

Infectious diseases and antimicrobial therapy (J000426)

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

Credits	3.0	Study time	90 h	Contact hrs	20.0 h
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Course offerings and teaching methods in academic year 2018-2019

A (semester 1)	Dutch	guided self-study	10.0 h
		lecture	10.0 h

Lecturers in academic year 2018-2019

Coenye, Tom	FW02	lecturer-in-charge
Claus, Barbara	FW02	co-lecturer

Offered in the following programmes in 2018-2019

Master of Science in Pharmaceutical Care	crdts	offering
	3	A

Teaching languages

Dutch

Keywords

Antibiotics, antimicrobial therapy, resistance, microbiology, bacteriology, infections, PK/PD of antibiotics

Position of the course

Adequate antimicrobial therapy is the central key point of this course. First, it requires good knowledge of the anti-infectious treatment modalities (spectrum of activity and resistance patterns). Second, a correct PK/PD interpretation of the treated population is of major importance. Both aspects form the content of this course, and are essential to build up an accurate pharmaceutical recommendation.

Contents

1. Spectrum of activity of antibiotics (with link to the problem of resistance), with the pathology as starting point and with reference to the BAPCOC guidelines (specific for the Belgian context)
2. Detailed discussion of the problem of antimicrobial resistance and discussion of strategies to avoid misuse and concomitant development of resistance against antimicrobial therapy
3. Changes in PK/PD of antimicrobial therapy in selected patient groups (obese patients, patients with a gastric bypass, children, cystic fibrosis patients, ...)
4. Capita selecta/specific topics in microbiology relevant for pharmacists. Examples of topics which can be included are the importance of hand hygiene, the role of the human microbiome in health and disease, faecal transplants, probiotics, ...

Initial competences

Having successfully completed courses in General microbiology, Pharmacology and Pharmacokinetics, or having acquired the corresponding competences in another way. This course needs to be followed together with Biotechnology and protein drugs.

Final competences

- 1 To have insight in the scientific background of a number of important infectious diseases.
- 2 To understand why certain antimicrobial agents are prescribed for certain infectious conditions.
- 3 To have a thorough understanding of the BAPCOC guidelines and to be able to apply these in practice.
- 4 To understand the origin and consequences of antimicrobial resistance.
- 5 To have a thorough understanding of the measures taken to reduce development of

- antimicrobial resistance and to be able to apply these in practice.
- 6 To have a good insight in the PK/PD of antibiotics in specific groups of patients.
 - 7 To be able to give recommendations on appropriate use of antimicrobial therapy to patients belonging to specific groups.

Conditions for credit contract

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

Conditions for exam contract

Access to this course unit via an exam contract is unrestricted

Teaching methods

Guided self-study, lecture

Learning materials and price

Slides used during lectures will be made freely available via Minerva.

References

None

Course content-related study coaching

Students have the possibility to ask questions before, during or after the lectures. Questions will also be answered on other times, but for this the students are asked to make an appointment (individual or in group).

Evaluation methods

end-of-term evaluation

Examination methods in case of periodic evaluation during the first examination period

Written examination

Examination methods in case of periodic evaluation during the second examination period

Written examination

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

not applicable

Calculation of the examination mark

The final result is the sum of the results obtained for the part on infectious diseases (partim T. Coenye), the part on PK/PD of anti-infectious agents (partim B. Claus), and the part on the BAPCOC guidelines. A student can only pass if he/she obtained at least 50% of the total score on each part. If this is not the case, the student will receive a maximum total score of 6/20.