University of Hradec Králové Faculty of Science

COURSE CATALOGUE



The Faculty of Science UHK (FoS UHK) was established in 2010. FoS UHK has over 600 students of biology, chemistry, informatics, mathematics, physics, toxicology and science teaching. The faculty is growing now more than ever, residing in the new modern university campus.

FoS UHK is the youngest faculty of the University of Hradec Králové which consists of **5 departments**:

- Department of Applied Cybernetics
- Department of Biology
- Department of Chemistry
- Department of Mathematics
- Department of Physics

We offer studies at all levels: Bachelor, Master and Ph.D.

INTERNATIONAL STUDENTS

International students can choose their courses taught in English from this Course catalogue as well as from other faculties of UHK, but there should be an overwhelming majority of courses from the Faculty of Science (at least 75 %). When seeking for scholarship students can make use of various international programs including our vast range of Eramus+ partners and other cooperations.

MODERN FACILITIES

Faculty resides in modern campus that includes laboratories, library, buffets, locker rooms and student lounges. The campus is situated within walking distance of the city centre and other university buildings.

Modern university in the heart of Europe

ACCOMMODATION

All international students are provided with accommodation at the university dormitory. The accommodation costs approx. ≤ 120 /month.



ABOUT THE UNIVERSITY OF HRADEC KRÁLOVÉ

The University of Hradec Králové is a public university (est. 1959) and provides high-quality education to almost 7,000 students. The UHK consists of 4 faculties: Faculty of Education, Faculty of Informatics and Management, Philosophical faculty and Faculty of Science.

There are several student organizations functioning at the UHK, including ESN Buddy System.

THE CITY OF HRADEC KRÁLOVÉ

Hradec Králové is located 100 km east from capital city, Prague. This city of 100,000 inhabitants is famous for its many parks and greenery as well as its historical and urban centre, social life and remarkable scenery at the confluence of Labe and Orlice rivers.

CONTACTS

For further information contact our International Office.

Please note that the course offer may change.

International Office

Mgr. Pavla Holubová pavla.holubova@uhk.cz + 420 493332817





Bachelor programs

Biology

Course title	Abbreviation*	Туре**	Semester	ECTS credits
Biological Methods	KBI/BBITE	Р	W	3
General Ecology	KBI/BOBEK	L+P	W	4
Phylogeny of Algae and Fungi	KBI/BFSSO	L+P	W	5
Cell Biology	KBI/BZABB	L+P	W	5
Geology	KBI/BZAGE	L+P	W	4
Math for Biology Students	KBI/BZAMA	L+S	W	4
Principles of Organic and Bioorganic Chemistry	KBI/BZOCH	L+P	W	4
Animal Anatomy and Morphology	KBI/BAMZI	L	W	3
Molecular Biology	KBI/BMOBI	L	W	3
Phylogeny of Vascular Plants	KBI/BFSVR	L+P	W	5
Microbiology	KBI/BMIBI	L+P	W	4
Human Anatomy	KBI/BANCL	L+P	W	4
Plant Physiology	KBI/BFYRO	L+P	W	5
Phylogeny of Vertebrates	KBI/BFSST	L+P	W	5
Evolutionary Biology	KBI/BEVBI	L	W	3
Legislation in Nature Conserva- tion	KBI/BLEZP	S	W	3
Seminar of Biology 1	KBI/BBIS1	S	W	2
Special Practice	KBI/BODPR	Р	W	5
Principles of Terraristics	KBI/BZTER	S	W	3
Alpine and Polar Ecology	KBI/BALPE	L+P	W	4
Dendrology	KBI/BDEND	S	W	3
Plants in Human Use	KBI/BUZRO	L	W	3
Principles of Geoinformatics	KBI/BUVGE	L+S	W	4
Basic Toxicology and Ecotoxicol- ogy	KBI/BZTOE	L+P	W	4
Biogeography	KBI/BBIOG	L	W	3
Basic Ethology	KBI/BZAET	L	W	3
Professional English Language 1	KBI/BANJ1	Р	W	2
Plant Anatomy and Morphology	KBI/BAMRO	L+P	S	5
Biochemistry	KBI/BBICH	L+P	S	4

Biophysics	KBI/BBIOF	L+P	S	3
Statistics	KBI/BZAST	L+P	S	4
Field Excursions of Botany	KBI/BBOTC	Р	S	3
Field Excursions of Geology	KBI/BGETC	Р	S	2
Genetics	KBI/BGENE	L+P	S	4
Plant Ecology	KBI/BEKRO	L+P	S	5
Phylogeny of Invertebrates	KBI/BFSBE	L+P	S	5
Conservation of Nature and Land- scape 1	KBI/BOPK1	S	S	3
Field Excursions of Zoology	KBI/BZCVT	Р	S	3
Animal Ecology	KBI/BEKZI	L+P	S	4
Comparative Animal Physiology	KBI/BSRFZ	L+P	S	5
Seminar of Biology 2	KBI/BBIS2	S	S	2
Ecology of Cyanobacteria and Algae	KBI/BEKSR	S+P	S	3
Pedology	KBI/BPEDO	S+P	S	4
Waste Management	KBI/BODHO	L	S	3
Environmental Chemistry	KBI/BCHZP	L+S	S	4
Analytical Chemistry	KBI/BANCH	L+P	S	4
Physical Geography	KBI/BFYGE	L+P	S	4
Hydrobiology	KBI/BHYDR	L+P	S	4
Agroecology	KBI/BAGRO	L+P	S	4
Professional English Language 2	KBI/BANJ2	Р	S	2



Chemistry

Course title	Abbreviation*	Туре**	Semester	ECTS credits
General and Inorganic Chemistry 1	KCH/BOAN1	L+S	W	4
Laboratory Technique	KCH/BLABT	LP	W	3
Fundamental Principles of Mathematics 1	KMA/BZAM1	L+S	W	4
Fundamentals in Physics 1	KCH/BFYZ1	L	W	3
History of Chemistry	КСН/ВНІСН	L	W	2
Occupational Safety in Chemistry	KCH/BBEPR	L	W	2
Professional English Language 1	KCH/BANJ1	Р	W	2
Chemical databases	KCH/BCHDA	Р	W	2
Cyber Security	KCH/BKYBE	L	W	2
Laboratory Practice in Physics 1	KCH/BLFY1	LP	W	3
Organic Chemistry 2	KCH/BORG2	L+S	W	6
Laboratory Practice in Organic Chemistry 2	KCH/BLOR2	LP	W	3
Physical Chemistry	KCH/BFYCH	L+S	W	3
Laboratory Practice in Physical Chemistry	KCH/BLFCH	LP	W	2
Analytical Chemistry 1	KCH/BANA1	L+S	W	4
Laboratory Practice in Analytical Chemistry 1	KCH/BLAN1	LP	W	3
Professional English Language 3	KCH/BANJ3	Р	W	2
Fundamentals in Toxicology and Pharmacology	KCH/BTOFA	L	W	2
Toxicology of Inorganic and Organic Compounds	KCH/BTAOS	L	W	3
Methods for Structural Study of Organic Compounds	KCH/BMSOS	S	W	2
Laboratory Practice in Structural Study of Organic Compounds	KCH/BLSOS	LP	W	2
Fundamentals in Medicinal Chemistry	KCH/BFACH	L	W	4
Fundamentals in Molecular Modelling	КСН/ВМОМО	L	W	2
Practice in Fundamentals of Molecular Modelling	КСН/ВСМОМ	Р	W	2

Laboratory Practice in Instrumen- tal Methods	KCH/BLINS	LP	W	2
Bachelor Thesis 1	KCH/BBAP1	LP	W	6
Microbiology	KCH/BMIKR	L	W	3
Laboratory Practice in Microbiology	KCH/BLMIK	LP	W	2
Technology and Environmental Protection	KCH/BTOZP	L	W	3
Toxicology and Analysis of Food	KCH/BTOAP	L	W	2
Legislation and Environment	KCH/BLEZP	L	W	2
Immunology	KCH/BIMUN	L	W	3
General and Inorganic Chemistry 2	KCH/BOAN2	L	S	4
Laboratory Practice in Inorganic Chemistry	KCH/BLANC	LP	S	2
Organic Chemistry 1	KCH/BORG1	L+S	S	3
Laboratory Practice in Organic Chemistry 1	KCH/BLOR1	LP	S	3
Fundamental Principles of Mathematics 2	KMA/BZAM2	L+S	S	3
Fundamentals in Physics 2	KCH/ BFYZ2	L	S	3
Basics of Statistics	KMA/BZAST	L+S	S	4
Professional English Language 2	KCH/BANJ2	Р	S	2
Laboratory Practice in Physics 2	KCH/BLFY2	LP	S	3
Advanced Procedures in MS Office	KCH/BPFOF	S	S	2
Fundamentals in Human Anatomy and Physiology	KCH/BANFY	L	S	3
Biophysics	KCH/BBIOF	L+S	S	3
Fundamentals in Algorithmization and Programming	KCH/BALPR	L+P	S	3
Reaction Mechanisms in Organic Chemistry	KCH/BREME	L+S	S	3
Chemical Software	KCH/BCHSO	S	S	2
Bachelor Thesis 2	KCH/BBAP2	LP	S	12
Analytical Chemistry 2	KCH/BANA2	L+S	S	4
Laboratory Practice in Analytical Chemistry 2	KCH/BLAN2	LP	S	3
Bioorganic Chemistry	KCH/BBIOR	L	S	4

Laboratory Practice in Bioorganic Chemistry	KCH/BLBIO	LP	S	3
Biochemistry	КСН/ВВІСН	L	S	4
Laboratory Practice in Biochem- istry	KCH/BLBCH	LP	S	2
Professional English Language 4	KCH/BANJ4	Р	S	3
Laboratory Practice in Separa- tions Methods	KCH/BLSEM	LP	S	2
Fundamentals in Cellular Molecu- lar Biology	КСН/ВМОВВ	L	S	3
Development of Dynamic Website	KCH/BDYWE	Р	S	2
Chemical and Biological Terrorism	КСН/ВСНВТ	L	S	2
Toxicology of Plant and Animal Toxins	KCH/BTRZJ	L	S	3
Methodology of Scientific Work	KCH/BMETP	Р	S	1

* more information can be found on:

https://stag.uhk.cz/portal/studium/prohlizeni.html?pc_lang=en

** Lecture (L), Seminar (S), Practice (P), Laboratory Practice (LP)

Mathematics

Course title	Abbreviation*	Туре**	Semester	ECTS credits
Mathematical Analysis 1	KMA/PMAL1	L+P	W	6
English Language 1	KMA/PANG1	Р	W	2
Financial Mathematics 1	KMA/PFIM1	L+P	W	4
Economics 1	KMA/PEKO1	L+P	W	6
Fundamentals of Informatics	KMA/PZINF	Р	W	2
Fundamental Principles of Math- ematics 1	KMA/PMZA1	L+P	W	8
Introduction to Mathematics	KMA/PUSTM	Р	W	2
Mathematical Analysis 3	KMA/PMAL3	L+P	W	8
Geometry 1	KMA/BGEO1	L+P	W	4
Banking	KMA/PBANI	L+P	W	4

Database Systems 1	KMA/PDSY1	L+P	W	3
Mathematical Statistics 1	KMA/PMST1	L+P	W	6
Insurance Law	KMA/PPOJP	L+P	W	4
Fundamentals of Numerical Mathematics	KMA/PZNUM	L+P	W	3
Difference Equations	KMA/NDIFR	L	W	2
Geometry 3	KMA/BGEO3	L+P	W	3
Methods of Solving Mathematical Tasks 1	KMA/PMER1	Р	W	2
Insurance Policies	KMA/PPOJI	L+P	W	6
Statistical Analysis of Financial Markets	KMA/PSAFT	L+P	W	6
Financial Mathematics 4	KMA/PFIM4	L+P	W	4
Fundamentals of Mathematical Modelling	KMA/PZMOD	L+P	W	3
History of Mathematics	KMA/PDEJM	L	W	2
Bachelor Thesis 1	KMA/PBPR1	Р	W	4
Surfaces and solids	KMA/PPLOT	Р	W	2
Chapters from Algebra 1	KMA/PKAL1	L	W	2
Professional Practice 2	KMA/POPR2	Р	W	2
Mathematical Analysis 2	KMA/PMAL2	L+P	S	6
English Language 2	KMA/PANG2	Р	S	4
Geometry 2	KMA/BGEO2	L+P	S	4
Algebra 2	KMA/BALG2	L+P	S	5
Financial Mathematics 2	KMA/PFIM2	L+P	S	4
Mathematical Software	KMA/PFMSW	Р	S	2
Economics 2	KMA/PEKO2	L+P	S	4
Fundamental Principles of Math- ematics 2	KMA/PMZA2	L+P	S	5
Fundamentals of Probability and Statistics	KMA/PZPRS	L+P	S	6
Fundamentals of Combinatorics	KMA/PZKOM	L+P	S	6
Methods of Solving Mathematical Tasks	KMA/PMER2	Р	S	2
Discrete Mathematics	KMA/PDISK	L+P	S	6
Financial Mathematics 3	KMA/PFIM3	L+P	S	4
Optimization	KMA/PFOPT	L+P	S	5

Mathematical Statistics 2	KMA/PMST2	L+P	S	5
Geometry 4	KMA/BGEO4	L+P	S	3
Accounting	KMA/PUCET	L+P	S	7
Introduction to Didactics of Math- ematics	KMA/BUDIM	Ρ	S	4
Professional Practice 1	KMA/POPR1	Р	S	3
Bachelor Thesis 2	KMA/PBPR2	Р	S	11
Typography of Mathematics Texts	KMA/BSTEX	Р	S	2
Chapters on Probability and Statistics	KMA/BKKPS	Р	S	2
Mathematical texts in English	KMA/BMTAJ	Р	S	2
An Introduction to Topology	KMA/BZTOP	L+P	S	2
Modeling of economic processes	KMA/PMOEP	L	S	2
Introduction to Mathematical Economy	KMA/PUMEK	L	S	2

** Lecture (L), Seminar (S), Practice (P), Laboratory Practice (LP)

Physics

Course title	Abbreviation*	Туре**	Semester	ECTS credits
Descriptive Geometry	KFY/BDEGE	L+S	W	3
Additional Mathematics 1	KFY/BDM1	LP	W	2
Pro-seminar in Physics 1	KFY/BFYP1	LP	W	2
Measurement of Physical Quantities	KFY/BMFV	S	W	3
Mathematics for Physics 1	KFY/BMZF1	L+S	W	4
English for Specific Purposes	KFY/BOAN1	LP	W	3
Programming, Computers 1	KFY/BPP1	Р	W	4
General Physics - Mechanics	KFY/BZFM	L+S	W	5
Basics of Chemistry	KFY/BZCH	LP	W	2
Basics of measuring instruments	KFY/BZMER	LP	W	2

Physical Laboratory 2	KFY/BFP2	Р	W	4
Physical Foundations of Computer 2	KFY/BFZP2	L+S	W	3
Numerical Methods 1	KFY/BNM1	L+S	W	4
Practical Instrumental Techniques 2	KFY/BPPT2	LP	W	2
Programming, Computers 3	KFY/BPP3	L+S	W	4
Instrumental Techniques 2	KFY/BPTE2	L	W	3
Systems of CAD 2	KFY/BSC2	S	W	2
Principles of Physics - Electricity 2	KFY/BZFE2	L+S	W	6
Automation and Measurement	KFY/BAM	L+S	W	3
Physical Laboratory 4	KFY/BFP4	Р	W	3
History of Measurement	KFY/BHM	LP	W	3
Mathematical Statistics	KFY/BMS	L+S	W	4
Monitoring systems of the envi- ronment and health protection	KFY/BMSOP	L+S	W	3
Computer and experiment 2	KFY/BPE2	LP	W	4
Principles of Electronics	KFY/BZE	L+S	W	4
Principles of Physics - Particles and Fields	KFY/BZFCP	L+S	W	4
Additional Mathematics 2	KFY/BDM2	LP	S	2
Additional Mathematics 2 Physical Laboratory 1	KFY/BDM2 KFY/BFP1	LP S	S S	2 3
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1	KFY/BDM2 KFY/BFP1 KFY/BFZP1	LP S LP	S S S	2 3 2
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2	LP S LP L+S	S S S S	2 3 2 3
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2	LP S LP L+S LP	S S S S S	2 3 2 3 3 3
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2	LP S LP L+S LP L+S	S S S S S S	2 3 2 3 3 3 3
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2 KFY/BPTE1	LP S LP L+S LP L+S L+S L+S	S S S S S S S S	2 3 2 3 3 3 3 4
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1 Systems of CAD 1	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2 KFY/BPTE1 KFY/BSC1	LP S LP L+S LP L+S L+S S	S S S S S S S S S	2 3 2 3 3 3 4 3
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1 Systems of CAD 1 Principles of Physics - Electricity 1	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2 KFY/BPP2 KFY/BPTE1 KFY/BSC1 KFY/BZFE1	LP S LP L+S L+S L+S S L+S S L+S	S S S S S S S S S S S	2 3 2 3 3 3 4 3 3 3
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1 Systems of CAD 1 Principles of Physics - Electricity 1 General Physics - Heat	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2 KFY/BPTE1 KFY/BSC1 KFY/BZFE1 KFY/BZFT	LP S LP L+S L+S L+S S L+S L+S L+S	S S S S S S S S S S S S S	2 3 2 3 3 3 4 3 3 4 3 4 4
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1 Systems of CAD 1 Principles of Physics - Electricity 1 General Physics - Heat Physical Laboratory 3	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2 KFY/BPTE1 KFY/BSC1 KFY/BZFE1 KFY/BZFT KFY/BZFT	LP S LP L+S L+S L+S S L+S L+S P	S S S S S S S S S S S S S S	2 3 2 3 3 3 4 3 3 4 3 4 4 4
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1 Systems of CAD 1 Principles of Physics - Electricity 1 General Physics - Heat Physical Laboratory 3 Numerical Methods 2	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2 KFY/BPTE1 KFY/BSC1 KFY/BZFE1 KFY/BZFT KFY/BZFT KFY/BFP3 KFY/BNM2	LP S LP L+S L+S L+S S L+S L+S L+S P L+S	S S S S S S S S S S S S S S S S	2 3 2 3 3 3 3 4 3 3 4 3 4 4 4 4
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1 Systems of CAD 1 Principles of Physics - Electricity 1 General Physics - Heat Physical Laboratory 3 Numerical Methods 2 Computer and experiment 1	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2 KFY/BPTE1 KFY/BSC1 KFY/BZFE1 KFY/BZFT KFY/BZFT KFY/BFP3 KFY/BNM2 KFY/BPE1	LP S LP L+S L+S L+S L+S L+S L+S L+S L+S L+S L+S	S S S S S S S S S S S S S S S S S	2 3 2 3 3 3 4 3 3 4 4 4 4 4 4
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1 Systems of CAD 1 Principles of Physics - Electricity 1 General Physics - Heat Physical Laboratory 3 Numerical Methods 2 Computer and experiment 1 Practical Instrumental Techniques 3	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2 KFY/BPP2 KFY/BPT1 KFY/BZFT KFY/BZFT KFY/BZFT KFY/BFP3 KFY/BPP3 KFY/BPP1 KFY/BPPT3	LP S LP L+S L+S L+S S L+S L+S L+S L+S P L+S LP P	S S S S S S S S S S S S S S S S S S S	2 3 2 3 3 3 4 3 3 4 4 4 4 4 4 1
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1 Systems of CAD 1 Principles of Physics - Electricity 1 General Physics - Heat Physical Laboratory 3 Numerical Methods 2 Computer and experiment 1 Practical Instrumental Techniques 3 Programming, Computers 4	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BOAN2 KFY/BPP2 KFY/BPTE1 KFY/BZFE1 KFY/BZFE1 KFY/BZFT KFY/BFP3 KFY/BNM2 KFY/BPP1 KFY/BPP13 KFY/BPP4	LP S LP L+S L+S L+S S L+S L+S L+S L+S L+S L+S L	S S S S S S S S S S S S S S S S S S S	2 3 2 3 3 3 4 3 3 4 4 4 4 4 4 1 5
Additional Mathematics 2 Physical Laboratory 1 Physical Basics of Computers 1 Mathematics for Physics 2 English for Specific Purposes 2 Programming, Computers 2 Instrumental Techniques 1 Systems of CAD 1 Principles of Physics - Electricity 1 General Physics - Heat Physical Laboratory 3 Numerical Methods 2 Computer and experiment 1 Practical Instrumental Techniques 3 Programming, Computers 4 Instrumental Techniques 3	KFY/BDM2 KFY/BFP1 KFY/BFZP1 KFY/BMZF2 KFY/BOAN2 KFY/BPP2 KFY/BPP2 KFY/BPT1 KFY/BZFT KFY/BZFT KFY/BZFT KFY/BFP3 KFY/BPP3 KFY/BPP1 KFY/BPP13 KFY/BPP4 KFY/BPT3	LP S LP L+S L+S L+S L+S L+S L+S L+S L+S L+S L+S	S S S S S S S S S S S S S S S S S S S	2 3 2 3 3 4 3 3 4 3 4 4 4 4 4 4 1 5 2

Fundamentals of Physics - Oscillations and Waves	KFY/BZFKV	L+S	S	5
Physical Laboratory 5	KFY/BFP5	Р	S	3
Bachelor thesis	KFY/BKP	Р	S	15
Practice	KFY/BPX	Р	S	12

* more information can be found on:

https://stag.uhk.cz/portal/studium/prohlizeni.html?pc_lang=en



Master programs



Biology

Course title	Abbreviation*	Type**	Semester	ECTS credits
Landscape Ecology	KBI/NEKKR	L+P	W	5
Conservation of Nature and Landscape 2	KBI/NOPK2	L+P	W	5
Seminar of Biology 1	KBI/NBIS1	S	W	3
Ecotoxicology	KBI/NEKTO	L+P	W	4
Biological Monitoring	KBI/NBIOM	L	W	4
Physiology of Plant Nutrition	KBI/NFYVR	L+P	W	4
Vegetation of Selected Ecosystems of Europe	KBI/NVVEE	L+P	W	6
Мусоlоду	KBI/NMYKO	S	W	3
Water and Wetland Plants	KBI/NVMRO	Р	W	4
Methods of Molecular Biology	KBI/NMEMB	Р	W	3
Geology and Geomorphology of Czech Landscape	KBI/NGGKC	L	W	3
Practical Dendrology	KBI/NPRDE	Р	W	3
Special Field Practice of Botany	KBI/NSBTC	Р	W	3
Entomology	KBI/NENTO	L+P	W	6
Animal Ecophysiology	KBI/NEKFZ	L+P	W	6
Zoological Methods	KBI/NMEZP	Р	W	3
Biology of Freshwater Invertebrates	KBI/NBIVB	S	W	3
Parasitology	KBI/NPARA	L	W	3
Mammaliology	KBI/NMAMA	L	W	3
Ornithology	KBI/NORNI	L	W	3
Biology of Ants	KBI/NBIMR	S	W	3
Genome Evolution	KBI/NEVGE	L	W	4
Special Microbiology	KBI/NSPMI	L+P	W	6
Work with Risky Agents	KBI/NPVRA	L+P	W	4
Nanotechnology	KBI/NNANO	S	W	3
Restoration Ecology	KBI/NEKOB	L	S	5
Developmental Biology	KBI/NDEBI	S	S	3
Seminar of Biology 2	KBI/NBIS2	S	S	3
Biotechnology	KBI/NBIOT	L	S	4

Molecular Ecology	KBI/NMOEK	L+C	S	3
Biotopes of the Czech Republic	KBI/NBICR	L+P	S	6
Plant Ecophysiology	KBI/NEKFR	L+P	S	6
Forest Ecology	KBI/NEKLE	L+P	S	4
Pharmacological Botany	KBI/NFABO	L	S	3
Plant Biotechnology	KBI/NROBI	L+P	S	5
Phytogeography	KBI/NFYGE	S	S	4
Changes of Landscape and Climate	KBI/NZKAK	S	S	3
Natural Toxins	KBI/NPRTO	L	S	3
Bryology and Lichenology	KBI/NBRLI	S	S	3
Landscape Planning	KBI/NUPKU	S	S	3
Scientific Illustration	KBI/NVEDI	L+P	S	4
Czech Vertebrates	KBI/NOBCR	L+S	S	6
Practices from Animal Morphology	KBI/NCVMZ	Р	S	3
Malacozoology	KBI/NMALA	S	S	3
Ethology	KBI/NETOL	S	S	3
Biology of Terrestrial Invertebrates	KBI/NBITB	S	S	3
Genomics and Proteomics	KBI/NGEPR	L+P	S	5
GMO	KBI/NGEMO	S	S	4
Food Safety	KBI/NBEPO	S	S	3



Chemistry

Course title	Abbreviation*	Type**	Semester	ECTS credits
Advanced Inorganic Chemistry	KCH/NPANC	L	W	3
Advanced Organic Chemistry	KCH/NPORG	L+S	W	4
Laboratory Practice in Advanced Organic Chemistry	KCH/NLORG	LP	W	2
Advanced Molecular Modelling	KCH/NPMOM	L	W	3
Laboratory Practice in Advanced Molecular Modelling	KCH/NCMOM	Р	W	2
Heterocyclic Chemistry	KCH/NCHHE	L	W	2
Laboratory Practice in NMR	KCH/NLNMR	LP	W	2
Advanced Molecular Biology	KCH/NPMOB	L	W	3
Laboratory Practice in Advanced Molecular Biology	KCH/NLMOB	LP	W	2
Applied Toxicology and Ecotoxicology	KCH/NAPTE	L	W	3
Sampling and Sample Preparation	KCH/NOPVZ	L	W	2
Laboratory Practice in Sampling and Sample Preparation	KCH/NLOPV	LP	W	2
Mass Spectroscopy	KCH/NHMSP	L	3	3
Advanced Biochemical Methods	KCH/NPBCH	L	3	3
Laboratory Practice in Advanced Biochemical Methods	KCH/NLBCH	LP	3	2
Electromigration Methods	KCH/NELME	L	3	2
Advanced Medicinal Chemistry	KCH/NPFAC	L	3	4
QSAR	KCH/NQSAR	L	3	2
Preparation of Synthetic Drugs	KCH/NPSYL	L	3	3
Laboratory Practice in Preparation of Synthetic Drugs	KCH/NLPSY	LP	3	2
Toxicology of Natural and Bioactive Compounds	KCH/NTPBS	L	3	3
Pathobiochemistry	KCH/NPATB	L	3	2
Toxicology of Nanoparticles	KCH/NTONA	L	3	2
Military and Agrochemical Toxicology	KCH/NTOVA	L	3	2
Genomics and proteomics	KCH/NGEPR	L	3	3
Diploma Thesis 1	KCH/NDIP1	LP	W	3

Diploma Thesis 3	KCH/NDIP3	LP	3	5
Bioinorganic chemistry	KCH/NBIAN	L	S	3
Advanced Bioorganic Chemistry	KCH/NPBIO	L	S	4
Laboratory Practice in Advanced Bioorganic Chemistry	KCH/NLBIO	LP	S	2
Chromatographic Methods	KCH/NCHRM	L	S	3
Laboratory Practice in Chromatographic Methods	KCH/NLCHR	LP	S	2
Molecular and Atomic Spectrometry	KCH/NMASP	L	S	3
Laboratory Practice in Molecular and Atomic Spectrometry	KCH/NLMAS	LP	S	2
Stereochemistry	KCH/NSTER	L	S	3
Biostatistics	KCH/NBIOS	S	S	3
Analysis of Biological Samples	KCH/NABIV	L	S	2
Ecotoxicological Bioassays	KCH/NEKOT	LP	S	2
Diploma Thesis 2	KCH/NDIP2	LP	S	5
Diploma Thesis 4	KCH/NDIP4	LP	S	10

** Lecture (L), Seminar (S), Practice (P), Laboratory Practice (LP)

Mathematics

Course title	Abbreviation*	Туре**	Semester	ECTS credits
Methods of Solving Mathematical Tasks 1	KMA/NMER1	Р	W	2
Didactics of Mathematics 1	KMA/NDMA1	L+P	W	2
Introduction to Theory of Differential Equations	KMA/NUTDR	L+P	W	5
Continuous Teaching Practice 1	KMA/NPPS1	Р	W	2
Probability	KMA/NPRAV	L+P	W	2
Didactics of Mathematics 3	KMA/NDMA3	L+P	W	4

Graph Theory	KMA/NTEOG	L+P	W	3
History of Mathematics	KMA/NDEJM	L	W	2
Mathematical Analysis-Selected Chapters	KMA/NVKAN	L	W	2
Financial Mathematics	KMA/NFINM	L+P	W	2
Matrix Algebra	KMA/NMATA	L	W	2
Introduction to Algebraic Topology	KMA/NUATO	L	W	2
Methods of Solving Mathematical Tasks 1	KMA/NMER2	Ρ	S	2
Set Theory	KMA/NTMNO	L	S	2
Didactics of Mathematics 2	KMA/NDMA2	L+P	S	2
Continuous Teaching Practice 2	KMA/NPPS2	Р	S	2
Didactic Software	KMA/NDISW	Р	S	2
Block Teaching Practice - Mathematics	KMA/NPPSS	Р	S	4
Selected Topics from Algebra	KMA/NUTEC	L	S	2
Theory of Metric Spaces-Introduction	KMA/NUMPR	L	S	2
Introduction to Algebraic Geometry	KMA/NUAGE	L	S	2
Introduction to measure theory	KMA/NTEOM	L	S	2
Generating Functions	KMA/NVYTF	L	S	2
Introduction to Theory of Functions of Complex Variable	KMA/NUTKF	L	S	2



Physics

Course title	Abbreviation*	Туре**	Semester	ECTS credits
Astrophysics and Geophysics	KFY/NASTR	L	W	3
Biophysics and Systems of Imaging in Biomedicine	KFY/NBZS1	Р	W	2
Laboratory Measurements and Modelling I	KFY/NLMM1	LP	W	3
Modelling and Simulation I	KFY/NMS1	Р	W	4
Mathematics for Theoretical Physics	KFY/NMTF	Р	W	2
Mathematics I: Functions of Several Variables, Differential Equations	KFY/NM1DR	L+S	w	6
Advanced Programming I	KFY/NPPP1	LP	W	4
Theoretical Mechanics 1	KFY/NTM	L+S	W	6
Experiments in Modern Physics	KFY/NEMF	Р	W	3
Fundamental Experiments and Historical Measurements	KFY/NFEHM	L+S	W	3
Models in Physics (Secondary School)	KFY/NFM	L	W	2
Condensed Matter Physics I	KFY/NFPK	L+S	W	5
Physical Principles of Technology I	KFY/NFZT	L+S	W	3
Modelling and Simulation III	KFY/NMS3	Р	W	2
Mathematics III: Processing of Measurement Data	KFY/NM3ZH	L+S	W	4
Computer and Model Formation II	KFY/NPTM2	LP	W	3
Theory of Relativity	KFY/NTR	L	W	3
Biophysics and Imaging Systems in Biomedicine	KFY/NBZS2	Р	S	2
Quantum Physics	KFY/NKF	L+S	S	5
Laboratory Measurements and Modelling II	KFY/NLMM2	LP	S	3
Modelling and Simulation II	KFY/NMS2	Р	S	3
Mathematics II: Functions of Several Variables, Differential Equations	KFY/NM2DR	L+S	S	5
Advanced Programming II	KFY/NPPP2	LP	S	4

Computer and Model Formation I	KFY/NPTM1	LP	S	4
Theory of Electromagnetic Field	KFY/NTEP	L+S	S	4
Thesis	KFY/NDP	Р	S	15
Practice	KFY/NPX	Р	S	12



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