

Bachelor's Degree Program

Physical Engineering

Specialization Physical Engineering of Materials

1st year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus	01MAN	Pošta, Pelantová	4+4 z	-	4	-
Calculus 1, examination ⁽¹⁾	01MANZ	Pošta, Pelantová	- zk	-	4	-
Linear Algebra 1	01LAL	Ambrož, Dvořáková	2+2 z	-	2	-
Linear Algebra 1, examination ⁽²⁾	01LALZ	Ambrož, Dvořáková	- zk	-	2	-
Mechanics	02MECH	Břeň, Novotný P.	4+2 z	-	4	-
Mechanics, examination	02MECHZ	Břeň	- zk	-	2	-
History of Physics 1	02DEF1	Jex	2+0 z	-	2	-
Basics of Programming	18ZPRO	Jarý, Vírúš	2+2 z	-	4	-
Preparatory week	00PT	FJFI	1 týden z	-	2	-
Calculus 2	01MAN2	Pelantová, Pošta	-	4+4 z, zk	-	8
Linear Algebra 2	01LAL2	Dvořáková, Ambrož	-	2+2 z, zk	-	4
Electricity and Magnetism	02ELMA	Hrivnák, Chadzitaskos	-	4+2 z, zk	-	6
Heat and Molecular Physics	02TER	Jizba, Zatloukal	-	2+2 z, zk	-	4
Introduction to Engineering	17UING	Fřýbort, Haušild, Mušálek	2+1 kz	-	3	-
Language Courses ⁽³⁾	04.	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Minimum in Mathematics 1	00MAM1	Břeň	0+1 z	-	1	-
Minimum in Mathematics 2	00MAM2	Pošta	0+1 z	-	1	-
History of Physics 2	02DEF2	Jex, Myška	-	2+0 z	-	2
Foundations of Physical Measurements 1, 2	02ZM12	Chaloupka, Škoda	2+0 zk	0+4 kz	2	4
Basic Work with PC	16ZPSP	Vrba T.	0+2 z	-	2	-
Introduction to UNIX	12UNXAP	Liska	-	1+1 z	-	2
General Chemistry 1, 2 ⁽⁴⁾	15CH12	Čuba, Distler, Motl	2+1 z	2+1 z, zk	3	3
Conversation Seminar in English ⁽⁵⁾	04AKS	Kovářová, Rafajová	-	0+2 z	-	1

(1) Examination in 01MANZ can be taken provided the assessment in 01MAN is obtained.

(2) Examination in 01LALZ can be taken provided the assessment in 01LAL is obtained.

(3) Enrollment in language courses follows the rules given separately.

(4) Enrollment in 15CH2 is possible only after passing 15CH1.

(5) Limited enrollment capacity.

Bachelor's Degree Program

Physical Engineering

Specialization Physical Engineering of Materials

2nd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus B 3, 4	01ANB34	Krbálek, Strachota	4+4 z, zk	2+4 z, zk	8	6
Numerical Methods 1	12NME1	Limpouch, Váchal	-	2+2 z, zk	-	4
Waves, Optics and Atomic Physics	02VOAF	Novotný P., Schmidt	4+2 z, zk	-	6	-
Thermodynamics and Statistical Physics	02TSFA	Jex, Novotný J.	-	2+2 z, zk	-	4
Analytical Mechanics ⁽¹⁾	02ANM	Hrivnák, Novotný P.	2+2 z, zk	-	4	-
Engineering Mechanics	14TEM	Kunz	2+2 z, zk	-	4	-
Differential Equations	01DIFR	Beneš, Strachota	-	2+2 z, zk	-	4
Dynamics of Linear Systems	14DYLS	Kunz	-	1+1 z, zk	-	2
Electron Microscopy	14ELM	Karlík	-	2+0 kz	-	2
Language Courses ⁽²⁾	04..	KHVJ	-	-	-	-
<i>Required optional courses ⁽³⁾</i>						
Materials Characterization	14CHMA	Haušild, Tesař	2+1 kz	-	4	-
Experimental Laboratory 1, 2	02PRA12	Bielčík	0+4 kz	0+4 kz	6	6
Practicum in Materials	14PMA	Karlík, Tesař	-	0+2 kz	-	3
<i>Social Sciences ⁽⁴⁾</i>						
Introduction to Psychology	00UPSY	Hajíček	-	0+2 z	-	1
Introduction to Law	00UPRA	Čech	-	0+2 z	-	1
Rhetoric	00RET	Kovářová	-	0+2 z	-	1
Ethics in Science and Technology	00ETV	Hajíček	-	0+2 z	-	1
<i>Optional courses:</i>						
Experimental Physics	02EXF	Křížková- Gajdošová	2+0 zk	-	2	-
Introduction to Probability 1, 2	01UP12	Krbálek, Vybíral	1+1 z, zk	1+1 z, zk	3	3
Seminar on Mathematical Physics	02SMF	Hlavatý	0+2 z	-	2	-
Basic Electronics 1, 2	12ZEL12	Pavel	2+1 z, zk	2+1 z, zk	3	3
Computer Algebra Systems	12PAS	Šiňor	1+1 z	-	2	-
Introduction to Scientific Computing	12UVP	Šiňor	-	1+1 z	-	2
Seminar on Solid State Physics	11SFIPL	Kalvoda	1+1 kz	-	2	-
Physical Training 1, 2	00TV12	ČVUT	- z	- z	1	1

(1) Examination in 02ANM can be taken only if 02MECHZ is passed.

(2) Enrollment in language courses follows the rules given separately.

(3) To obtain 6 credits at least is obligatory.

(4) Only one of these courses is obligatory.

Bachelor's Degree Program

Physical Engineering

Specialization Physical Engineering of Materials

3rd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Equations of Mathematical Physics ⁽¹⁾	01RMAF	Klika, Tušek	4+2 z, zk	-	7	-
Basics of Solid State Physics	11ZFPL	Kalvoda, Mihóková	2+0 zk	-	2	-
Bachelor Project 1, 2	00BPF12	Kalvoda	0+5 z	0+10 z	5	10
Bachelor Seminar	00BSEM	Kalvoda	-	0+2 z	-	1
Quantum Physics	02KF	Jizba	2+1 z, zk	-	3	-
Probability and Statistics	01PRST	Hobza	3+1 z, zk	-	4	-
Elasticity 1	14EM1	Materna, Oliva	2+2 z, zk	-	5	-
Numerical Methods 2	01NME2	Beneš	-	2+0 kz	-	2
Metal Physics	14FKO	Čech, Karlík	-	4+2 z, zk	-	6
Practicum in Finite Elements Methods	14PMKOP	Materna	-	0+2 zk	-	3
Testing and Processing of Metals and Alloys	14ZZKOS	Lauschmann, Mušálek	-	2+2 z, zk	-	4
Language Courses ⁽²⁾	04...	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Instrumentation and Measurement	11ELEA	Jiroušek	-	2+0 z, zk	-	2
Physical Training 3, 4	00TV34	ČVUT	- z	- z	1	1
Structure of Solid State	11SPL	Kolenko, Kraus	2+2 z, zk	-	4	-
Applications of Group Theory in Solid State Physics	11APLG	Potůček	2+0 zk	-	2	-
Nanotechnology	12NT	Hulicius, Proška	2+0 zk	-	2	-
Programming in MATLAB	18PMTL	Kukal, Tran	0+4 kz	-	4	-
Fundamentals of Optics	12ZAOP	Kwiecien	2+0 z, zk	-	2	-

(1) Examination in 01RMAF can be taken only if all courses in Calculus and Linear Algebra are passed.

(2) Enrollment in language courses follows the rules given separately.

Bachelor's Degree Program

Physical Engineering

Specialization Plasma Physics and Thermonuclear Fusion

1st year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus	01MAN	Pošta, Pelantová	4+4 z	-	4	-
Calculus 1, examination ⁽¹⁾	01MANZ	Pošta, Pelantová	- zk	-	4	-
Linear Algebra 1	01LAL	Ambrož, Dvořáková	2+2 z	-	2	-
Linear Algebra 1, examination ⁽²⁾	01LALZ	Ambrož, Dvořáková	- zk	-	2	-
Mechanics	02MECH	Břeň, Novotný P.	4+2 z	-	4	-
Mechanics, examination	02MECHZ	Břeň	- zk	-	2	-
Basics of Programming	18ZPRO	Jarý, Virius	2+2 z	-	4	-
Preparatory week	00PT	FJFI	1 týden z	-	2	-
Calculus 2	01MAN2	Pelantová, Pošta	-	4+4 z, zk	-	8
Linear Algebra 2	01LAL2	Dvořáková, Ambrož	-	2+2 z, zk	-	4
Electricity and Magnetism	02ELMA	Hrivnák, Chadzitaskos	-	4+2 z, zk	-	6
Heat and Molecular Physics	02TER	Jizba, Petrásek	-	2+2 z, zk	-	4
Introduction to Laser Technology	12ULTB	Jelínková, Němec, Šulc	-	2+1 kz	-	3
Seminar on Plasma Physics	02SFP	Svoboda	-	0+2 z	-	2
Language Courses ⁽³⁾	04..	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Minimum in Mathematics 1	00MAM1	Břeň	0+1 z	-	1	-
Minimum in Mathematics 2	00MAM2	Pošta	0+1 z	-	1	-
History of Physics 1	02DEF1	Jex	2+0 z	-	2	-
Discrete Mathematics 1, 2 ⁽⁴⁾	01DIM12	Masáková	2+0 z	2+0 z	2	2
History of Physics 2	02DEF2	Jex, Myška	-	2+0 z	-	2
Foundations of Physical Measurements 1, 2 ⁽⁴⁾	02ZM12	Chaloupka, Škoda	2+0 zk	0+4 kz	2	4
Introduction to Solid State Physics	11UFPLN	Kolenko	-	2+0 zk	-	2
Physical Seminar 1	02FYS1	Svoboda	0+2 z	-	2	-
Basics of Algorithmization	18ZALG	Virius	-	2+2 z, zk	-	4
General Chemistry 1, 2 ⁽⁵⁾	15CH12	Čuba, Distler, Motl	2+1 z	2+1 z, zk	3	3
Conversation Seminar in English ⁽⁶⁾	04AKS	Kovářová, Rafajová	-	0+2 z	-	1
Introduction to Photonics and Nanostructures	12UFN	Kwiecien, Richter	-	2+1 kz	-	3

(1) Examination in 01MANZ can be taken provided the assessment in 01MAN is obtained.

(2) Examination in 01LALZ can be taken provided the assessment in 01LAL is obtained.

(3) Enrollment in language courses follows the rules given separately.

(4) The indicated courses can be scheduled simultaneously.

(5) Enrollment of 15CH2 is possible only after passing 15CH1.

(6) Limited enrollment capacity.

Bachelor's Degree Program

Physical Engineering

Specialization Plasma Physics and Thermonuclear Fusion

2nd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus B 3, 4	01ANB34	Krbálek, Strachota	4+4 z, zk	2+4 z, zk	8	6
Numerical Methods 1	12NME1	Limpouch, Váchal	-	2+2 z, zk	-	4
Waves, Optics and Atomic Physics	02VOAF	Novotný P., Schmidt	4+2 z, zk	-	6	-
Thermodynamics and Statistical Physics	02TSFA	Jex, Novotný J.	-	2+2 z, zk	-	4
Theoretical Physics 1 ⁽¹⁾	02TEF1	Hrivnák, Novotný P.	2+2 z, zk	-	4	-
Experimental Laboratory 1, 2	02PRA12	Bielčík	0+4 kz	0+4 kz	6	6
Experimental Physics Laboratory of Plasma Diagnostics	02EXF 02UPP	Óbertová, Adam Brotánková, Svoboda	2+0 zk -	- 0+2 kz	2 -	- 3
Language Courses ⁽³⁾	04..	KHVJ	-	-	-	-
<i>Social Sciences ⁽⁴⁾</i>						
Introduction to Law	00UPRA	Čech	-	0+2 z	-	1
Introduction to Psychology	00UPSY	Hajíček	-	0+2 z	-	1
Rhetoric	00RET	Kovářová	-	0+2 z	-	1
Ethics in Science and Technology	00ETV	Hajíček	-	0+2 z	-	1
<i>Optional courses:</i>						
Theoretical Physics 2 ⁽²⁾	02TEF2	Hrivnák, Novotný P.	-	2+2 z, zk	-	4
Discrete Mathematics 3	01DIMA3	Dvořáková	2+0 zk	-	2	-
Introduction to Probability 1, 2	01UP12	Krbálek, Vybíral	1+1 z, zk	1+1 z, zk	3	3
Introduction to Elementary Particle Physics	02UFEC	Bielčík	2+0 z	-	2	-
Introduction to Curves and Surfaces 1	02UKP1	Hlavatý	-	1+1 z	-	2
Seminar on Mathematical Physics	02SMF	Hlavatý	0+2 z	-	2	-
Special Theory of Relativity	02STR	Břeň	-	2+0 zk	-	2
Basic Electronics 1, 2 ⁽⁵⁾	12ZEL12	Pavel	2+1 z, zk	2+1 z, zk	3	3
Introduction to Modern Physics ⁽⁴⁾	12UMF	Pšíkal	-	2+1 z	-	3
Programming in C++ 1, 2	18PRC12	Jarý, Vírúš	2+2 z	2+2 kz	4	4
Physical Training 1, 2	00TV12	ČVUT	- z	- z	1	1

- (1) Examination in 02TEF1 can be taken only if 02MECHZ is passed.
 (2) Examination in 02TEF2 can be taken only if 02ELMA and 02TEF1 are passed.
 (3) Enrollment in language courses follows the rules given separately.

- (4) Only one of these courses is obligatory.
- (5) The indicated courses can be scheduled simultaneously.

Bachelor's Degree Program

Physical Engineering

Specialization Plasma Physics and Thermonuclear Fusion

3rd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Equations of Mathematical Physics ⁽¹⁾	01RMAF	Klika, Tušek	4+2 z, zk	-	7	-
Basics of Solid State Physics	11ZFPL	Kalvoda, Mihóková	2+0 zk	-	2	-
Bachelor Project 1, 2	00BPFI12	Kalvoda	0+5 z	0+10 z	5	10
Bachelor Seminar	00BSEM	Kalvoda	-	0+2 z	-	1
Probability and Statistics	01PRST	Hobza	3+1 z, zk	-	4	-
Quantum Physics	02KF	Jizba, Petrásek	2+1 z, zk	-	3	-
Vacuum Technology	12VKT	Petráček, Švejkar	2+2 kz	-	4	-
Fundamentals of Electrodynamics	12ZELD	Šiňor	1+1 z, zk	-	2	-
Fundamentals of Nuclear Physics	02ZJFY	Wagner	3+2 z, zk	-	5	-
Introduction to Computational Physics 1	12UPF1	Kuchařík, Liska	1+1 z, zk	-	2	-
Introduction to Nuclear Fusion	02UFU	Mlynář, Brotánková, Ficker	-	2+2 z, zk	-	4
Principles of Plasma Physics	12ZZFP	Limpouch	-	3+1 z, zk	-	4
Power Engineering	17ENER	Tichý	-	2+0 zk	-	2
Language Courses ⁽²⁾	04...	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Introduction to Curves and Surfaces 2	02UKP2	Hlavatý	1+1 z	-	2	-
Transport Phenomena/Nonequilibrium Systems	02TJNS	Jex	-	2+0 kz	-	2
Atomic and Molecular Spectroscopy	02AMS	Civiš	2+2 z, zk	-	4	-
Basic Optical Laboratory	12ZPOP	Jančárek	-	0+4 kz	-	6
Basic Laser Technology Laboratory ⁽³⁾	12ZPLT	Blažej	-	0+4 kz	-	6
Measurement and Data Processing	12ZMDT	Blažej, Procházka	1+1 z, zk	-	2	-
Engineering Mechanics	14TEM	Kunz	2+2 z, zk	-	4	-
Fundamentals of Ionizing-Radiation Metrology	16MEZB	Čechák, Novotný P.	2+1 z, zk	-	4	-
Fundamentals of Radiation Dosimetry 1, 2	16ZDOZ12	Trojek	2+2 z, zk	2+0 zk	4	2
Basics of Electronics	17ZEL	Kropík	2+2 kz	-	3	-
Molecular Physics	12MOF	Michl, Proška	-	2+0 zk	-	2
Physical Training 3, 4	00TV34	ČVUT	- z	- z	1	1

- (1) Examination in 01RMAF can be taken only if all courses in Calculus and Linear Algebra are passed.
- (2) Enrollment in language courses follows the rules given separately.
- (3) Enrollment in 12ZPLT is possible only after passing 12ULTB.

Bachelor's Degree Program

Physical Engineering

Specialization Solid State Engineering

1st year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus	01MAN	Pošta, Pelantová	4+4 z	-	4	-
Calculus 1, examination ⁽¹⁾	01MANZ	Pošta, Pelantová	- zk	-	4	-
Linear Algebra 1	01LAL	Ambrož, Dvořáková	2+2 z	-	2	-
Linear Algebra 1, examination ⁽²⁾	01LALZ	Ambrož, Dvořáková	- zk	-	2	-
Mechanics	02MECH	Břeň, Novotný P.	4+2 z	-	4	-
Mechanics, examination	02MECHZ	Břeň	- zk	-	2	-
History of Physics 1	02DEF1	Jex	2+0 z	-	2	-
Basics of Programming	18ZPRO	Jarý, Virius	2+2 z	-	4	-
Preparatory week	00PT	FJFI	1 týden z	-	2	-
Calculus 2	01MAN2	Pelantová, Pošta	-	4+4 z, zk	-	8
Linear Algebra 2	01LAL2	Dvořáková, Ambrož	-	2+2 z, zk	-	4
Electricity and Magnetism	02ELMA	Hrivnák, Chadzitaskos	-	4+2 z, zk	-	6
Heat and Molecular Physics	02TER	Jizba, Zatloukal	-	2+2 z, zk	-	4
Introduction to Solid State Physics	11UFPLN	Kolenko	-	2+0 zk	-	2
Language Courses ⁽³⁾	04.	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Minimum in Mathematics 1	00MAM1	Břeň	0+1 z	-	1	-
Minimum in Mathematics 2	00MAM2	Pošta	0+1 z	-	1	-
History of Physics 2	02DEF2	Jex, Myška	-	2+0 z	-	2
Foundations of Physical Measurements 1, 2	02ZM12	Chaloupka, Škoda	2+0 zk	0+4 kz	2	4
Introduction to UNIX	12UNIXAP	Liska	-	1+1 z	-	2
General Chemistry 1, 2 ⁽⁴⁾	15CH12	Čuba, Distler, Motl	2+1 z	2+1 z, zk	3	3
Introduction to Photonics and Nanostructures	12UFN	Kwiecien, Richter	-	2+1 kz	-	3
Basic Work with PC	16ZPSP	Vrba T.	0+2 z	-	2	-
Basics of GNU Plot	11GPL	Dráb	0+2 z	-	2	-
Conversation Seminar in English ⁽⁵⁾	04AKS	Kovářová, Rafajová	-	0+2 z	-	1

(1) Examination in 01MANZ can be taken provided the assessment in 01MAN is obtained.

(2) Examination in 01LALZ can be taken provided the assessment in 01LAL is obtained.

(3) Enrollment in language courses follows the rules given separately.

(4) Enrollment in 15CH2 is possible only after passing 15CH1.

(5) Limited enrollment capacity.

Bachelor's Degree Program

Physical Engineering

Specialization Solid State Engineering

2nd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus B 3, 4	01ANB34	Krbálek, Strachota	4+4 z, zk	2+4 z, zk	8	6
Numerical Methods 1	12NME1	Limpouch, Váchal	-	2+2 z, zk	-	4
Waves, Optics and Atomic Physics	02VOAF	Novotný P., Schmidt	4+2 z, zk	-	6	-
Thermodynamics and Statistical Physics	02TSFA	Jex, Novotný J.	-	2+2 z, zk	-	4
Structure of Solid State	11SPLA	Kolenko, Kraus	2+2 z, zk	-	4	-
Seminar on Solid State Physics	11SFIPL	Kalvoda	1+1 kz	-	2	-
Theoretical Physics 1 ⁽¹⁾ , 2 ⁽²⁾	02TEF12	Hrivnák, Novotný P.	2+2 z, zk	2+2 z, zk	4	4
GNU Programming	11GNU	Dráb	-	2+2 kz	-	4
Language Courses ⁽³⁾	04..	KHVJ	-	-	-	-
<i>Social Sciences ⁽⁴⁾</i>						
Introduction to Psychology	00UPSY	Hajíček	-	0+2 z	-	1
Introduction to Law	00UPRA	Čech	-	0+2 z	-	1
Rhetoric	00RET	Kovářová	-	0+2 z	-	1
Ethics in Science and Technology	00ETV	Hajíček	-	0+2 z	-	1
<i>Optional courses:</i>						
Experimental Physics	02EXF	Óbertová, Adam	2+0 zk	-	2	-
Introduction to Probability 1, 2	01UP12	Krbálek, Vybíral	1+1 z, zk	1+1 z, zk	3	3
Experimental Laboratory 1, 2	02PRA12	Bielčík	0+4 kz	0+4 kz	6	6
Seminar on Mathematical Physics	02SMF	Hlavatý	0+2 z	-	2	-
Basic Electronics 1	12ZEL1	Pavel	2+1 z, zk	-	3	-
Seminar on Computer Simulations	11SPS	Drahokoupil	-	0+2 z	-	2
Computer Algebra Systems	12PAS	Šiňor	1+1 z	-	2	-
Introduction to Scientific Computing	12UVP	Šiňor	-	1+1 z	-	2
Electron Microscopy	14ELM	Karlík	-	2+0 kz	-	2
Physical Training 1, 2	00TV12	ČVUT	- z	- z	1	1

(1) Examination in 02TEF1 can be taken only if 02MECHZ is passed.

(2) Examination in 02TEF2 can be taken only if 02ELMA and 02TEF1 are passed.

(3) Enrollment in language courses follows the rules given separately.

(4) Only one of these courses is obligatory.

Bachelor's Degree Program

Physical Engineering

Specialization Solid State Engineering

3rd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Equations of Mathematical Physics ⁽¹⁾	01RMAF	Klika, Tušek	4+2 z, zk	-	7	-
Basics of Solid State Physics	11ZFPL	Kalvoda, Mihóková	2+0 zk	-	2	-
Bachelor Project 1, 2	00BPFI12	Kalvoda	0+5 z	0+10 z	5	10
Bachelor Seminar	00BSEM	Kalvoda, Sedlák, Kučeráková	-	0+2 z	-	1
Probability and Statistics	01PRST	Hobza	3+1 z, zk	-	4	-
Quantum Mechanics 1, 2	02KM12	Štefaňák	4+2 z, zk	4+2 z, zk	6	6
Diffraction Analysis of Solid State	11DAPL	Čapek, Ganev	2+0 zk	-	2	-
Practical Training in Solid State Physics	11CFPL	Kučeráková	0+2 z	-	2	-
Applications of Group Theory in Solid State Physics	11APLG	Potůček	2+0 zk	-	2	-
Continuum in Solid State Physics	11KFPL	Seiner	-	2+0 zk	-	2
Solid State Physics – Applications and Analytical Methods	11MAPL	Kratochvílová	-	2+2 z, zk	-	4
Introduction to Condensed Matter Simulations	11ZSKL	Drahokoupil, Kalvoda	-	1+1 kz	-	2
Language Courses ⁽²⁾	04...	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Linear Circuit Analysis	11ANEL	Jiroušek, Levinský	4+0 z, zk	-	4	-
Logical Circuits and Microprocessors	11MIK	Jiroušek, Levinský	-	4+0 z, zk	-	4
Structure and Function of Bio-Molecules	11SFBM	Kolenko	2+1 z, zk	-	3	-
Atomic and Molecular Spectroscopy	02AMS	Civiš	2+2 z, zk	-	4	-
Transport Phenomena/Nonequilibrium Systems	02TJNS	Jex	-	2+0 kz	-	2
Molecular Physics	12MOF	Michl, Proška	-	2+0 zk	-	2
Fundamentals of Optics	12ZAOP	Kwiecien	2+0 z, zk	-	2	-
Fundamentals of Photonic Structures	12ZFS	Richter	-	2+0 z, zk	-	2
Nanotechnology	12NT	Hulicius, Proška	2+0 zk	-	2	-
Programming in MATLAB	18PMTL	Kukal, Tran	0+4 kz	-	4	-
Vacuum Technology	12VKT	Petráček,	2+2 kz	-	4	-

Principles of Plasma Physics	12ZFP	Švejkar Limpouch	-	3+1 z, zk	-	4
Physical Training 3, 4	00TV34	ČVUT	- z	- z	1	1

- (1) Examination in 01RMAF can be taken only if all courses in Calculus and Linear Algebra are passed.
(2) Enrollment in language courses follows the rules given separately.

Bachelor's Degree Program

Nuclear and Particle Physics

1st year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus	01MAN	Pošta, Pelantová	4+4 z	-	4	-
Calculus 1, examination ⁽¹⁾	01MANZ	Pošta, Pelantová	- zk	-	4	-
Linear Algebra 1	01LAL	Ambrož, Dvořáková	2+2 z	-	2	-
Linear Algebra 1, examination ⁽²⁾	01LALZ	Ambrož, Dvořáková	- zk	-	2	-
Mechanics	02MECH	Břeň, Novotný P.	4+2 z	-	4	-
Mechanics, examination	02MECHZ	Břeň	- zk	-	2	-
Foundations of Physical Measurements 1, 2	02ZM12	Chaloupka, Škoda	2+0 zk	0+4 kz	2	4
Preparatory week	00PT	FJFI	1 týden z	-	2	-
Basics of Programming	18ZPRO	Jarý, Virius	2+2 z	-	4	-
Linear Algebra 2	01LAL2	Dvořáková, Ambrož	-	2+2 z, zk	-	4
Calculus 2	01MAN2	Pelantová, Pošta	-	4+4 z, zk	-	8
Electricity and Magnetism	02ELMA	Hrivnák, Chadzitaskos	-	4+2 z, zk	-	6
Heat and Molecular Physics	02TER	Jizba, Petrásek	-	2+2 z, zk	-	4
Language Courses ⁽³⁾	04..	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Minimum in Mathematics 1	00MAM1	Břeň	0+1 z	-	1	-
Minimum in Mathematics 2	00MAM2	Pošta	0+1 z	-	1	-
History of Physics 1	02DEF1	Jex, Myška	2+0 z	-	2	-
General Chemistry 1, 2 ⁽⁴⁾	15CH12	Čuba, Distler, Motl	2+1 z	2+1 z, zk	3	3
History of Physics 2	02DEF2	Jex, Myška	-	2+0 z	-	2
Physical Seminar 1	02FYS1	Svoboda	0+2 z	-	2	-
Introduction to Engineering	17UING	Frýbort, Haušild, Mušálek	2+1 kz	-	3	-
Introduction to UNIX	12UNXAP	Liska	-	1+1 z	-	2
Basics of Algorithmization	18ZALG	Virus	-	2+2 z, zk	-	4
Conversation Seminar in English ⁽⁵⁾	04AKS	Kovářová, Rafajová	-	0+2 z	-	1

(1) Examination in 01MANZ can be taken provided the assessment in 01MAN is obtained.

(2) Examination in 01LALZ can be taken provided the assessment in 01LAL is obtained.

(3) Enrollment in language courses follows the rules given separately.

(4) Enrollment in 15CH2 is possible only after passing 15CH1.

(5) Limited enrollment capacity.

Bachelor's Degree Program

Nuclear and Particle Physics

2nd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus B 3, 4	01ANB34	Krbálek, Strachota	4+4 z, zk	2+4 z, zk	8	6
Numerical Methods 1	12NME1	Limpouch, Váchal	-	2+2 z, zk	-	4
Waves, Optics and Atomic Physics	02VOAF	Novotný P., Schmidt	4+2 z, zk	-	6	-
Theoretical Physics 1 ⁽¹⁾ , 2 ⁽²⁾	02TEF12	Hrivnák, Novotný P.	2+2 z, zk	2+2 z, zk	4	4
Experimental Physics	02EXF	Óbertová, Adam	2+0 zk	-	2	-
Experimental Laboratory 1, 2	02PRA12	Bielčík	0+4 kz	0+4 kz	6	6
Thermodynamics and Statistical Physics	02TSFA	Jex, Novotný J.	-	2+2 z, zk	-	4
Language Courses ⁽³⁾	04..	KHVJ	-	-	-	-
<i>Social Sciences ⁽⁴⁾</i>						
Introduction to Law	00UPRA	Čech	-	0+2 z	-	1
Introduction to Psychology	00UPSY	Hajíček	-	0+2 z	-	1
Rhetoric	00RET	Kovářová	-	0+2 z	-	1
Ethics in Science and Technology	00ETV	Hajíček	-	0+2 z	-	1
<i>Optional courses:</i>						
Introduction to Elementary Particle Physics	02UFEC	Bielčík	2+0 z	-	2	-
Introduction to Probability 1, 2	01UP12	Krbálek, Vybíral	1+1 z, zk	1+1 z, zk	3	3
Introduction to Curves and Surfaces 1	02UKP1	Hlavatý	-	1+1 z	-	2
Introduction to Quantum Theory	02UKT	Štefaňák	-	2+0 z	-	2
Special Theory of Relativity	02STR	Břeň	-	2+0 zk	-	2
Programming in C++ 1, 2	18PRC12	Jarý, Virius	2+2 z	2+2 kz	4	4
Physical Training 1, 2	00TV12	ČVUT	- z	- z	1	1

(1) Examination in 02TEF1 can be taken only if 02MECHZ is passed.

(2) Examination in 02TEF2 can be taken only if 02ELMA and 02TEF1 are passed.

(3) Enrollment in language courses follows the rules given separately.

(4) Only one of these courses is obligatory.

Bachelor's Degree Program

Nuclear and Particle Physics

3rd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Subatomic Physics	02SF	Čepila	4+2 z, zk	-	6	-
Quantum Mechanics 1, 2	02KM12	Štefaňák	4+2 z, zk	4+2 z, zk	6	6
Equations of Mathematical Physics ⁽¹⁾	01RMAF	Klika, Tušek	4+2 z, zk	-	7	-
Detectors and Detection Principles 1, 2	02DPD12	Contreras	2+0 zk	4+0 zk	2	4
Workshop 1 ⁽³⁾	02VS1	Bielčík	1 týden z	-	1	-
Bachelor Thesis 1, 2	02BPJC12	Bielčík	0+5 z	0+10 z	5	10
Subatomic Physics 2	02SF2	Chaloupka	-	4+2 z, zk	-	6
Language Courses ⁽²⁾	04...	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Probability and Statistics	01PRST	Hobza	3+1 z, zk	-	4	-
Numerical Methods 2	01NME2	Beneš	-	2+0 kz	-	2
Basics of Electronics	17ZEL	Kropík	2+2 kz	-	3	-
Introduction to Curves and Surfaces 2	02UKP2	Hlavatý	1+1 z	-	2	-
Tools for Simulation and Data Analysis 1	02NSAD1	Hubáček	2+0 z	-	2	-
Simulations and Data Analysis Tools 2	02NSAD2	Hubáček	-	2+0 z	-	2
Introduction to the Standard Model of Microworld	02ZSM	Hubáček	-	2+0 zk	-	2
Seminar on Quark-Gluon Plasma 1, 2	02ROZ12	Bielčík, Bielčíková, Tomášik	2+0 z	2+0 z	2	2
Scientific and Technical Computing	12VTV	Procházka	-	1+1 z	-	2
Functions of Complex Variable	01FKO	Šťovíček	-	2+1 z, zk	-	3
Scientific Programming in Python	12PYTH	Váchal	-	0+2 z	-	2
Vacuum Technology	12VKT	Švejkar, Petráček	2+2 kz	-	4	-
Physical Training 3, 4	00TV34	ČVUT	- z	- z	1	1

(1) Examination in 01RMAF can be taken only if all courses in Calculus and Linear Algebra are passed.

(2) Enrollment in language courses follows the rules given separately.

(3) The course is intended for students of this programme only.

Bachelor's Degree Program

Physical Engineering

Specialization Laser Technology and Photonics

1st year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus	01MAN	Pošta, Pelantová	4+4 z	-	4	-
Calculus 1, examination ⁽¹⁾	01MANZ	Pošta, Pelantová	- zk	-	4	-
Linear Algebra 1	01LAL	Ambrož, Dvořáková	2+2 z	-	2	-
Linear Algebra 1, examination ⁽²⁾	01LALZ	Ambrož, Dvořáková	- zk	-	2	-
Mechanics	02MECH	Břeň, Novotný P.	4+2 z	-	4	-
Mechanics, examination	02MECHZ	Břeň	- zk	-	2	-
History of Physics 1	02DEF1	Jex	2+0 z	-	2	-
Basics of Programming	18ZPRO	Jarý, Virius	2+2 z	-	4	-
Preparatory week	00PT	FJFI	1 týden z	-	2	-
Calculus 2	01MAN2	Pelantová, Pošta	-	4+4 z, zk	-	8
Linear Algebra 2	01LAL2	Dvořáková, Ambrož	-	2+2 z, zk	-	4
Electricity and Magnetism	02ELMA	Hrivnák, Chadzitaskos	-	4+2 z, zk	-	6
Heat and Molecular Physics	02TER	Jizba, Petrásek	-	2+2 z, zk	-	4
Language Courses ⁽³⁾	04..	KHVJ	-	-	-	-
<i>Required optional courses ⁽⁴⁾</i>						
Introduction to Laser Technology	12ULTB	Jelínková, Němec, Šulc	-	2+1 kz	-	3
Introduction to Photonics and Nanostructures	12UFN	Kwiecien, Richter, Proška	-	2+1 kz	-	3
<i>Optional courses:</i>						
Minimum in Mathematics 1	00MAM1	Břeň	0+1 z	-	1	-
Minimum in Mathematics 2	00MAM2	Pošta	0+1 z	-	1	-
History of Physics 2	02DEF2	Jex, Myška	-	2+0 z	-	2
Physical Seminar 1	02FYS1	Svoboda	0+2 z	-	2	-
Foundations of Physical Measurements 1, 2	02ZM12	Chaloupka, Škoda	2+0 zk	0+4 kz	2	4
Basic Work with PC	16ZPSP	Vrba T.	0+2 z	-	2	-
Introduction to UNIX	12UNXAP	Liska	-	1+1 z	-	2
General Chemistry 1, 2 ⁽⁵⁾	15CH12	Čuba, Distler, Motl	2+1 z	2+1 z, zk	3	3
Introduction to Solid State Physics	11UFPLN	Kolenko	-	2+0 zk	-	2
Basics of Algorithmization	18ZALG	Virus	-	2+2 z, zk	-	4
Conversation Seminar in English ⁽⁶⁾	04AKS	Kovářová, Rafajová	-	0+2 z	-	1

(1) Examination in 01MANZ can be taken provided the assessment in 01MAN is obtained.

(2) Examination in 01LALZ can be taken provided the assessment in 01LAL is obtained.

- (3) Enrollment in language courses follows the rules given separately.
- (4) At least one course is compulsory.
- (5) Enrollment in 15CH2 is possible only after passing 15CH1.
- (6) Limited enrollment capacity.

Bachelor's Degree Program

Physical Engineering

Specialization Laser Technology and Photonics

2nd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus B 3, 4	01ANB34	Krbálek, Strachota	4+4 z, zk	2+4 z, zk	8	6
Numerical Methods 1	12NME1	Limpouch, Váchal	-	2+2 z, zk	-	4
Waves, Optics and Atomic Physics	02VOAF	Novotný P., Schmidt	4+2 z, zk	-	6	-
Thermodynamics and Statistical Physics	02TSFA	Jex, Novotný J.	-	2+2 z, zk	-	4
Theoretical Physics 1 ⁽¹⁾ , 2 ⁽¹⁾	02TEF12	Hrivnák, Novotný P.	2+2 z, zk	2+2 z, zk	4	4
Experimental Laboratory 1, 2	02PRA12	Bielčík	0+4 kz	0+4 kz	6	6
Measurement and Data Processing	12ZMDT	Blažej, Procházka	1+1 z, zk	-	2	-
Laser Technology 1	12LTB1	Jelínková, Němec, Šulc	-	2+1 z, zk	-	3
Language Courses ⁽³⁾	04..	KHVJ	-	-	-	-
<i>Social Sciences ⁽⁴⁾</i>						
Introduction to Law	00UPRA	Čech	-	0+2 z	-	1
Introduction to Psychology	00UPSY	Hajíček	-	0+2 z	-	1
Rhetoric	00RET	Kovářová	-	0+2 z	-	1
Ethics in Science and Technology	00ETV	Hajíček	-	0+2 z	-	1
<i>Optional courses:</i>						
Introduction to Scientific Computing	12UVP	Šňor	-	1+1 z	-	2
Introduction to Probability 1, 2	01UP12	Krbálek, Vybíral	1+1 z, zk	1+1 z, zk	3	3
Computer Algebra Systems	12PAS	Šňor	1+1 z	-	2	-
Basic Electronics 1, 2	12ZEL12	Pavel	2+1 z, zk	2+1 z, zk	3	3
Microprocessors 1, 2	12MPR12	Čech	4+0 zk	2+0 zk	4	2
Microprocessor Practicum 1, 2	12MPP12	Vyhlídal	0+3 kz	0+3 kz	4	4
Electron Microscopy	14ELM	Karlík	-	2+0 kz	-	2
Programming in C++ 1, 2	18PRC12	Jarý, Virius	2+2 z	2+2 kz	4	4
Physical Training 1, 2	00TV12	ČVUT	- z	- z	1	1
Selected Parts of Modern Physics	12VPMF	Pšikal	-	2+1 z	-	3

- (1) Examination in 02TEF1 can be taken only if 02MECHZ is passed.
 (2) Examination in 02TEF2 can be taken only if 02ELMA and 02TEF1 are passed.
 (3) Enrollment in language courses follows the rules given separately.
 (4) Only one of these courses is obligatory.

Bachelor's Degree Program

Physical Engineering

Specialization Laser Technology and Photonics

3rd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Equations of Mathematical Physics ⁽¹⁾	01RMAF	Klika, Tušek	4+2 z, zk	-	7	-
Basics of Solid State Physics	11ZFPL	Kalvoda, Mihóková	2+0 zk	-	2	-
Bachelor Project 1, 2	00BPF12	Kalvoda	0+5 z	0+10 z	5	10
Bachelor Seminar	00BSEM	Kalvoda	-	0+2 z	-	1
Quantum Mechanics 1	02KM1	Štefaňák	4+2 z, zk	-	6	-
Fundamentals of Electrodynamics	12ZELD	Šiňor	1+1 z, zk	-	2	-
Fundamentals of Optics	12ZAOP	Kwecien	2+0 z, zk	-	2	-
Laser Technology 2	12LTB2	Kubeček, Šulc, Jelínek	2+1 z, zk	-	3	-
Fundamentals of Photonic Structures	12ZFS	Richter, Čtyroký	-	2+0 z, zk	-	2
Basic Optical Laboratory	12ZPOP	Jančárek	-	0+4 kz	-	6
Basic Laser Technology Laboratory ⁽³⁾	12ZPLT	Blažej	-	0+4 kz	-	6
Language Courses ⁽²⁾	04...	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Probability and Statistics	01PRST	Hobza	3+1 z, zk	-	4	-
Functions of Complex Variable	01FKO	Šťovíček	-	2+1 z, zk	-	3
Numerical Methods 2	01NME2	Beneš	-	2+0 kz	-	2
Introductory Practicum in Electronics 1, 2 ⁽⁴⁾	12EPR12	Procházka	0+2 kz	0+2 kz	3	3
Vacuum Technology	12VKT	Švejkar, Petráček	2+2 kz	-	4	-
Quantum Mechanics 2	02KM2	Štefaňák	-	4+2 z, zk	-	6
Molecular Physics	12MOF	Michl, Proška	-	2+0 zk	-	2
Nanotechnology	12NT	Hulicius, Proška	2+0 zk	-	2	-
Operating Systems	12OSY	Čech	3+0 zk	-	3	-
Regulation and Sensors	12RSEN	Vyhliđal	4 z, zk	-	4	-
High Frequency and Pulse Technology	12VFT	Pavel	-	2+0 z, zk	-	2
Cryogenic Technology	12KRYO	Martínková	-	2+0 z	-	2
Laser Systems	12LAS	Kubeček	-	2+1 z, zk	-	3
Application of Lasers	12APL	Jančárek, Jelínková	2+0 z, zk	-	2	-
Principles of Plasma Physics	12ZFP	Limpouch	-	3+1 z, zk	-	4
Physical Training 3, 4	00TV34	ČVUT	- z	- z	1	1
Scientific and Technical Calculations	12VTV	Procházka	-	1+1 z	-	2

(1) Examination in 01RMAF can be taken only if all courses in Calculus and Linear Algebra are passed.

(2) Enrollment in language courses follows the rules given separately.

- (3) For enrollment in 12ZPLT by students of other specializations, 12ULTB or 12LTB1 is a prerequisite.
- (4) For enrollment in 12EPR12, 12ZEL12 is a prerequisite.

Bachelor's Degree Program

Physical Engineering

Specialization Computational Physics

1st year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus	01MAN	Pošta, Pelantová	4+4 z	-	4	-
Calculus 1, examination ⁽¹⁾	01MANZ	Pošta, Pelantová	- zk	-	4	-
Linear Algebra 1	01LAL	Ambrož, Dvořáková	2+2 z	-	2	-
Linear Algebra 1, examination ⁽²⁾	01LALZ	Ambrož, Dvořáková	- zk	-	2	-
Mechanics	02MECH	Břeň, Novotný P.	4+2 z	-	4	-
Mechanics, examination	02MECHZ	Břeň	- zk	-	2	-
History of Physics 1	02DEF1	Jex	2+0 z	-	2	-
Basics of Programming	18ZPRO	Jarý, Virius	2+2 z	-	4	-
Preparatory week	00PT	FJFI	1 týden z	-	2	-
Calculus 2	01MAN2	Pelantová, Pošta	-	4+4 z, zk	-	8
Linear Algebra 2	01LAL2	Dvořáková, Ambrož	-	2+2 z, zk	-	4
Electricity and Magnetism	02ELMA	Hrivnák, Chadzitaskos	-	4+2 z, zk	-	6
Heat and Molecular Physics	02TER	Jizba, Zatloukal	-	2+2 z, zk	-	4
Introduction to UNIX	12UNXAP	Liska	-	1+1 z	-	2
Language Courses ⁽³⁾	04.	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Minimum in Mathematics 1	00MAM1	Břeň	0+1 z	-	1	-
Minimum in Mathematics 2	00MAM2	Pošta	0+1 z	-	1	-
History of Physics 2	02DEF2	Jex, Myška	-	2+0 z	-	2
Foundations of Physical Measurements 1, 2	02ZM12	Chaloupka, Škoda	2+0 zk	0+4 kz	2	4
Basic Work with PC	16ZPSP	Vrba T.	0+2 z	-	2	-
General Chemistry 1, 2 ⁽⁴⁾	15CH12	Čuba, Distler, Motl	2+1 z	2+1 z, zk	3	3
Basics of Algorithmization	18ZALG	Virius	-	2+2 z, zk	-	4
Introduction to Laser Technology	12ULTB	Jelínková, Němec, Šulc	-	2+1 kz	-	3
Introduction to Photonics and Nanostructures	12UFN	Kwecien, Richter, Proška	-	2+1 kz	-	3
Conversation Seminar in English ⁽⁵⁾	04AKS	Kovářová, Rafajová	-	0+2 z	-	1

(1) Examination in 01MANZ can be taken provided the assessment in 01MAN is obtained.

(2) Examination in 01LALZ can be taken the assessment in 01LAL is obtained.

(3) Enrollment in language courses follows the rules given separately.

(4) Enrollment in 15CH2 is possible only after passing 15CH1.

(5) Limited enrollment capacity.

Bachelor's Degree Program

Physical Engineering

Specialization Computational Physics

2nd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus B 3, 4	01ANB34	Krbálek, Strachota	4+4 z, zk	2+4 z, zk	8	6
Numerical Methods 1	12NME1	Limpouch, Váchal	-	2+2 z, zk	-	4
Waves, Optics and Atomic Physics	02VOAF	Novotný P., Schmidt	4+2 z, zk	-	6	-
Thermodynamics and Statistical Physics	02TSFA	Jex, Novotný J.	-	2+2 z, zk	-	4
Theoretical Physics 1 ⁽¹⁾ , 2 ⁽²⁾	02TEF12	Hrivnák, Novotný P.	2+2 z, zk	2+2 z, zk	4	4
Computer Algebra Systems	12PAS	Šiňor	1+1 z	-	2	-
Measurement and Data Processing	12ZMDT	Blažej, Procházka	1+1 z, zk	-	2	-
Programming in C++ 1, 2	18PRC12	Jarý, Virius	2+2 z	2+2 kz	4	4
Introduction to Scientific Computing	12UVP	Šiňor	-	1+1 z	-	2
Selected Topics in Modern Physics	12VPMF	Pšikal	-	2+1 z	-	3
Language Courses ⁽³⁾	04..	KHVJ	-	-	-	-
<i>Social Sciences ⁽⁴⁾</i>						
Introduction to Law	00UPRA	Čech	-	0+2 z	-	1
Introduction to Psychology	00UPSY	Hajíček	-	0+2 z	-	1
Rhetoric	00RET	Kovářová	-	0+2 z	-	1
Ethics in Science and Technology	00ETV	Hajíček	-	0+2 z	-	1
<i>Optional courses:</i>						
Experimental Laboratory 1, 2	02PRA12	Bielčík	0+4 kz	0+4 kz	6	6
Seminar on Mathematical Physics	02SMF	Hlavatý	0+2 z	-	2	-
Basic Electronics 1, 2	12ZEL12	Pavel	2+1 z, zk	2+1 z, zk	3	3
Software Seminar 1, 2 ⁽⁵⁾	01SOS12	Čulík	0+2 z	0+2 z	2	2
Introduction to Probability 1, 2	01UP12	Krbálek, Vybíral	1+1 z, zk	1+1 z, zk	3	3
Seminar on Solid State Physics	11SFIPL	Kalvoda	1+1 kz	-	2	-
Physical Training 1, 2	00TV12	ČVUT	- z	- z	1	1

(1) Examination in 02TEF1 can be taken only if 02MECHZ is passed.

(2) Examination in 02TEF2 can be taken only if 02ELMA and 02TEF1 are passed

(3) Enrollment in language courses follows the rules given separately.

(4) Only one of these courses is obligatory.

(5) Contains fundamentals of JAVA.

Bachelor's Degree Program

Physical Engineering

Specialization Computational Physics

3rd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Equations of Mathematical Physics ⁽¹⁾	01RMAF	Klika, Tušek	4+2 z, zk	-	7	-
Basics of Solid State Physics	11ZFPL	Kalvoda, Mihóková	2+0 zk	-	2	-
Bachelor Project 1, 2	00BPF12	Kalvoda	0+5 z	0+10 z	5	10
Bachelor Seminar	00BSEM	Kalvoda	-	0+2 z	-	1
Quantum Mechanics 1	02KM1	Štefaňák	4+2 z, zk	-	6	-
Fundamentals of Electrodynamics	12ZELD	Šňor	1+1 z, zk	-	2	-
Computer Algebra	12POAL	Liska	1+1 kz	-	2	-
Introduction to Computational Physics 1, 2	12UPF12	Kuchařík, Liska	1+1 z, zk	1+1 z, zk	2	2
Fundamentals of Optics	12ZAOP	Kwiecien	2+0 z, zk	-	2	-
Principles of Plasma Physics	12ZFP	Limpouch	-	3+1 z, zk	-	4
Scientific Programming in Python	12PYTH	Váchal	-	0+2 z	-	2
Introduction to Continuum Dynamics	01DYKO	Fučík, Strachota	-	2+1 z, zk	-	3
Language Courses ⁽²⁾	04...	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Administration of UNIX System	12AUX	Šňor	-	2+0 kz	-	2
Molecular Physics	12MOF	Michl, Proška	-	2+0 zk	-	2
Nanotechnology	12NT	Hulicius, Proška	2+0 zk	-	2	-
Nuclear Physics B	02ZJFB	Wagner	3+0 kz	-	3	-
Programming in Java	18PJ	Virius	2+2 z, zk	-	5	-
LaTeX - Publication Instrument	01PSL	Ambrož	-	0+2 z	-	2
Fundamentals of Photonic Structures	12ZFS	Richter, Čtyrský	-	2+0 z, zk	-	2
Computer Graphics 1, 2	01PGR12	Strachota	1+1 z, zk	1+1 z, zk	2	2
Computer Networks 1, 2 ⁽³⁾	01SITE12	Minárik	1+1 z	1+1 z	2	2
Introduction to Computer Security 1	01ZPB1	Vokáč	-	1+1 z	-	2
Practical Classes of Programming	01PROP	Oberhuber	0+2 z	-	2	-
Machine Learning in Julia	00FEL	Adam, Mácha	1+2 kz	-	3	-
Physical Training 3, 4	00TV34	ČVUT	- z	- z	1	1
Quantum Mechanics 2	02KM2	Štefaňák	-	4+2 z, zk	-	6

(1) Examination in 01RMAF can be taken only if all courses in Calculus and Linear Algebra are passed.

(2) Enrollment in language courses follows the rules given separately

(3) Both parts must be enrolled.

Bachelor's Degree Program

Quantum Technologies

1st year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus	01MAN	Pošta, Pelantová	4+4 z	-	4	-
Calculus 1, examination	01MANZ	Pošta, Pelantová	- zk	-	4	-
Linear Algebra 1	01LAL	Ambrož, Dvořáková	2+2 z	-	2	-
Linear Algebra 1, examination	01LALZ	Ambrož, Dvořáková	- zk	-	2	-
Mechanics	02MECH	Břeň, Novotný P.	4+2 z	-	4	-
Mechanics, examination	02MECHZ	Břeň	- zk	-	2	-
History of Physics 1	02DEF1	Jex, Myška	2+0 z	-	2	-
Basics of Programming	18ZPRO	Jarý, Virius	2+2 z	-	4	-
Preparatory week	00PT	FJFI	1 týden z	-	2	-
Foundations of Physical Measurements 1, 2	02ZM12	Chaloupka, Škoda	2+0 zk	0+4 kz	2	4
Calculus 2	01MAN2	Pelantová, Pošta	-	4+4 z, zk	-	8
Linear Algebra 2	01LAL2	Dvořáková, Ambrož	-	2+2 z, zk	-	4
Electricity and Magnetism	02ELMA	Hrivnák, Chadzitaskos	-	4+2 z, zk	-	6
Heat and Molecular Physics	02TER	Jizba, Petrásek	-	2+2 z, zk	-	4
Language Courses ⁽¹⁾	04.	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Minimum in Mathematics 1	00MAM1	Břeň	0+1 z	-	1	-
Minimum in Mathematics 2	00MAM2	Pošta	0+1 z	-	1	-
History of Physics 2	02DEF2	Jex, Myška	-	2+0 z	-	2
Physical Seminar 1	02FYS1	Svoboda	0+2 z	-	2	-
Introduction to Solid State Physics	11UFPLN	Kolenko	-	2+0 zk	-	2
Introduction to Photonics and Nanostructures	12UFN	Kwecien, Richter, Proška	-	2+1 kz	-	3
Introduction to UNIX	12UNXAP	Liska	-	1+1 z	-	2
Basic Work with PC	16ZPSP	Vrba T.	0+2 z	-	2	-
Introduction to Engineering	17UING	Frybort, Haušild, Mušálek	2+1 kz	-	3	-
Conversation Seminar in English ⁽²⁾	04AKS	Kovářová, Rafajová	-	0+2 z	-	1

(1) Enrollment in language courses follows the rules given separately.

(2) Limited enrollment capacity.

Bachelor's Degree Program

Quantum Technologies

2nd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Calculus B 3, 4	01ANB34	Krbálek, Strachota	4+4 z, zk	2+4 z, zk	8	6
Numerical Methods 1	12NME1	Limpouch, Váchal	-	2+2 z, zk	-	4
Waves, Optics and Atomic Physics	02VOAF	Novotný P., Schmidt	4+2 z, zk	-	6	-
Introduction to Laser Technology	12ULAT	Jelínková, Šulc	2 kz	-	2	-
Theoretical Physics 1 ⁽¹⁾ , 2 ⁽²⁾	02TEF12	Hrivnák, Novotný P.	2+2 z, zk	2+2 z, zk	4	4
Experimental Laboratory 1, 2	02PRA12	Bielčík	0+4 kz	0+4 kz	6	6
Thermodynamics and Statistical Physics	02TSFA	Jex, Novotný J.	-	2+2 z, zk	-	4
Language Courses ⁽³⁾	04	KHVJ	-	-	-	-
<i>Social Sciences ⁽⁴⁾</i>						
Introduction to Law	00UPRA	Čech	-	0+2 z	-	1
Introduction to Psychology	00UPSY	Hajíček	-	0+2 z	-	1
Rhetoric	00RET	Kovářová	-	0+2 z	-	1
Ethics in Science and Technology	00ETV	Hajíček	-	0+2 z	-	1
<i>Optional courses:</i>						
Special Theory of Relativity	02STR	Břeň	-	2+0 zk	-	2
Introduction to Elementary Particle Physics	02UFEC	Bielčík	2+0 z	-	2	-
Introduction to Quantum Theory	02UKT	Štefaňák	-	2+0 z	-	2
Experimental Physics	02EXF	Óbertová, Adam	2+0 zk	-	2	-
Introduction to Modern Physics	12UMF	Pšíkal	-	2+1 z	-	3
Introduction to Scientific Computing	12UVP	Šiňor	-	1+1 z	-	2
Basic Electronics 1, 2	12ZEL12	Pavel	2+1 z, zk	2+1 z, zk	3	3
Programming in C++ 1, 2	18PRC12	Jarý, Virius	2+2 z	2+2 kz	4	4
Seminar on Solid State Physics	11SFIPL	Kalvoda	1+1 kz	-	2	-
Physical Training 1, 2	00TV12	ČVUT	- z	- z	1	1

(1) Examination in 02TEF1 can be taken only if 02MECHZ is passed.

(2) Examination in 02TEF2 can be taken only if 02ELMA and 02TEF1 are passed

(3) Enrollment in language courses follows the rules given separately.

(4) Only one of these courses is obligatory.

Bachelor's Degree Program

Quantum Technologies

3rd year

Course	code	lecturer	win. sem.	sum. sem.	cr	cr
<i>Compulsory courses:</i>						
Equations of Mathematical Physics ⁽¹⁾	01RMAF	Klika, Tušek	4+2 z, zk	-	7	-
Probability and Statistics	01PRST	Hobza	3+1 z, zk	-	4	-
Quantum Laboratory 1	11KPRA1	Jelínek, Kalvoda, Sedlák, Šulc	0+4 kz	-	4	-
Quantum Mechanics 1, 2	02KM12	Štefaňák	4+2 z, zk	4+2 z, zk	6	6
Fundamentals of Classical Optics and Electrodynamics	12KOE	Kwiecien, Richter, Šňor	-	4+0 zk	-	4
Quantum Laboratory 2	02KPRA2	Čepila	-	0+4 kz	-	4
Bachelor Project 1, 2	00BPQT12	Sedlák, Štefaňák, Šulc	0+5 z	0+10 z	5	10
Language Courses ⁽¹⁾	04...	KHVJ	-	-	-	-
<i>Optional courses:</i>						
Tools for Simulations and Data Analysis 12	02NSAD12	Hubáček	2+0 z	2+0 z	2	2
Functions of Complex Variable	01FKO	Šťovíček	-	2+1 z, zk	-	3
Vacuum Technology	12VKT	Švejkar, Petráček	2+2 kz	-	4	-
Scientific Programming in Python	12PYTH	Váchal	-	0+2 z	-	2
Scientific and Technical Computing	12VTV	Procházka	-	1+1 z	-	2
Detectors and Detection Principles 1, 2	02DPD12	Contreras	2+0 zk	4+0 zk	2	4
Basics of Solid State Physics	11ZFPL	Kalvoda, Mihóková	2+0 zk	-	2	-
Basic Laser Technology Laboratory	12ZPLT	Blažej	-	0+4 kz	-	6
Laser Systems	12LAS	Kubeček	-	2+1 z, zk	-	3
Physical Training 3, 4	00TV34	ČVUT	- z	- z	1	1
Basics of photonic structures	12ZFS	Richter, Čtyroký	-	2+0 z, zk	-	2

(1) Examination in 01RMAF can be taken only if all courses in Calculus and Linear Algebra are passed.

(2) Enrollment in language courses follows the rules given separately.