Course: From DNA to Protein — credits: 5

Course code	BFVP23DNA
Name	From DNA to Protein
Study year	2023-2024
ECTS credits	5
Language	Dutch, with parts in English
Coordinator	W.A. Pool
Modes of delivery	Lecture Project-based learning
Assessments	Portfolio - Other assessment Theorie - Written, organised by School

Learning outcomes

You correctly name and describe the sequential steps of replication, transcription, translation and repair processes of DNA at the molecular level.

You describe the regulation of gene expression from transcriptional to post-translational levels for prokaryotic and eukaryotic systems.

You recognise DNA technologies cloning, PCR, sequencing, DNA array, and can explain their application in practice

You explain the influence of evolutionary processes on the genome

You independently describe biological concepts based on English literature in a form that is understandable and appealing to a layperson

You summarise study texts meaningfully in appropriate textual or graphic form

You work in a team on a project in which you recognise, realistically prioritise, distribute, implement and evaluate tasks

Content

The module starts with an introduction in which various cases/topics are presented. You choose a topic from these, which is the common thread running through the course. Under the guidance of a lecturer, in small project groups you master the necessary biological and chemical theory on how hereditary information enables important biomolecules to work in a cell. There are weekly workshops on various biological topics and study skills needed to complete the group assignment. Together with fellow students (under the guidance of a lecturer), you make your own arrangements and a schedule to study and practise the material taught using given learning materials. Halfway through the module, you present your progress as a group to the rest of the class. During the course of this module, you will also work on developing a game or multimedia product that represents "the central dogma" of molecular biology: this may be a computer game, a board or card game, or a film or (stop-motion) animation, or a similar product. You will give feedback on each other's created products after having played or seen them.

Included in programme(s)

Bio-Informatics

School(s)

Institute for Life Science & Technology

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