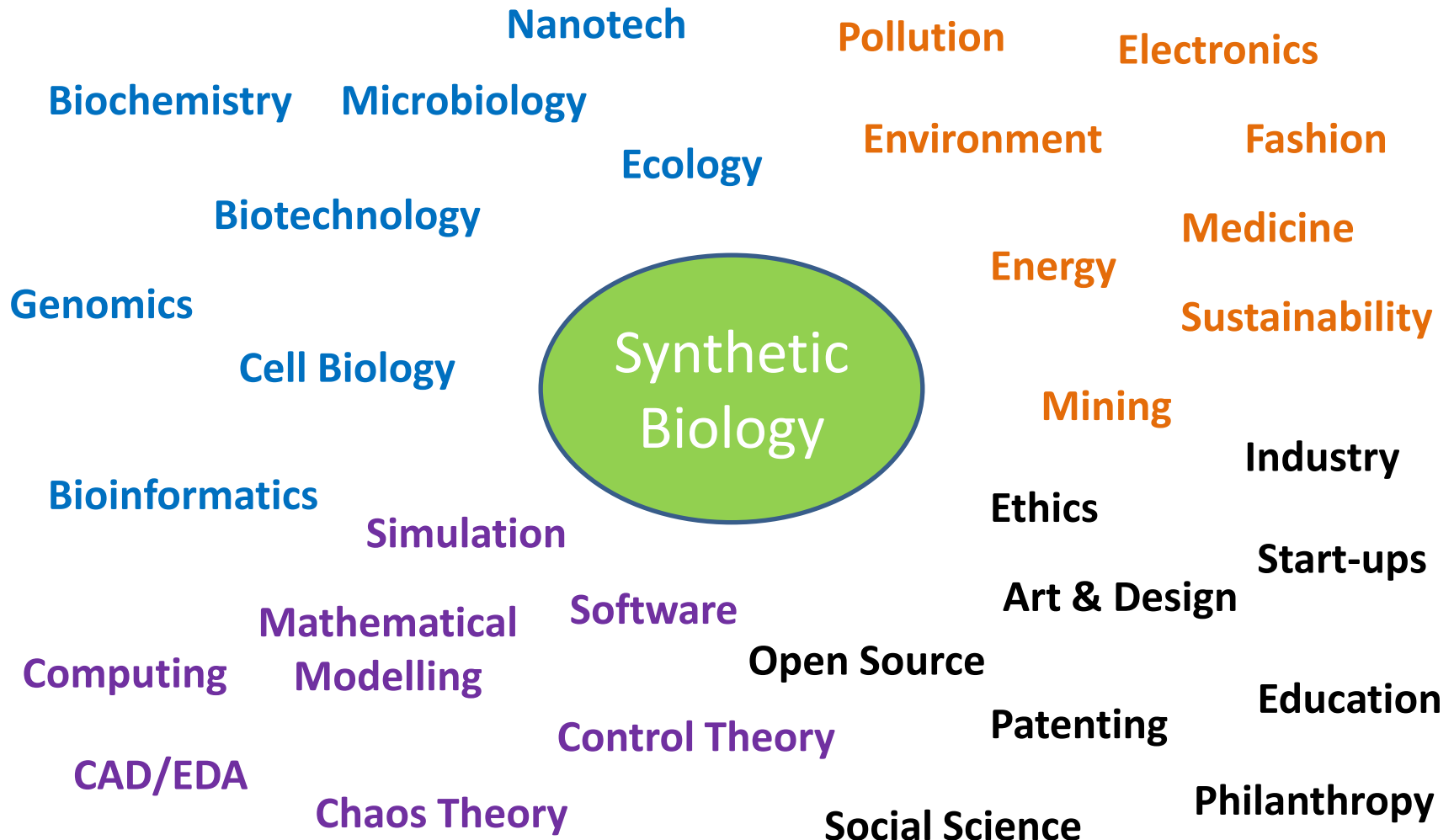


# Rewriting biology to give new function



Following an abstraction similar to electronic engineering

# Bringing together disciplines





# Auxin

Imperial College  
London

Project AuxIn

Achievements

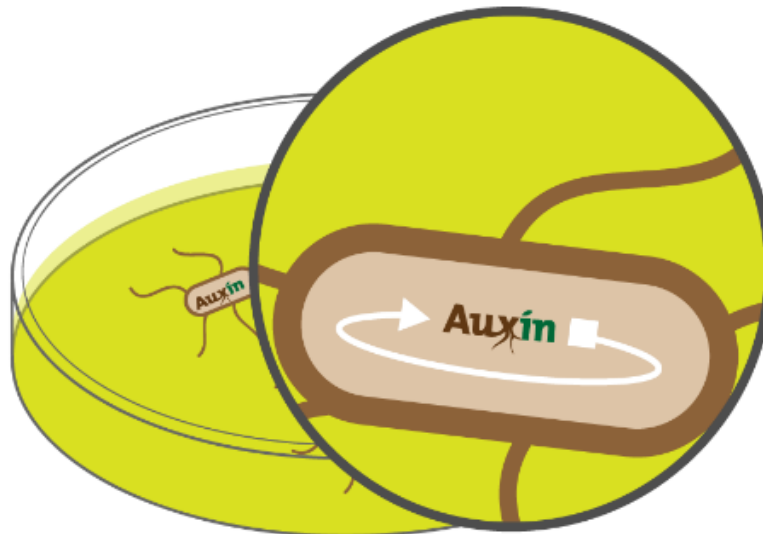
Human Practice

Extras

Team

If you cannot view the photo gallery below, please click [here](#) to view our alternative home page or download the Adobe Flash Player [here](#).

## PHOTO GALLERY



Project AuxIn aims to help fight desertification by promoting plant root growth using engineered bacteria. Re-vegetation is one of the most effective ways to prevent soil erosion. The project consists of three modules – Phyto-Route, Auxin Xpress, and Gene Guard. (Click to learn more)

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AT A GLANCE

MAIN RESULTS

DATA

Follow us on



The Radio\_iGEM Show



The Radio\_iGEM Show

[Jamboree Part 3 - The Results](#)



INFO



FANS



TRACKS

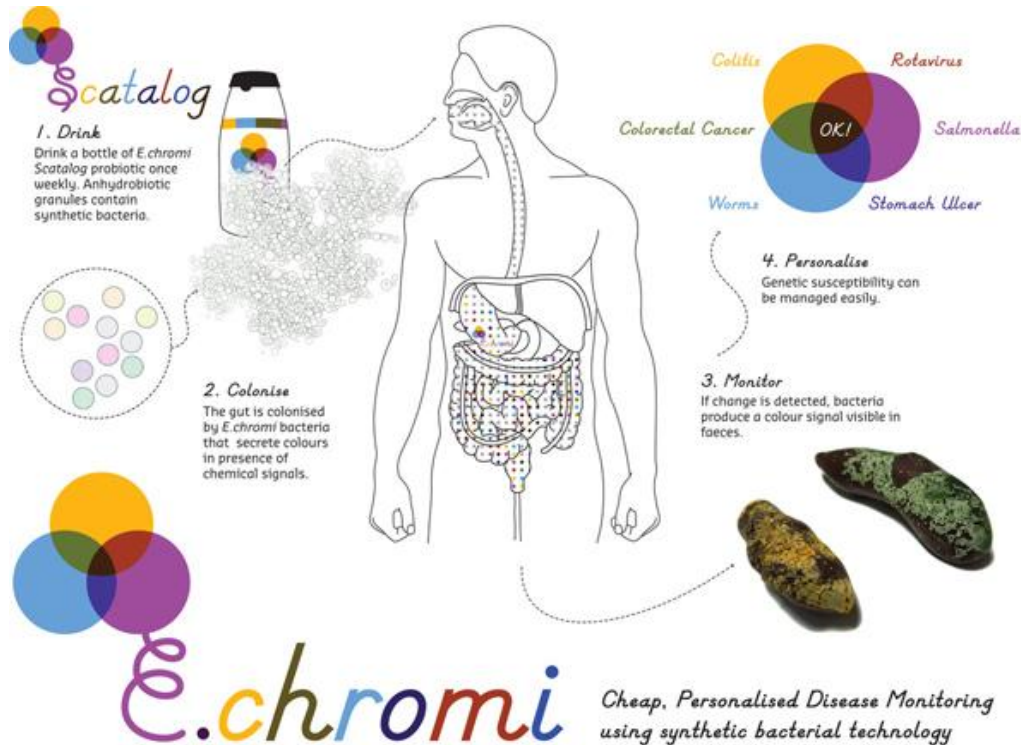


CHAT



EPISODES

# What could synthetic biology give us?



With James King and Daisy Ginsberg



# Course Structure

## Lectures:

- Introductory Biology for Bioengineers OR Introductory Engineering for Life Scientists
- Foundations of synthetic biology
- Applications of synthetic biology

## Workshop:

- Ethics of synthetic biology 25/1

## Classes and Coursework:

- Computer modelling project and write-up Deadline 21/1 (BE) 30/1 (LS)
- Wet-lab practical and data-analysis with questions Deadline 4/2

## Mini-iGEM Project:

- Mixed groups coming up with synthetic biology project idea
- Assessed group write-up of idea, inc. modelling, ethics and more... 14/2
- Assessed presentation of project 15/2

## Exams:

- Separate exams for Bioengineering and Life Science students

# Suggested Reading

Synthetic Biology: A Primer Textbook

<http://www.amazon.co.uk/Synthetic-Biology-Paul-S-Freemont/dp/1848168632>

The iGEM competition

[http://igem.org/Main\\_Page](http://igem.org/Main_Page)



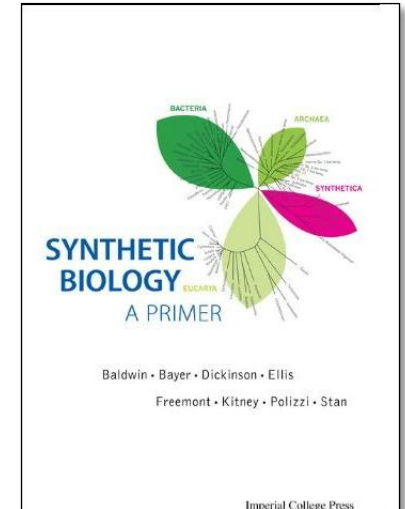
The BioBricks Parts Registry

[http://partsregistry.org/Main\\_Page](http://partsregistry.org/Main_Page)



The Woodrow Wilson Project: synthetic biology 101

<http://www.synbioproject.org/topics/synbio101/>



David Shukman visits Imperial's Synthetic Biology Centre

<http://www.bbc.co.uk/news/science-environment-17511081>



Horizon 1 hour special on Synthetic Biology with Adam Rutherford

<http://www.bbc.co.uk/programmes/b01b45zh>



