

Institut für Chemie und Biochemie Module descriptions for the bachelor program Chemistry

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Module: Basics of Radiochemistry				
University/Department/Institute: Freie Universität Berlin/Department of Biology, Chemistry, Pharmacy/Institute of Chemistry and Biochemistry				
Module supervisors: Lecturers of the module				
Entrance Requirements: none				
<b>Goals of Qualification</b> : Students have acquired basic knowledge of fundamental laws of radioactive decay, nuclear reactions, chemistry of radioactive elements and isotopes, application of radioactive elements in medicine and technology and the basics of radiation protection. They are able to use this knowledge when measuring nuclear radiation or for the synthesis of radioactive substances. They have acquired the basic knowledge to handle open radioactive substances and enclosed radiation sources safely as well as relevant measurement techniques.				
<b>Contents:</b> nuclear structure, elementary particles, nuclear radiation, natural and artificial radioactivity, interaction of emission and matter, measurement of nuclear radiation, principles of radiation protection, radiochemical analysis methods, radiochemical tags, nuclear medicine, chemistry of selected radioactive elements, transuranic elements, nuclear fission, nuclear disposal, basic regulations for working in a radiochemical laboratory, radioactive measurement techniques, classic radiochemical measurements, analytical methods in radiochemistry, handling of open radioactive compounds, radiochemical trace analysis (neutron activation analysis)				
Teaching methods	Hours of attendance (Hours per week)	Forms of active participation	Workload (hours)	
Teaching methods	Hours of attendance (Hours per week) 2	Forms of active participation -	Workload (hours) Presence (L) Pre-, post-preparation (L)	30 30
Teaching methods Lecture Safety relevant lab training	Hours of attendance (Hours per week) 2 30 hours	Forms of active participation - Conduction and written protocol of experiment	Workload (hours) Presence (L) Pre-, post-preparation (L) Presence (Lab) Pre-, post-preparation (Lab) Exam preparation and examination	30 30 30 30 30 30
Teaching methods Lecture Safety relevant lab training Language offer of lecture	Hours of attendance (Hours per week) 2 30 hours	Forms of active participation - Conduction and written protocol of experiment German, if required by circuma	Workload (hours) Presence (L) Pre-, post-preparation (L) Presence (Lab) Pre-, post-preparation (Lab) Exam preparation and examination stances: English	30 30 30 30 30
Teaching methods Lecture Safety relevant lab training Language offer of lecture Compulsory regular atten	Hours of attendance (Hours per week) 2 30 hours dance	Forms of active participation - Conduction and written protocol of experiment German, if required by circum Lecture attendance is recomm	Workload (hours) Presence (L) Pre-, post-preparation (L) Presence (Lab) Pre-, post-preparation (Lab) Exam preparation and examination stances: English nended, lab training: yes	30 30 30 30 30
Teaching methods Lecture Safety relevant lab training Language offer of lecture Compulsory regular atten Workload (total)	Hours of attendance (Hours per week) 2 30 hours dance	Forms of active participation	Workload (hours) Presence (L) Pre-, post-preparation (L) Presence (Lab) Pre-, post-preparation (Lab) Exam preparation and examination stances: English nended, lab training: yes	30 30 30 30 30 5 CP
Teaching methods Lecture Safety relevant lab training Language offer of lecture Compulsory regular atten Workload (total) Length of module	Hours of attendance (Hours per week) 2 30 hours dance	Forms of active participation	Workload (hours) Presence (L) Pre-, post-preparation (L) Presence (Lab) Pre-, post-preparation (Lab) Exam preparation and examination stances: English nended, lab training: yes	30 30 30 30 30 5 CP
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Teaching methods Lecture Safety relevant lab training Language offer of lecture Compulsory regular atten Workload (total) Length of module Examination Lecture is offered	Hours of attendance (Hours per week) 2 30 hours dance	Forms of active participation - Conduction and written protocol of experiment German, if required by circums Lecture attendance is recomm 150 hours One semester (Lab: one week Exam (120 minutes); The exam can also be conduc Every semester	Workload (hours) Presence (L) Pre-, post-preparation (L) Presence (Lab) Pre-, post-preparation (Lab) Exam preparation and examination stances: English nended, lab training: yes	30 30 30 30 30 5 CP

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No responsibility is taken for the correctness of this translation of the German document found at

http://www.bcp.fu-berlin.de/studium-lehre/studiengaenge/ordnungen/chemie\_container/03\_bsc\_chemie/chemie\_bc\_sto\_2013.pdf The English versions of the module descriptions are found at

http://www.bcp.fu-berlin.de/en/studium-lehre/studiengaenge/chemie/bachelor/modulbeschreibungen/index.html