



## Biotechnologische technieken in medische diagnostiek (C002697)

Cursusomvang (nominale waarden; effectieve waarden kunnen verschillen per opleiding)

Studiepunten 3.0      Studietijd 80 u      Contacturen 25.0 u

Aanbodsessies en werkvormen in academiejaar 2018-2019

B (semester 2)      Engels      hoorcollege      25.0 u

Lesgevers in academiejaar 2018-2019

Deforce, Dieter      FW01      Verantwoordelijk lesgever

Aangeboden in onderstaande opleidingen in 2018-2019

	stptn	aanbodsessie
<a href="#">Master of Science in Biochemistry and Biotechnology</a>	3	B
<a href="#">Uitwisselingsprogramma biochemie en biotechnologie (niveau master)</a>	3	B

Onderwijstalen

Engels

Trefwoorden

diagnostics, DNA, genetic analysis, immunologic assays

Situering

The goal of this course is to provide the student with a profound insight and knowledge pertaining the broad application of biotechnological techniques in the field of medical diagnostics, more specifically PCR, automated DNA sequencing, geneexpression analysis, micro-array and derivatives thereof used in diagnostics. In addition will this course provide the student a prospective view of the possible applications and the applications in development of biotechnological medical diagnostics this by means of recent literature.

This course contributes to the following program competencies: MA WE.BB.1.1, MA WE.BB.1.2, MA WE.BB.1.4, MA WE.BB.2.1, MA WE.BB.2.2, MA WE.BB.2.6, MA WE.BB.3.2, MA WE.BB.5.1, MA WE.BB.6.3

Inhoud

In the first section all biotechnological techniques used, or which could be used in medical diagnostics will be explained in depth both technically and theoretically. In the second section an overview will be given of the numerous medical diagnosis which can be performed by using one or more of the biotechnological techniques discussed in the first section. The advantages and the disadvantages of these biotechnological diagnostics compared to other diagnostic techniques will be discussed. In the third section the international regulatory aspects, quality control and the necessary validations pertaining these biotechnological medical diagnostic products and the difficulties in this area will be discussed.

Begincompetenties

Previous education in the life sciences equivalent with the level of Master of Science in Biochemistry and Biotechnology.

Eindcompetenties

- 1 Profound knowledge about the biotechnological techniques used in medical diagnostics.
- 2 Knowing the principles and the pit-falls, being able to critically interpret the data of such analysis.
- 3 In depth knowledge of the PCR, automated DNA sequencing, geneexpression analysis, micro-array and derivatives thereof used in diagnostics.

Creditcontractvoorwaarde

Toelating tot dit opleidingsonderdeel via creditcontract is mogelijk mits gunstige beoordeling van de competenties

#### Examencontractvoorwaarde

Dit opleidingsonderdeel kan niet via examencontract gevolgd worden

#### Didactische werkvormen

Hoorcollege

#### Leermateriaal

The student will have a syllabus, which will also be published on the internet, at his disposition in addition to scientific literature and scientific information of biotechnological medical diagnostic kits. Slides of the lessons are also available on the internet:

<http://allserv.ugent.be/~ddeforce/English/courses.htm>

Geraamde totaalprijs: 10 EUR

#### Referenties

<http://allserv.ugent.be/~ddeforce/English/courses.htm>

#### Vakinhoudelijke studiebegeleiding

Prof. Deforce is the contact person for coaching concerning course related subjects.

#### Evaluatiemomenten

periodegebonden evaluatie

#### Evaluatievormen bij periodegebonden evaluatie in de eerste examenperiode

Schriftelijk examen met open vragen

#### Evaluatievormen bij periodegebonden evaluatie in de tweede examenperiode

Schriftelijk examen met open vragen

#### Evaluatievormen bij niet-periodegebonden evaluatie

#### Tweede examenkans in geval van niet-periodegebonden evaluatie

Niet van toepassing

#### Eindscoreberekening

schriftelijk examen: 100%