

## Methodology of Nutritional Research (D012497)

**Course size** *(nominal values; actual values may depend on programme)*

**Credits 5.0**

**Study time 150 h**

**Course offerings in academic year 2024-2025**

A (semester 1)

English

Gent

**Lecturers in academic year 2024-2025**

Lapauw, Bruno

GE35

lecturer-in-charge

Coucke, Paul

GE31

co-lecturer

Laukens, Debby

GE35

co-lecturer

**Offered in the following programmes in 2024-2025**

[Master of Science in Biomedical Sciences](#)

**crdts**

5

**offering**

A

**Teaching languages**

English

**Keywords**

Nutrition related research, research methodologies, nutritional research study design, food databases, dietary intake, nutritional epidemiology, nutritional analyses, biomarkers & body composition, energy requirements, translational research, isotope research

**Position of the course**

This course is a basic course and aims to provide students with an overview of the main directions and methodological aspects of contemporary nutrition-related research.

**Contents**

Methodological aspects of nutrition related research; interpretation and implementation of nutritional research; research methods for analysis of body composition and substrate metabolism; epidemiology & nutrition: use of databases; methods to register dietary intake and calculate nutrient intake; use of animal models in nutritional research - translational research; food analysis: methods to measure concentrations of nutrients and toxins; genetics in nutrition-related research; *Omic* applications

**Initial competences**

Having completed successfully the bachelor degree in biomedical sciences or having acquired the relevant learning outcomes by other means.

**Final competences**

- 1 Having acquired knowledge of the most important methodological aspects of translational and human nutrition research.
- 2 Being able to critically evaluate methodological aspects of nutritional research for their applicability, relevance, and utilization, and to independently apply standard research procedures.
- 3 Performing a critical appraisal of published nutrition research.
- 4 Apply methodological aspects of nutrition research within the field of epidemiology.
- 5 Understanding the most important translational research models in nutrition.
- 6 To critically review the methods of investigating human nutritional status through recording and calculating dietary intake, determining body composition and laboratory methods. Assess the applicability of these methods.

**Conditions for credit contract**

Access to this course unit via a credit contract is determined after successful competences assessment

**Conditions for exam contract**

This course unit cannot be taken via an exam contract

**Teaching methods**

Group work, Lecture, Practical, Work placement, Peer teaching

**Study material**

Type: Slides

Name: Course and illustrative materials will be provided by the different teachers.

Indicative price: Free or paid by faculty

Optional: no

Language : English

Available on Ufora : Yes

**References**

Relevant literature will be provide during classes. General background can be found in:

- Nutrition Research Methodologies. 2015 (Lovegrove, Hodson, Sharma, Lanham-New; Eds) - Wiley Blackwell, ISBN 978-1-118-55467-8
- Introduction to nutrition and health research. 2001 (Koh, Owens, Eds) - Kluwer, London, ISBN 0-7923-7983-7
- Willett W. Nutritional Epidemiology. 1998; Oxford - University Press, New York; ISBN 0-19-512297-6
- Gibson RS. Principles of nutritional assessment 2005; Oxford University Press, New York; ISBN10: 0195171691
- All available at the library of the Endocrinology department

**Course content-related study coaching**

Please contact the responsible teacher (Prof. Dr. B. Lapauw) via 003293322130

**Assessment moments**

end-of-term and continuous assessment

**Examination methods in case of periodic assessment during the first examination period**

Oral assessment, Written assessment with multiple-choice questions, Written assessment with open-ended questions

**Examination methods in case of periodic assessment during the second examination period**

Oral assessment, Written assessment with multiple-choice questions, Written assessment with open-ended questions

**Examination methods in case of permanent assessment**

Skills test, Participation, Presentation, Assignment

**Possibilities of retake in case of permanent assessment**

examination during the second examination period is possible in modified form

**Calculation of the examination mark**

60 % periodic evaluation

40 % non periodic evaluation

Participation to the practica is a necessary condition to succeed for the course.

Absence in the practica results in a total score (theory + practicum) of maximum 9/20, independent the score of the theoretical part.