



DEPARTMENT OF CHEMISTRY AND MOLECULAR BIOLOGY

BIO235 Immunology, 15 credits

Immunologi, 15 högskolepoäng

First Cycle

Confirmation

This course syllabus was confirmed by Department of Chemistry and Molecular Biology on 2014-06-11 and was last revised on 2018-06-13 to be valid from 2018-06-14, autumn semester of 2018.

Field of education: Science 100%

Department: Department of Chemistry and Molecular Biology

Position in the educational system

This is a first-cycle course in Biology designed to deepen the the knowledge in Immunology. The course can be included as part of a Bachelor's degree in Molecular Biology or Biology, or as part of a Master's degree in Molecular Biology, Biology or Genomics and Systems Biology. The course can also be taken as a freestanding course.

Main field of studies

Biology

Molecular Biology

Specialization

G2F, First Cycle, has at least 60 credits in first-cycle course/s as entry requirements

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Entry requirements

Students must have successfully completed the basic courses Cell Biology, BIO900, 15 hec, Molecular Genetics, BIO905, 15 hec, Biological Form and Function, BIO910, 15 hec, Ecology and Evolution, BIO915, 15 hec, and Biodiversity and Systematics, BIO920, 15 hec plus completed Chemistry, 30 hec or other equivalent courses.

English proficiency is required to the level of English 6/English Course B from Swedish Upper Secondary School, or be certified by an international recognized test, for example TOEFL or IELTS.

Learning outcomes

At the end of the course;

Knowledge and understanding

Students will understand the basic principles of immune mechanisms at the cellular and molecular levels; they will know how these mechanisms and systems integrate with each other.

Competence and skills

Students will be able to predict the basic immune mechanisms underlying the individual's response to infectious agents, tumours and self antigens.

They will be capable of applying advanced methods to examine hypotheses experimentally.

Judgement and approach

The team-based group approach of the course will enable the students to integrate information for analysis of complex problems; they will gain new teamwork and interpersonal skills enabling effective research group work.

Course content

The course is build up by weekly themes. In the beginning of the week students receive lectures relevant to the theme. Time for self-study is then allocated and this is followed by a Team-Based Learning group session at the end of the week. The theme "immunological techniques" covers two weeks; includes analysis and interpretation of data, literature searches and compilation of a written report.

The following topics are covered:

- Innate immunity and antigen presentation
- Lymphocyte development and T cell activation.
- Humoral immunity
- Lymphocyte migration and homing
- Immunological techniques
- Immunity to infection and tumors- immunological tolerance

Form of teaching

See above

All items except lectures are compulsory.

Language of instruction: English

Assessment

Written examination 9 credits, written report 3 credits and seminar 3 credits.

The written exam is given twice a year; a regular examination at the end of the course and another opportunity to write the exam will be provided before the next year's regular exam.

The written report is examined twice a year; a regular examination during the course and another opportunity to hand in the report will be provided before the next year's regular examination of written reports.

Group seminars require active participation to achieve a passing grade. On occasional absence from group seminars the student is required to submit a written report of the theme discussed at the seminar. Systemic absence, lack of activity or knowledge during the seminars renders the failing grade. Should a student fail, the opportunity to complete the group seminars by participation in the next year's regular course will be given.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

Course evaluation

Course evaluation by students will be made by anonymous questionnaire. The teacher compiles an analysis of the course evaluation and provides suggestions for further development of the course. Analysis and suggestion will be communicated to the students and published on the University of Gothenburg's learning platform, GUL.