Hanze

Course: Laboratory Introduction — credits: 5

Course code	BOVP23RINTROLAB
Name	Laboratory Introduction
Study year	2023-2024
ECTS credits	5
Language	Dutch, with parts in English
Coordinator	J.A. Komduur

Modes of delivery	Lecture Practical / Training Teaching method 1 Tutorial
Assessments	Inleiding Biologie en Chemie - Computer, organised by STAD examinations Laboratoriumvaardigheden - Other assessment

Learning outcomes

This module has the following learning outcomes:

You work safely, making solutions in water from solid pure substances and working with micropipettes according to standard instructions and rules under supervision in the biomedical laboratory;

You explain the diversity of life from the theory of evolution and possess knowledge of the different domains of life according to current scientific knowledge and at the level described in the BOKS;

You describe atomic structure and chemical bonds and predict properties of atoms using the Periodic Table of Elements and quantum theory according to current scientific insights and at the level described in the BOKS;

You reason out the 3-D structure (VSEPR) for molecules, predict properties (electronegativity) for molecules and salts and name the systematic name and formula (IUPAC) according to current scientific insights and at the level described in the BOKS;

You find your way around Hanze University independently, work independently within the Hanze University's digital learning environment, know your mentor group and fellow students, and study English-language study material independently (e.g. college-level textbooks).

DAS competencies

Competency	Level (I-IV)
Research	I
Experimentation	I
Development	
Management	I
Advise	
Instruction	I
Leadership	
Self-management	I

Content

In this module, you will correctly learn the basic operations of working in a biological laboratory (weighing, dissolving, pipetting with micropipettes) taking into account safety and environmental aspects. You need knowledge of chemistry to estimate the properties of a substance and its correct name and formula. With the Periodic Table of Elements and knowledge of modern atomic theory, you learn about the chemical properties of atoms to know what type of compounds they prefer to form.

In Biology classes, you will learn about the diversity of life from the theory of evolution and discover the different domains of life (prokaryotes, archaea, eukaryotes). In the tutorials, you will complete assignments to practise the material, learn to use English terms and acquire general study skills.

To prepare for module 3's basic maths skills, 4x maths lessons (fractions/calculus rules/scientific notation/solving first- and second-degree equations) are given to refresh your knowledge.

Included in programme(s)

Major Biology and Medical Research

School(s)

Institute for Life Science & Technology

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