

Course: Urinary System

credits: 5

Course code BOVP23MDURINEWEG
Name Urinary System
Study year 2026-2027
ECTS credits 5
Language Dutch, with parts in English
Coordinator A.I.R. Spanjer

Modes of delivery Assignment
 Practical / Training
 Tutorial
Assessments Urologische Diagnostiek en Statistiek - Other assessment

Learning outcomes

You will identify, describe and visualise the anatomy, histology and physiology of the urinary tract by analysing a patient case using self-assessment tests and clinical chemistry methods for determining creatinine and protein levels in urine samples.

You will apply basic statistical skills, including the normal distribution and confidence intervals, to datasets relating to creatinine and protein measurements, and visualise the results using Excel in order to assess data quality in terms of variability and reproducibility.

You will carry out the creatinine and protein measurements correctly in accordance with the guidelines, applying the theory of redox reactions; you will understand the principles of spectrophotometry and the resulting calculations, and explain these during a laboratory session.

You plan and evaluate your own study work and adjust your learning accordingly, thereby taking ownership of your learning process; you reflect in a reflection report on collaborating with fellow students and the importance of effective study methods.

DAS competencies

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

Content

In this module, you will study the anatomy, physiology and histology of a healthy and a diseased kidney using patient case studies. You will do this by dissecting a kidney (macroscopic level) and by staining and examining histological sections (microscopic level). In addition, you will find an image of a histological section from a kidney patient, so that you can identify the differences at the histological level. You will compile the results of the associated assignments in your anatomy portfolio.

You will then take on the role of a medical analyst and study the effect of kidney damage in these patients in the laboratory by carrying out protein and creatinine assays. You will learn to relate the results of the experiments to the extent of kidney damage in a patient. Using Excel, you will learn to structure and visualise the data you generate. To interpret the structured data, you will apply basic statistical skills to a dataset. To conclude, you will individually demonstrate that you can create a correlated calibration curve and that you can visualise and structure a dataset and apply statistical tests to it. At the start of the module, you will evaluate your study habits and consciously adjust them throughout the module. At the end of this module, you will reflect on your study habits and your collaboration with fellow students over the past term.

Included in programme(s)

Major Medical Diagnostics

School(s)

Engineering, Life Sciences & ICT

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