Hanze

Course: Calculation and Preparation of Buffers and Solutions — credits: 5

Course code	BOVP23RBBBO
Name	Calculation and Preparation of Buffers and Solutions
Study year	2026-2027
ECTS credits	5
Language	Dutch, with parts in English
Coordinator	G.J.H. Hofstede
Modes of delivery	Lecture Practical / Training Tutorial
Assessments	Buffers and Solutions - Other assessment Chemical Calculations - Written, organised by STAD examinations

Learning outcomes

This module has the following learning outcomes:

You apply knowledge about chemical reactions and describe which factors determine their rate according to current scientific knowledge for a biological experiment

You calculate the composition of buffers by applying knowledge of acids and bases according to the chemistry methodologies for use in a biological and medical laboratory.

You use general laboratory skills and standard laboratory equipment based on GLP rules to make buffers and solutions according to prescribed protocols in a biological and medical laboratory.

DAS competencies

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

Content

In the Calculate and Prepare Buffers and Solutions module, you will learn to perform various calculations and conversions using units commonly used in the laboratory to make requested buffers and solutions applicable to a biological experiment. The module provides a direct link of chemistry to a biological laboratory by making buffers and highlighting the properties of buffer capacity in a biological laboratory.

Included in programme(s)

Major Biology and Medical Research

School(s)

Engineering, Life Sciences & ICT

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