Linnæus University

Jnr: 2015/2185-3.1.2

Course syllabus

Faculty of Health and Life Sciences
Department of Chemistry and Biomedical Sciences

2BL508 Transfusionsmedicin med laboratoriemetodik, 4,5 högskolepoäng

Transfusion Medicine and Laboratory Methodology, 4.5 credits

Main field of study
Biomedical Laboratory Science, Biomedical Science

Subject Group
Biomedical Laboratory Science

Level of classification
First Level

Progression
G2F

Date of Ratification
Approved by Faculty of Health and Life Sciences 2015-07-02
The course syllabus is valid from autumn semester 2015

Prerequisites
Fundamental Laboratory Methodology 7.5 credits, Biochemistry 7.5 credits, Biochemical Laboratory Methodology 7.5 credits, Care and ethics, clinical course, 7.5 credits, Cell and Molecular Biology with Laboratory Methodology 15 credits, Anatomy and Physiology with Fundamental Clinical Laboratory Methodology 15 credits, Pathophysiology and Internal Medicine 7.5 credits, Clinical Immunology with Laboratory Methodology 7.5 credits, Clinical Microbiology with Laboratory Methodology 7.5 credits, Hematology and laboratory methodology, 4.5 credits Clinical Chemistry with Laboratory Methodology, 6 credits, or equivalent.

Objectives

Sub-course 1: Transfusion Medicine: Theory 1.5 credits

After completing the subcourse the student should be able to:
- Describe the major blood group systems ABO, Rh and Kell and give a general description of other blood group systems of clinical significance;- Give an account of the theoretical background of and the work that is done in transfusion medicine, such as blood typing and antigen typing, blood transfusion, identification of antibodies and compatibility testing;- Demonstrate insight into the laws and regulations and the quality assurance aspects that regulate work within transfusion medicine.

Sub-course 2: Biomedical Laboratory Science: Theory and Laboratory Work 3 credits

After completing the subcourse the student should be able to:
- Give an account of the principles for drawing blood from blood donors, division into

various blood components and the storage thereof;- Conduct and give an account of the analysis methods for blood group serology such as slide and tube techniques as well as their applications in blood typing, compatibility testing and antibody screening/identification, and give an account of gel techniques, and- Compile the results in a written laboratory report and critically evaluate a fellow student's report through feedback.

Content

Sub-course 1: Transfusion Medicine: Theory 1.5 credits

- Blood group systems, blood typing, blood transfusion, antibody screening/ identification, compatibility testing and the preparation and storage of blood components.- Laws and regulations and quality assurance.

Sub-course 2: Biomedical Laboratory Science: Theory and Laboratory Work 3 credits

- Analysis methods for blood group serology, such as tube, slide and gel techniques along with their applications in blood typing, compatibility testing and antibody screening/identification.- Blood typing with the slide technique for determining ABO groups and with the tube technique for blood grouping with regard to the RhD gene.- Anti-human globulin techniques for the screening and identification of irregular antibodies in plasma.- Compilation of a laboratory results in a scientific report as well as providing feedback.

Type of Instruction

Instruction consists of lectures, seminars, group exercises and laboratory work. Participation in seminars, group exercises, laboratory work and some specified lectures is obligatory.

Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.
The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail.

Sub-course 1 is examined in writing with the grades A, B, C, D, E, or F.
Sub-course 2 is examined in writing with the grades A, B, C, D, E, or F. Written laboratory reports, feedback and practical tests are examined with the grades A, B, C, D, E, or F. Passing sub-course 2 requires not only a passing grade on the written examination, but also passing grades for written laboratory reports, feedback and practical tests.

The results of each sub-course are weighed together in relation to the number of credits and determines the final grade.

The criteria needed to obtain a passing grade are listed in Goals (see above).

An opportunity to retake the exam is provided within six weeks during term time. The number of opportunities to take the exam may be limited to five.

Course Evaluation

A written course evaluation will be carried out during or towards the end of the course. The results and analysis of the course evaluation will be presented to current students and students taking the course on the next scheduled occasion.

Credit Overlap

The course cannot be included in a degree along with the following course/courses of which the content fully, or partly, corresponds to the content of this course:2BL008 Transfusion Medicine and Laboratory Methodology 4,5 credits.

Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material

Required reading

Daniels, G. & Bromilow, I. *Essential Guide to Blood Groups*. Blackwell. Latest edition or e-book.

Hoffbrandt, A. & Moss, P.A.H. *Essential Hematology*. Wiley-Blackwell Ltd. Latest edition.

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