Department of Physics

Stockholm University

Education plan

for

Bachelor´s Programme in Biophysics
Kandidatprogram i biofysik

180.0 Higher Education Credits
180.0 ECTS credits

Programme code:	NBFFK
Valid from:	Autumn 2008
Date of approval:	2008-04-23
Department:	Department of Physics

Decision

Prerequisites and special admittance requirements

Swedish upper secondary school courses Mathematics D, Physics B and Chemistry B, or equivalent.

Programme structure

During the first two years the compulsory part of the program consists of courses in Physics and Mathematics, which are a necessity for successful studies in Bio-physics. In addition during the first Year an introductory course in Bio-Chemistry is also given. Mathematical methods are being implemented to study different thematics in Physics and to a less extent in Bio-Physics. During the third year, courses in Quantum physics and Bio-Physics are given.
To be admitted to third year a minimum of grade E is required on the first two years courses.

Goals

For a Bachelor's degree in Bio-Physics the student shall prove to have good knowledge and understanding of Physics and Bio-Physics, including deeper knowledge of a specific selected area of the field as well as being familiar with the actual research topics in the field including the ability of collecting, evaluating and critically assessing relevant information in the fields of Physics and Bio-Physics, the ability to communicate both oral and in writing to discuss and argue in front of different groups at national and international events is also a necessity.
Ability to participate in an independent manner in different research and development work, to take into consideration different relevant scientific, socio-political and ethical aspects and show understanding about the possibilities and limitations of Physics and Bio-Physics to provide answer to different questions as well as the role and answer of scientists in how these methods are being utilised and indentifying the need of new knowledge and take responsibility for a meanings full development of new knowledge.

Courses

First Year: Compulsory courses: Mathematics IGN 30credits*(MM2001),Mechanics GN 12credits*(FK3003),
Experimental Methods in PhysicsGN 10,5credits*(FK3005),Molecular life sciences GN 7,5 7,5 credits*(KB1003).

Second Year: Compulsory courses:
Mathematicial analysisIIIGN 7,5credits*(MM5001), Mathematicial analysis IV GN 7,5 credits* (MM5002),

Algebra II GN 7,5credits*(MM5004),Numerical methods for physicists GN 7,5credits*(BE3002), Electromagnetism GN 12credits*(FK4010),Optics and waves GN 10,5credits*(FK4009),Thermodynamics and statistical physics GN 7,5credits*(FK4008).

Third Year: Compulsory courses: Quantum mechanics I GN 7,5credits*(FK5011),Quantum mechanics II GN 7,5credits*, Bio-Physical Chemistry GN 15credits*(KB6004)*
Bio-Physics independent work GN 30 credits*, Selected courses(0-15credits*free choice from the Program).

Degree

Bachelor

Misc

Students who have been admitted to the program but have not finished the program during the tre years period, can ask for dispense to finish the program even after the program is ended. In this case limitations specified in the course plan are implemented. The Departments of Mathematics,Numerical Analysis and Datalogy, Bio-chemistry and Bio-physics,Inorganic chemistry and Structural Chemistry of Stockholm University are being involved in the program.