Course syllabus for

Microbiology 2, 7.5 credits

Mikrobiologi 2, 7.5 hp

This course has been cancelled, for further information see Transitional provisions in the last version of the syllabus.

Please note that the course syllabus is available in the following versions:
Autumn2012 , Autumn2013 , Autumn2014

Course code	1BA061
Course name	Microbiology 2
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Biomedical Laboratory Science
Level	G2 - First cycle 2
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Laboratory Medicine
Decided by	Programnämnd 6 (Biomedicinsk analytiker- och Röntgensjuksköterskeprogrammen)
Decision date	2012-05-09
Revised by	Education committee LABMED
Last revision	2020-09-02
Course syllabus valid from	Autumn 2014

Specific entry requirements

Passed courses about at least 105 credits from semester 1-4 at biomedical laboratory science programme Specialization Laboratory Medicine and passed course in Microbiology - methodology and diagnostics.

Objectives

The overall aim of the course is that the student should acquire advanced knowledge in microbiology through theoretical and practical studies.

Knowledge and understanding
On completion of the course, the student should be able to:

- account for fungi and parasites that are of clinical importance
- identify basic pathogenic mechanisms in microorganisms, which are important in interaction with man
- explain how antibiotics and antivirals function on a molecular level

- show how viruses and bacterial vectors are used for different purposes and be to perform analysis of protein expression using different reporter genes

Skills and abilities
On completion of the course, the student should be able to:

- Develop a research plan and its contents to be able to carry out a scientific study
- Independently, based on method descriptions, be able to plan and carry out different methods for susceptibility testing, sterile technique and microbial gene transfer by means of the today dominating systems for gene transfer
- Interpret, evaluate and compare his own data with expected results and general principles critically
- Orally and in writing account for and discuss relevant original- and review literature concerning issues within infection and microbiology and analyse and compile these.

Judgement and approach
On completion of the course, the student should be able to:

- Apply a professional attitude by show ability to good cooperation
- Analyse and identify his need of additional knowledge to develop his skills

Content

The course starts with advanced lectures on fungus and parasites. Viruses and the different pathogenic mechanisms of bacteria are brought up and antiviral treatment and antibiotics.

A large part of the course is occupied by a project. Before starting of this the student writes a project plan that is then reviewed by a supervisor. During the project period, the student works independently with the analyses that should be performed, these are then summarized in a written report and presented orally in a follow-up seminar where the students review and objects on one another's work.

In the written report is included also that the students search, analyse and compile current scientific literature within the project

Projectwork, 3.0 hp

Grading scale: VU

For project work, a project written and scientific articles are prepared (Article seminar). When the project is finished it is summarized in a laboratory report. The project is described later verbally and the studentas are also reviewing each other's work.

Microbiology, theory, 4.5 hp

Grading scale: VU

Microbiological theory include lectures in microbiology, parasitology and mycology. And article review of microbial pathogenesis.

Teaching methods

The teaching includes lectures, seminars, laboratory sessions, study visit and project work.

All seminars are compulsory. In case of absence from seminar, an agreement between the student and responsible teacher concerning compensation is made.

Examination

The course be examined through:
1. Written laboratory report of the project work. Grade: Fail/Pass/Pass with distinction
2. Respondentship/opposition on the project work. Grade Fail/Pass
3. Written individual examination. Grade: Fail/Pass/Pass with distinction
For the grade Pass in the whole course, at least grade Pass in all included parts is required For the grade Pass with distinction in the whole course, the grade Pass with distinction in the laboratory report is required and examination and Pass on other parts.

Laboratory sessions, seminars and study visits are compulsory. In case of absence from compulsory parts, an agreement between the student and responsible teacher concerning supplementary qualification is made.

In case of absence an agreement concerning supplementary examination is made between the student and the responsible teacher. One re-examination is given in connection to the course and during a re-examination week in August. At failed laboratory session or clinical placement, the student has the opportunity to make if the laboratory session/clinical placement at another occasion.

Transitional provisions

The course has been cancelled and was offered for the last time in the autumn semester of 2019. Examination will be provided until the spring of 2021 for students who have not completed the course.

Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Board of Higher Education.

Literature and other teaching aids

Murray, Patrick R.; Rosenthal, Kenneth S.0 319233; Pfaller, Michael A.
Medical microbiology

5. ed. : St. Louis : Mosby, cop. 2005 - x, 963 s.
ISBN:0-323-03303-2 LIBRIS-ID:9878822
Library search

Ringsrud, Karen Munson; Linné, Jean Jorgenson
Linné & Ringsrud's Clinical laboratory science : the basics and routine techniques
Turgeon, Mary L.

5. ed. /b [editor] Mary L. Turgeon : St. Louis, Mo. : Mosby Elsevier, cop. 2007 - xiv, 608 s.
ISBN:0-323-03412-8 LIBRIS-ID:10255799
Library search