

Course descriptions

TABLE OF CONTENTS

1. N-bUXX-004/15 Additional course in Geology.....	3
2. N-bUCH-037/16 Analytical Chemistry for Teachers.....	4
3. 1-UFY-241/10 Atomic and Nuclear Physics.....	5
4. N-bUXX-002/16 Auxology and school hygiene.....	6
5. 1-UXX-937/17 BSc Thesis in Physics Seminar (1).....	7
6. 1-UXX-938/17 BSc Thesis in Physics Seminar (2).....	8
7. N-bOBH-100/15 Bachelor Thesis Defense (state exam).....	9
8. N-bUBI-002/16 Bachelor theses.....	10
9. N-bUCH-002/16 Biochemistry for Teachers.....	11
10. N-bXCJ-121/19 CLIL 1 – Content and language integrated learning.....	12
11. N-bXCJ-122/19 CLIL 2 – Content and language integrated learning.....	13
12. 1-UFY-160/15 Calculus for Physics Teachers.....	14
13. N-bCXX-002/15 Chemical Calculation (1).....	15
14. N-bCAG-005/15 Chemical Calculation (2).....	16
15. N-bCEC-002/15 Chemistry and Environment.....	17
16. 1-UFY-181/15 Complementary Classes in Mechanics.....	18
17. 1-UFY-336/15 Constitution of Texts and Tasks for Education in Physics.....	19
18. N-bUCH-039/16 Didactics of Chemistry.....	20
19. N-bUCH-038/16 Didactics of School Experiments in Chemistry.....	21
20. N-bXDI-013/15 Digital Technologies 1.....	22
21. N-bXDI-016/16 Digital Technologies 2.....	23
22. N-bXDI-017/16 Digital Technologies 3.....	24
23. N-bCOR-001/15 Elective Seminar in Organic Chemistry.....	25
24. N-bCOR-008/16 Elective Seminar in Organic Synthesis.....	26
25. 1-UFY-141/15 Electromagnetism.....	27
26. N-bXCJ-070/10 English 1.....	28
27. N-bXCJ-071/10 English 2.....	29
28. N-bXCJ-086/10 English 3.....	30
29. N-bXCJ-087/10 English 4.....	31
30. N-bXCJ-118/18 English language 3 - preparation course for UNiCert.....	32
31. N-bXCJ-119/18 English language 4 - preparation course for UNiCert.....	33
32. 1-UFY-351/15 Experimental Methods in Physics.....	34
33. N-bXCJ-120/19 Foreign language placement test.....	35
34. 1-UFY-951/15 Fundamentals of Physics and Didactics of Physics (state exam).....	36
35. N-bUCH-034/15 General Chemistry for Teachers.....	37
36. N-bXCJ-072/10 German 1.....	38
37. N-bXCJ-073/10 German 2.....	39
38. N-bXCJ-096/10 German 3.....	40
39. N-bXCJ-097/10 German 4.....	41
40. N-bEXX-116/19 Globálne problémy životného prostredia.....	42
41. N-bXXX-001/19 Green University 1.....	43
42. N-bXXX-002/19 Green University 2.....	44
43. N-bUCH-036/15 Inorganic Chemistry for Teachers.....	45
44. 1-UFY-220/15 Introduction to Class Experiments.....	46
45. 1-UFY-310/15 Introduction to Didactics of Physics.....	47
46. N-bXDI-004/10 Introduction to Philosophy (1).....	48
47. N-bXDI-005/10 Introduction to Philosophy (2).....	49

48. N-bUCH-035/15	Laboratory Technique for Teachers.....	50
49. N-bXCJ-094/10	Latin.....	51
50. N-bXCJ-095/10	Latin.....	52
51. 1-UFY-120/15	Mathematical Methods in Physics (1).....	53
52. 1-UFY-121/15	Mathematical Methods in Physics (2).....	54
53. 1-UFY-343/15	Mathematical Methods of Theoretical Physics.....	55
54. 1-UFY-111/15	Mechanics.....	56
55. 1-UFY-342/15	Molecular Physics and Thermodynamics.....	57
56. N-bUCH-041/16	Natural Compounds.....	58
57. N-bUCH-003/15	Organic Chemistry for Teachers.....	59
58. N-bXDI-014/15	Pedagogic Communication.....	60
59. N-bCXX-012/15	Perspectives in Chemistry.....	61
60. N-bUXX-001/15	Perspectives of current biology.....	62
61. N-bUCH-001/15	Physical Chemistry for Teachers.....	63
62. N-bXTV-104/18	Physical Education.....	64
63. N-bXTV-101/18	Physical Education 1.....	65
64. N-bXTV-102/18	Physical Education 2.....	66
65. N-bXTV-103/18	Physical Education 3.....	67
66. N-bXTV-105/18	Physical Education 5.....	68
67. N-bXTV-106/18	Physical Education 6.....	69
68. 1-UFY-335/15	Physics Around Us.....	70
69. 1-UFY-360/15	Physics as the Component of Science Education.....	71
70. 1-UFY-170/20	Physics by Experience.....	72
71. N-bGXX-002/19	Practice-oriented geology for all.....	73
72. N-bUXX-038/19	Psychology for Teachers (1).....	74
73. N-bUXX-039/19	Psychology for Teachers (2).....	75
74. N-bXDI-006/10	Rhetoric.....	76
75. 1-UFY-320/15	School Experiments in Physics.....	77
76. N-bUXX-026/16	School Management.....	78
77. 1-UFY-132/15	School Physics (1).....	79
78. 1-UFY-232/15	School Physics (2).....	80
79. N-bUCH-040/16	Scientific and professional literature.....	81
80. N-bUXX-025/16	Seminar to the bachelor thesis.....	82
81. N-bUXX-205/15	Summer physic-educational meeting 2.....	83
82. N-bUXX-002/15	Supporting Science Subjects - Chemistry 1.....	84
83. N-bUXX-003/15	Supporting Science Subjects - Chemistry 2.....	85
84. N-bXDI-015/15	Supportive Science - Physics.....	86
85. N-bXDI-011/15	Supportive science - Mathematics.....	87
86. N-bUXX-023/16	Teaching Practice 1 (A).....	88
87. N-bUXX-024/16	Teaching Practice 1 (B).....	89
88. 1-UXX-821/15	Teaching Practice in Physics (1).....	90
89. N-bXDI-012/15	Theoretical Fundaments of Education.....	91
90. N-bUXX-037/15	Theory of Teaching.....	92
91. N-bCXX-046/16	Toxicology.....	93
92. 1-UFY-265/15	Unconventional Physics.....	94
93. 1-UFY-210/00	Waves and Optics.....	95
94. N-bUXX-201/00	Winter physic-educational meeting.....	96
95. N-bEXX-115/19	Človek ako súčasť prírody.....	97

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KGP/N-bUXX-004/15		Course title: Additional course in Geology			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 81					
A	B	C	D	E	FX
28,4	23,46	18,52	12,35	16,05	1,23
Lecturers: doc. RNDr. Daniel Pivko, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KAlCh/N-bUCH-037/16		Course title: Analytical Chemistry for Teachers			
Educational activities: Type of activities: practicals / lecture / seminar Number of hours: per week: 2 / 4 / 2 per level/semester: 28 / 56 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 59					
A	B	C	D	E	FX
18,64	27,12	30,51	18,64	5,08	0,0
Lecturers: RNDr. Róbert Góra, PhD., doc. RNDr. Radoslav Halko, PhD., doc. RNDr. Marian Masár, PhD.					
Last change: 09.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KJFB/1-UFY-241/10		Course title: Atomic and Nuclear Physics			
Educational activities: Type of activities: practicals / lecture Number of hours: per week: 1 / 3 per level/semester: 14 / 42 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 132					
A	B	C	D	E	FX
25,0	12,88	19,7	15,91	21,97	4,55
Lecturers: RNDr. Radoslav Böhm, PhD., Ing. Jakub Kaizer, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KAn/N-bUXX-002/16		Course title: Auxology and school hygiene			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 90					
A	B	C	D	E	FX
98,89	0,0	0,0	0,0	0,0	1,11
Lecturers: Mgr. Silvia Bodoriková, PhD., RNDr. Eva Neščáková, CSc.					
Last change: 20.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UXX-937/17		Course title: BSc Thesis in Physics Seminar (1)			
Educational activities: Type of activities: seminar Number of hours: per week: 1 per level/semester: 14 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 24					
A	B	C	D	E	FX
95,83	0,0	0,0	0,0	0,0	4,17
Lecturers: doc. PaedDr. Klára Velmovská, PhD.					
Last change: 06.02.2021					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UXX-938/17		Course title: BSc Thesis in Physics Seminar (2)			
Educational activities: Type of activities: seminar Number of hours: per week: 1 per level/semester: 14 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 22					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Peter Demkanin, PhD.					
Last change: 06.02.2021					
Approved by:					

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: PriF.KDPP/N-bOBH-100/15	Course title: Bachelor Thesis Defense
Number of credits: 8	
Educational level: I.	
State exam syllabus:	
Last change:	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava						
Faculty: Faculty of Natural Sciences						
Course ID: PriF.KDPP/N-bUBI-002/16		Course title: Bachelor theses				
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning						
Number of credits: 4						
Recommended semester: 6.						
Educational level: I.						
Prerequisites:						
Course requirements:						
Learning outcomes:						
Class syllabus:						
Recommended literature:						
Languages necessary to complete the course:						
Notes:						
Past grade distribution Total number of evaluated students: 162						
A	ABS	B	C	D	E	FX
72,22	0,0	12,96	7,41	3,09	3,7	0,62
Lecturers: doc. RNDr. Beáta Brestenská, CSc., Mgr. Štefan Zolcer, PhD., doc. PaedDr. Elena Čipková, PhD., PaedDr. Anna Drozdíková, PhD., doc. RNDr. PaedDr. Zuzana Haláková, PhD., doc. RNDr. Štefan Karolčík, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., PaedDr. Tibor Nagy, PhD., RNDr. Soňa Nagyová, PhD., prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. Zlatica Országhová, CSc., PhD., ThLic. Peter Ikhardt, PhD., doc. RNDr. Daniel Gurňák, PhD., RNDr. Ivan Ružek, PhD., doc. Mgr. Marcel Horňák, PhD., RNDr. Jana Chrappová, PhD., doc. Ing. Mária Mečiarová, PhD., doc. RNDr. Andrea Ševčovičová, PhD., doc. RNDr. Katarína Pavličková, CSc., doc. RNDr. Daniel Pivko, PhD., doc. RNDr. Jozef Tatiersky, PhD., RNDr. Jana Ciceková, PhD., PhDr. Michael Fuchs						
Last change:						
Approved by:						

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KBCh/N-bUCH-002/16		Course title: Biochemistry for Teachers			
Educational activities: Type of activities: practicals / lecture / seminar Number of hours: per week: 5 / 4 / 2 per level/semester: 70 / 56 / 28 Form of the course: on-site learning					
Number of credits: 9					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 60					
A	B	C	D	E	FX
10,0	13,33	38,33	21,67	13,33	3,33
Lecturers: prof. RNDr. Marta Kollárová, DrSc., doc. Mgr. Peter Polčic, PhD., RNDr. Petra Čermáková, PhD., RNDr. Gabriela Gavurníková, CSc.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-121/19		Course title: CLIL 1 – Content and language integrated learning			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 8					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Barbara Kordíková					
Last change: 07.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-122/19		Course title: CLIL 2 – Content and language integrated learning			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites: PriF.KJ/N-bXCJ-121/19 - CLIL 1 – Content and language integrated learning					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 5					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Barbara Kordíková					
Last change: 07.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-160/15		Course title: Calculus for Physics Teachers			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 48					
A	B	C	D	E	FX
66,67	10,42	6,25	8,33	4,17	4,17
Lecturers: doc. PaedDr. Klára Velmovská, PhD., Mgr. Anna Trúsiková					
Last change: 23.09.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KAgCh/N-bCXX-002/15		Course title: Chemical Calculation (1)			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 701					
A	B	C	D	E	FX
20,4	15,98	12,98	11,98	16,98	21,68
Lecturers: doc. RNDr. Jozef Tatiersky, PhD., Mgr. Olivier Monfort, PhD., Mgr. Ivana Božeková					
Last change: 09.11.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KAgCh/N-bCAG-005/15		Course title: Chemical Calculation (2)			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 89					
A	B	C	D	E	FX
50,56	7,87	11,24	5,62	4,49	20,22
Lecturers: doc. RNDr. Jozef Tatiersky, PhD., RNDr. Ján Šimunek, PhD.					
Last change: 14.11.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.ChÚ/N-bCEC-002/15		Course title: Chemistry and Environment			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 20					
A	B	C	D	E	FX
15,0	35,0	25,0	15,0	10,0	0,0
Lecturers: RNDr. Renáta Górová, PhD., RNDr. Helena Jurdáková, PhD., prof. RNDr. Anton Gáplovský, DrSc.					
Last change: 29.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-181/15		Course title: Complementary Classes in Mechanics			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 55					
A	B	C	D	E	FX
89,09	3,64	1,82	3,64	0,0	1,82
Lecturers: PaedDr. Peter Horváth, PhD., PaedDr. Jarier Wannous, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-336/15		Course title: Constitution of Texts and Tasks for Education in Physics			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Peter Demkanin, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bUCH-039/16		Course title: Didactics of Chemistry			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 60					
A	B	C	D	E	FX
85,0	15,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Beáta Brestenská, CSc., PaedDr. Tibor Nagy, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bUCH-038/16		Course title: Didactics of School Experiments in Chemistry			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 61					
A	B	C	D	E	FX
9,84	39,34	39,34	9,84	0,0	1,64
Lecturers: PaedDr. Anna Drozdíková, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-013/15		Course title: Digital Technologies 1			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 274					
A	B	C	D	E	FX
95,62	3,65	0,36	0,36	0,0	0,0
Lecturers: RNDr. Henrieta Mázorová, PhD., doc. RNDr. Beáta Brestenská, CSc., PaedDr. Tibor Nagy, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-016/16		Course title: Digital Technologies 2			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 181					
A	B	C	D	E	FX
98,34	1,1	0,0	0,55	0,0	0,0
Lecturers: doc. RNDr. Beáta Brestenská, CSc., RNDr. Henrieta Mázorová, PhD., PaedDr. Tibor Nagy, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-017/16		Course title: Digital Technologies 3			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 5.					
Educational level: I.					
Prerequisites: PriF.KDPP/N-bXDI-013/15 - Digital Technologies 1					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 54					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Beáta Brestenská, CSc., RNDr. Henrieta Mázorová, PhD., PaedDr. Tibor Nagy, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KOrCh/N-bCOR-001/15		Course title: Elective Seminar in Organic Chemistry			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 363					
A	B	C	D	E	FX
32,51	20,39	17,36	10,19	10,74	8,82
Lecturers: doc. Ing. Mária Mečiarová, PhD., doc. RNDr. Peter Magdolen, PhD., RNDr. Viera Poláčková, PhD., Mgr. Henrieta Stankovičová, PhD., Mgr. Peter Šramel, PhD., Mgr. Tibor Peňaška, PhD.					
Last change: 15.11.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KOrCh/N-bCOR-008/16		Course title: Elective Seminar in Organic Synthesis			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 127					
A	B	C	D	E	FX
23,62	20,47	25,2	15,75	4,72	10,24
Lecturers: doc. Ing. Mária Mečiarová, PhD.					
Last change: 27.11.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KTF+KDMFI/1-UFY-141/15		Course title: Electromagnetism			
Educational activities: Type of activities: practicals / lecture Number of hours: per week: 2 / 3 per level/semester: 28 / 42 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 56					
A	B	C	D	E	FX
19,64	12,5	21,43	19,64	25,0	1,79
Lecturers: RNDr. Eduard Masár, PhD., doc. RNDr. Peter Demkanin, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-070/10		Course title: English 1			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3., 5.					
Educational level: I.					
Prerequisites: PriF.KJ/N-bXCJ-120/19 - Foreign language placement test					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 3934					
A	B	C	D	E	FX
44,05	25,75	16,14	7,93	4,55	1,58
Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., PhDr. Oľga Pažitková, CSc., RNDr. Tatiana Slováková, PhD., Mgr. Barbara Kordíková, Michael Jerry Sabo					
Last change: 07.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-071/10		Course title: English 2			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 4., 6.					
Educational level: I.					
Prerequisites: PriF.KJ/N-bXCJ-070/10 - English 1					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 3673					
A	B	C	D	E	FX
52,82	23,63	14,27	5,23	3,24	0,82
Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., PhDr. Oľga Pažitková, CSc., RNDr. Tatiana Slováková, PhD., Mgr. Barbara Kordíková, Michael Jerry Sabo					
Last change: 07.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-086/10		Course title: English 3			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3., 5.					
Educational level: I.					
Prerequisites: PriF.KJ/N-bXCJ-070/10 - English 1,PriF.KJ/N-bXCJ-071/10 - English 2 and leboPriF.KJ/N-bXCJ-114/16 - English language for Chemistry students (2),PriF.KJ/N-bXCJ-113/16 - English language for Chemistry students (1)					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 547					
A	B	C	D	E	FX
63,62	23,95	7,86	2,56	1,1	0,91
Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., PhDr. Oľga Pažitková, CSc., RNDr. Tatiana Slováková, PhD., Mgr. Barbara Kordíková, Michael Jerry Sabo					
Last change: 08.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-087/10		Course title: English 4			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4., 6.					
Educational level: I.					
Prerequisites: PriF.KJ/N-bXCJ-070/10 - English 1, PriF.KJ/N-bXCJ-071/10 - English 2					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 327					
A	B	C	D	E	FX
71,87	20,8	6,12	0,61	0,31	0,31
Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., PhDr. Oľga Pažitková, CSc., RNDr. Tatiana Slováková, PhD., Mgr. Barbara Kordíková, Michael Jerry Sabo					
Last change: 08.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-118/18		Course title: English language 3 - preparation course for UNiCert			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3., 5.					
Educational level: I.					
Prerequisites: PriF.KJ/N-bXCJ-070/10 - English 1, PriF.KJ/N-bXCJ-071/10 - English 2					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 81					
A	B	C	D	E	FX
65,43	32,1	0,0	2,47	0,0	0,0
Lecturers: Mgr. Barbara Kordíková, PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., RNDr. Tatiana Slováková, PhD.					
Last change: 08.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-119/18		Course title: English language 4 - preparation course for UNIcert			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4., 6.					
Educational level: I.					
Prerequisites: PriF.KJ/N-bXCJ-118/18 - English language 3 - preparation course for UNIcert					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 68					
A	B	C	D	E	FX
85,29	11,76	0,0	0,0	0,0	2,94
Lecturers: Mgr. Barbara Kordíková, Mgr. Aneta Barnes					
Last change: 08.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-351/15		Course title: Experimental Methods in Physics			
Educational activities: Type of activities: laboratory practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 26					
A	B	C	D	E	FX
96,15	3,85	0,0	0,0	0,0	0,0
Lecturers: PaedDr. Peter Horváth, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-120/19		Course title: Foreign language placement test			
Educational activities: Type of activities: Number of hours: per week: per level/semester: Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 1., 2..					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 822					
A	B	C	D	E	FX
99,64	0,0	0,0	0,0	0,24	0,12
Lecturers: PhDr. Jarmila Cihová, PhD., PhDr. Štefánia Dugovičová, PhD., Mgr. Barbara Kordíková, PhDr. Oľga Pažitková, CSc., Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová, RNDr. Tatiana Slováková, PhD.					
Last change: 08.01.2020					
Approved by:					

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Natural Sciences	
Course ID: FMFL.KDMFI/1-UFY-951/15	Course title: Fundamentals of Physics and Didactics of Physics
Number of credits: 2	
Educational level: I.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KAgCh/N-bUCH-034/15		Course title: General Chemistry for Teachers			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 3 / 2 per level/semester: 42 / 28 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 245					
A	B	C	D	E	FX
1,22	6,53	13,47	15,51	17,14	46,12
Lecturers: doc. RNDr. Jozef Tatiersky, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-072/10		Course title: German 1			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3., 5.					
Educational level: I.					
Prerequisites: PriF.KJ/N-bXCJ-120/19 - Foreign language placement test					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 577					
A	B	C	D	E	FX
21,32	19,93	26,0	17,33	11,79	3,64
Lecturers: Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová					
Last change: 21.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-073/10		Course title: German 2			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 4., 6.					
Educational level: I.					
Prerequisites: PriF.KJ/N-bXCJ-072/10 - German 1					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 564					
A	B	C	D	E	FX
25,35	21,45	26,24	16,49	6,91	3,55
Lecturers: Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová					
Last change: 21.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-096/10		Course title: German 3			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 3., 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 91					
A	B	C	D	E	FX
87,91	7,69	2,2	0,0	1,1	1,1
Lecturers: Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová					
Last change: 15.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-097/10		Course title: German 4			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 4., 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 66					
A	B	C	D	E	FX
87,88	10,61	1,52	0,0	0,0	0,0
Lecturers: Mgr. Stella Rizmanová, Mgr. Karin Rózsová Wolfová					
Last change: 21.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KPI/N-bEXX-116/19		Course title: Globálne problémy životného prostredia			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 2., 4., 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 327					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Martina Zvaríková, PhD., RNDr. Ľubomír Jurkovič, PhD., doc. RNDr. Katarína Pavličková, CSc., prof. RNDr. Pavel Dlapa, PhD.					
Last change: 18.09.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KEM/N-bXXX-001/19		Course title: Green University 1			
Educational activities: Type of activities: practicals / seminar Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1., 2., 3., 4., 5., 6..					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 5					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Jaroslav Bella, doc. Mgr. Miroslava Slaninová, Dr., RNDr. Hubert Žarnovičan, PhD., Mgr. Martin Šebesta, PhD.					
Last change: 11.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KEM/N-bXXX-002/19		Course title: Green University 2			
Educational activities: Type of activities: practicals / seminar Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1., 2., 3., 4., 5., 6..					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 3					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Jaroslav Bella, doc. Mgr. Miroslava Slaninová, Dr., Mgr. Martin Šebesta, PhD., RNDr. Hubert Žarnovičan, PhD.					
Last change: 11.02.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KAgCh/N-bUCH-036/15		Course title: Inorganic Chemistry for Teachers			
Educational activities: Type of activities: practicals / lecture / seminar Number of hours: per week: 5 / 3 / 2 per level/semester: 70 / 42 / 28 Form of the course: on-site learning					
Number of credits: 8					
Recommended semester: 2.					
Educational level: I.					
Prerequisites: PriF.KAgCh/N-bUCH-034/15 - General Chemistry for Teachers					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 134					
A	B	C	D	E	FX
2,99	11,94	14,18	23,88	12,69	34,33
Lecturers: prof. RNDr. Gustáv Plesch, DrSc., doc. RNDr. Milan Drábik, CSc., RNDr. Jana Chrappová, PhD., doc. Mgr. Peter Billik, PhD., doc. RNDr. Jozef Tatiersky, PhD., RNDr. Lukáš Krivosudský, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-220/15		Course title: Introduction to Class Experiments			
Educational activities: Type of activities: laboratory practicals / lecture Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 4.					
Educational level: I., N					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 54					
A	B	C	D	E	FX
59,26	20,37	14,81	0,0	1,85	3,7
Lecturers: doc. RNDr. Peter Demkanin, PhD., doc. Mgr. PaedDr. Viera Haverlíková, PhD.					
Last change: 06.02.2021					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFI.KDMFI/1-UFY-310/15		Course title: Introduction to Didactics of Physics			
Educational activities: Type of activities: practicals / lecture Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 5.					
Educational level: I.					
Prerequisites: FMFI.KDMFI+KEF/1-UFY-132/15 - School Physics (1)					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 32					
A	B	C	D	E	FX
62,5	12,5	15,63	0,0	6,25	3,13
Lecturers: doc. PaedDr. Klára Velmovská, PhD., Mgr. Simona Gorčáková					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-004/10		Course title: Introduction to Philosophy (1)			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements: participation, activity, homework or final essay					
Learning outcomes: Understanding of the basic concepts of systematic philosophy and the basic traditions of the history of philosophy.					
Class syllabus: Introduction of the basic concepts of philosophy. A review of the history of philosophy. The emergence of philosophy in antique Greece and its development. Plato and Aristotle. Chosen problems of systematic philosophy.					
Recommended literature: Tarnas, R.: The Passion of the Western Mind Anzenbacher, A.: Introduction to Philosophy					
Languages necessary to complete the course: slovak					
Notes:					
Past grade distribution Total number of evaluated students: 1668					
A	B	C	D	E	FX
50,48	35,97	13,01	0,36	0,18	0,0
Lecturers: Mgr. Štefan Zolcer, PhD.					
Last change: 19.09.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-005/10		Course title: Introduction to Philosophy (2)			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements: participation, activity, homework or final essay					
Learning outcomes: Understanding of the basic concepts of systematic philosophy and the basic traditions of the history of philosophy.					
Class syllabus: Introduction of the basic concepts of philosophy. A review of the history of philosophy. Reflections on the beginnings of modern scientific and philosophical thinking in early modern times and the development of modern philosophy. Chosen problems of systematic philosophy.					
Recommended literature: Tarnas, R.: The Passion of the Western Mind Anzenbacher, A.: Introduction to Philosophy Kuhn, T. S.: The Structure of Scientific Revolutions Rosenberg, A.: Philosophy of Science. A contemporary introduction					
Languages necessary to complete the course: slovak					
Notes:					
Past grade distribution Total number of evaluated students: 1352					
A	B	C	D	E	FX
49,85	33,14	16,12	0,37	0,44	0,07
Lecturers: Mgr. Štefan Zolcer, PhD.					
Last change: 19.09.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KAgCh/N-bUCH-035/15		Course title: Laboratory Technique for Teachers			
Educational activities: Type of activities: practicals Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 220					
A	B	C	D	E	FX
9,09	15,91	22,27	19,09	14,55	19,09
Lecturers: RNDr. Jana Chrappová, PhD., doc. Mgr. Peter Bilik, PhD., RNDr. Zuzana Matkovičová, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-094/10		Course title: Latin			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 464					
A	B	C	D	E	FX
42,24	20,69	13,36	5,17	6,25	12,28
Lecturers: PhDr. Štefánia Dugovičová, PhD., Mgr. Ivan Lábaj, PhD.					
Last change: 16.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJ/N-bXCJ-095/10		Course title: Latin			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 355					
A	B	C	D	E	FX
49,58	20,28	10,99	3,94	3,1	12,11
Lecturers: PhDr. Štefánia Dugovičová, PhD., Mgr. Ivan Lábaj, PhD.					
Last change: 16.01.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-120/15		Course title: Mathematical Methods in Physics (1)			
Educational activities: Type of activities: practicals / lecture Number of hours: per week: 1 / 2 per level/semester: 14 / 28 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 57					
A	B	C	D	E	FX
45,61	21,05	12,28	5,26	7,02	8,77
Lecturers: doc. PaedDr. Klára Velmovská, PhD.					
Last change: 23.09.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-121/15		Course title: Mathematical Methods in Physics (2)			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 49					
A	B	C	D	E	FX
65,31	14,29	10,2	8,16	0,0	2,04
Lecturers: doc. PaedDr. Klára Velmovská, PhD.					
Last change: 23.09.2020					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-343/15		Course title: Mathematical Methods of Theoretical Physics			
Educational activities: Type of activities: seminar Number of hours: per week: 1 per level/semester: 14 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 26					
A	B	C	D	E	FX
61,54	23,08	7,69	7,69	0,0	0,0
Lecturers: PaedDr. Lukáš Bartošovič, PhD.					
Last change: 29.11.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-111/15		Course title: Mechanics			
Educational activities: Type of activities: practicals / lecture Number of hours: per week: 2 / 3 per level/semester: 28 / 42 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 66					
A	B	C	D	E	FX
27,27	16,67	19,7	19,7	4,55	12,12
Lecturers: PaedDr. Peter Horváth, PhD., doc. RNDr. Peter Demkanin, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-342/15		Course title: Molecular Physics and Thermodynamics			
Educational activities: Type of activities: lecture Number of hours: per week: 3 per level/semester: 42 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 6.					
Educational level: I.					
Prerequisites: FMFL.KDMFI/1-UFY-111/15 - Mechanics					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 26					
A	B	C	D	E	FX
65,38	30,77	3,85	0,0	0,0	0,0
Lecturers: PaedDr. Lukáš Bartošovič, PhD.					
Last change: 29.11.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KOrCh/N-bUCH-041/16		Course title: Natural Compounds			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 1 / 1 per level/semester: 14 / 14 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 8					
A	B	C	D	E	FX
37,5	0,0	37,5	12,5	0,0	12,5
Lecturers: Mgr. Ambroz Almássy, PhD., doc. RNDr. Peter Magdolen, PhD.					
Last change: 14.11.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KOrCh/N-bUCH-003/15		Course title: Organic Chemistry for Teachers			
Educational activities: Type of activities: practicals / lecture / seminar Number of hours: per week: 5 / 4 / 2 per level/semester: 70 / 56 / 28 Form of the course: on-site learning					
Number of credits: 9					
Recommended semester: 4.					
Educational level: I.					
Prerequisites: PriF.KAgCh/N-bUCH-034/15 - General Chemistry for Teachers					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 78					
A	B	C	D	E	FX
6,41	11,54	16,67	29,49	15,38	20,51
Lecturers: Mgr. Andrea Martinická, PhD., doc. Ing. Mária Mečiarová, PhD., Mgr. Peter Šramel, PhD.					
Last change: 27.11.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-014/15		Course title: Pedagogic Communication			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 1 / 1 per level/semester: 14 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 279					
A	B	C	D	E	FX
20,07	24,01	26,16	15,05	9,68	5,02
Lecturers: doc. RNDr. PaedDr. Zuzana Haláková, PhD.					
Last change: 03.12.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KOrCh/N-bCXX-012/15		Course title: Perspectives in Chemistry			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 94					
A	B	C	D	E	FX
9,57	40,43	24,47	19,15	6,38	0,0
Lecturers: doc. RNDr. Martin Putala, CSc., RNDr. Oľga Roszkopfová, PhD., doc. Ing. Dušan Velič, DrSc., prof. RNDr. Ivan Černušák, DrSc., RNDr. Milan Sýkora, PhD., Mgr. Peter Hrobárik, PhD., doc. RNDr. Erik Rakovský, PhD., RNDr. Marek Cigáň, PhD.					
Last change: 14.11.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KGe/N-bUXX-001/15		Course title: Perspectives of current biology			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 96					
A	B	C	D	E	FX
60,42	10,42	16,67	2,08	4,17	6,25
Lecturers: prof. RNDr. Ľubomír Tomáška, DrSc., doc. RNDr. Radoslav Beňuš, PhD., prof. RNDr. Vladimír Kováč, CSc., prof. RNDr. Karol Mičieta, PhD., Mgr. Michal Martinka, PhD., prof. RNDr. Ján Turňa, CSc., doc. RNDr. Stanislav Stuchlík, CSc., doc. Mgr. Peter Vďačný, prof. RNDr. Michal Zeman, DrSc., prof. RNDr. Yvetta Gbelská, CSc., prof. RNDr. Jela Mistríková, DrSc.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KFTCh/N-bUCH-001/15		Course title: Physical Chemistry for Teachers			
Educational activities: Type of activities: practicals / lecture / seminar Number of hours: per week: 2 / 4 / 2 per level/semester: 28 / 56 / 28 Form of the course: on-site learning					
Number of credits: 6					
Recommended semester: 3.					
Educational level: I.					
Prerequisites: PriF.KAgCh/N-bUCH-034/15 - General Chemistry for Teachers					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 87					
A	B	C	D	E	FX
14,94	19,54	18,39	26,44	14,94	5,75
Lecturers: doc. Mgr. Pavel Neogrady, DrSc., RNDr. Erik Szabó, PhD., doc. RNDr. Ivan Valent, CSc., doc. Ing. Dušan Velič, DrSc., doc. Ing. Marián Janek, PhD., RNDr. Lukáš Félix Pašteka, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KTV/N-bXTV-104/18		Course title: Physical Education			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 316					
A	B	C	D	E	FX
99,37	0,0	0,63	0,0	0,0	0,0
Lecturers: Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KTV/N-bXTV-101/18		Course title: Physical Education 1			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 858					
A	B	C	D	E	FX
99,07	0,7	0,0	0,0	0,0	0,23
Lecturers: Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KTV/N-bXTV-102/18		Course title: Physical Education 2			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 561					
A	B	C	D	E	FX
99,82	0,0	0,0	0,0	0,0	0,18
Lecturers: Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KTV/N-bXTV-103/18		Course title: Physical Education 3			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 369					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KTV/N-bXTV-105/18		Course title: Physical Education 5			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 230					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KTV/N-bXTV-106/18		Course title: Physical Education 6			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 178					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Kristína Vanýsková, PaedDr. Vladimír Hubka, Mgr. Miriam Kirchmayerová, PhD., Mgr. Ján Krošlák, Mgr. Martin Mokošák, PhD., Mgr. Igor Remák, PhD., PaedDr. Mgr. Lenka Vandáková					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFI.KDMFI/1-UFY-335/15		Course title: Physics Around Us			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 5.					
Educational level: I.					
Prerequisites: FMFI.KDMFI+KEF/1-UFY-132/15 - School Physics (1)					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 19					
A	B	C	D	E	FX
94,74	0,0	0,0	0,0	5,26	0,0
Lecturers: PaedDr. Peter Horváth, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-360/15		Course title: Physics as the Component of Science Education			
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 40					
A	B	C	D	E	FX
80,0	7,5	7,5	0,0	0,0	5,0
Lecturers: doc. Mgr. PaedDr. Viera Haverlíková, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-170/20		Course title: Physics by Experience			
Educational activities: Type of activities: training session Number of hours: per week: per level/semester: 5d Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 1., 3., 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. PaedDr. Viera Haverlíková, PhD., doc. PaedDr. Klára Velmovská, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KIHG/N-bGXX-002/19		Course title: Practice-oriented geology for all			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 2., 4., 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 21					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Renáta Fláková, PhD., doc. RNDr. Dávid Krčmář, PhD., RNDr. Ivana Ondřejková, PhD., doc. RNDr. Renáta Adamcová, PhD., doc. RNDr. Martin Bednarik, PhD., RNDr. Tatiana Durmeková, PhD., doc. Mgr. Vladimír Greif, PhD., Mgr. Rudolf Tornyai, PhD.					
Last change: 15.05.2021					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bUXX-038/19		Course title: Psychology for Teachers (1)			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 96					
A	B	C	D	E	FX
15,63	30,21	22,92	17,71	10,42	3,13
Lecturers: RNDr. Jana Ciceková, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bUXX-039/19		Course title: Psychology for Teachers (2)			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 2.					
Educational level: I.					
Prerequisites: FMFI-PriF.KDPP/1-UXX-141/15 - Psychology for Teachers (1)					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 152					
A	B	C	D	E	FX
50,0	25,66	15,79	2,63	4,61	1,32
Lecturers: RNDr. Jana Ciceková, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-006/10		Course title: Rhetoric			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 1 / 1 per level/semester: 14 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 1., 2., 3., 4., 5., 6..					
Educational level: I.					
Prerequisites:					
Course requirements: participation, activity, eventually final essay Scale of assessment (preliminary/final): Continuously 70% / during the examination period 30%					
Learning outcomes: The aim of the course is to teach students to adequately articulate their ideas, to express their attitudes and opinions, to use argumentation, think critically, to communicate adequately, and to listen or read with understanding.					
Class syllabus: Except the introductory lectures, the course is conceived as seminars with discussions on chosen topics.					
Recommended literature: Aristoteles: Rétorika. Bratislava: Thetis, 2009. Recommended sources are given to each topic separately.					
Languages necessary to complete the course: Slovak					
Notes:					
Past grade distribution Total number of evaluated students: 1420					
A	B	C	D	E	FX
50,14	36,83	10,42	1,48	0,56	0,56
Lecturers: Mgr. Štefan Zolcer, PhD.					
Last change: 18.09.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-320/15		Course title: School Experiments in Physics			
Educational activities: Type of activities: laboratory practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 5.					
Educational level: I., N					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 37					
A	B	C	D	E	FX
48,65	13,51	27,03	5,41	2,7	2,7
Lecturers: doc. PaedDr. Klára Velmovská, PhD., Mgr. Simona Gorčáková, PaedDr. Jakub Čevajka, PhD.					
Last change: 04.12.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bUXX-026/16		Course title: School Management			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 1 / 2 per level/semester: 14 / 28 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 168					
A	B	C	D	E	FX
32,14	39,88	14,88	10,71	1,79	0,6
Lecturers: doc. RNDr. PaedDr. Zuzana Haláková, PhD.					
Last change: 03.12.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI+KEF/1-UFY-132/15		Course title: School Physics (1)			
Educational activities: Type of activities: course / lecture Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 57					
A	B	C	D	E	FX
85,96	3,51	5,26	1,75	0,0	3,51
Lecturers: PaedDr. Peter Horváth, PhD., doc. RNDr. František Kundracik, CSc.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFI.KDMFI/1-UFY-232/15		Course title: School Physics (2)			
Educational activities: Type of activities: practicals / lecture Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 46					
A	B	C	D	E	FX
34,78	23,91	15,22	15,22	0,0	10,87
Lecturers: PaedDr. Lukáš Bartošovič, PhD., doc. Mgr. PaedDr. Viera Haverlíková, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KAgCh/N-bUCH-040/16		Course title: Scientific and professional literature			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 1 / 1 per level/semester: 14 / 14 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 6					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: prof. Ing. Karol Jesenák, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bUXX-025/16		Course title: Seminar to the bachelor thesis			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 156					
A	B	C	D	E	FX
77,56	12,18	3,21	4,49	1,92	0,64
Lecturers: RNDr. Soňa Nagyová, PhD., RNDr. Ivan Ružek, PhD., RNDr. Jana Chrappová, PhD., doc. RNDr. Katarína Pavličková, CSc., doc. RNDr. Tomáš Derka, PhD., doc. RNDr. Beáta Brestenská, CSc., doc. PaedDr. Elena Čipková, PhD., doc. RNDr. Štefan Karolčík, PhD., doc. RNDr. PaedDr. Zuzana Haláková, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., PaedDr. Tibor Nagy, PhD., doc. Mgr. Soňa Jančovičová, PhD., doc. RNDr. Eliška Gálová, PhD., doc. Ing. Margita Obernauerová, CSc., doc. Ing. Mária Mečiarová, PhD., doc. Mgr. Marcel Horňák, PhD., doc. RNDr. Daniel Gurňák, PhD., RNDr. Katarína Danielová, PhD., PhD. ThLic. Peter Ikhardt, PhD., RNDr. Jana Ciceková, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KTV/N-bUXX-205/15		Course title: Summer physic-educational meeting 2			
Educational activities: Type of activities: other Number of hours: per week: per level/semester: 7d Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 2., 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 295					
A	B	C	D	E	FX
99,32	0,0	0,0	0,0	0,0	0,68
Lecturers: Mgr. Kristína Vanýsková					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KJCh/N-bUXX-002/15		Course title: Supporting Science Subjects - Chemistry 1			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 109					
A	B	C	D	E	FX
22,02	16,51	33,03	13,76	14,68	0,0
Lecturers: RNDr. Andrea Kováčová, PhD., RNDr. Eva Viglašová, PhD., doc. RNDr. Michal Galamboš, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KOrCh/N-bUXX-003/15		Course title: Supporting Science Subjects - Chemistry 2			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 60					
A	B	C	D	E	FX
16,67	48,33	11,67	15,0	8,33	0,0
Lecturers: doc. Ing. Mária Mečiarová, PhD., Mgr. Iveta Kmentová, PhD.					
Last change: 27.11.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-015/15		Course title: Supportive Science - Physics			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 2.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 220					
A	B	C	D	E	FX
35,0	28,18	18,18	8,64	2,73	7,27
Lecturers: PaedDr. Lukáš Bartošovič, PhD., doc. Mgr. PaedDr. Viera Haverlíková, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-011/15		Course title: Supportive science - Mathematics			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 1.					
Educational level: I.					
Prerequisites:					
Course requirements: Scale of assessment (preliminary/final): 40/60					
Learning outcomes: Knowledge from higher mathematics.					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 256					
A	B	C	D	E	FX
56,25	22,66	7,81	3,91	3,52	5,86
Lecturers: PaedDr. Peter Vankúš, PhD.					
Last change: 24.04.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bUXX-023/16		Course title: Teaching Practice 1 (A)			
Educational activities: Type of activities: practice Number of hours: per week: 40 per level/semester: 560 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 186					
A	B	C	D	E	FX
70,43	17,2	4,3	4,84	3,23	0,0
Lecturers: doc. RNDr. Beáta Brestenská, CSc., doc. PaedDr. Elena Čipková, PhD., doc. RNDr. Štefan Karolčík, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., RNDr. Soňa Nagyová, PhD., prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. Katarína Pavličková, CSc., RNDr. Hubert Žarnovičan, PhD., PhDr. Michael Fuchs					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava						
Faculty: Faculty of Natural Sciences						
Course ID: PriF.KDPP/N-bUXX-024/16		Course title: Teaching Practice 1 (B)				
Educational activities: Type of activities: practice Number of hours: per week: 40 per level/semester: 560 Form of the course: on-site learning						
Number of credits: 2						
Recommended semester: 6.						
Educational level: I.						
Prerequisites:						
Course requirements:						
Learning outcomes:						
Class syllabus:						
Recommended literature:						
Languages necessary to complete the course:						
Notes:						
Past grade distribution Total number of evaluated students: 217						
A	ABS	B	C	D	E	FX
75,12	0,0	17,51	4,15	1,38	1,38	0,46
Lecturers: doc. RNDr. Beáta Brestenská, CSc., doc. PaedDr. Elena Čipková, PhD., doc. RNDr. Štefan Karolčík, PhD., RNDr. Peter Likavský, CSc., RNDr. Henrieta Mázorová, PhD., RNDr. Soňa Nagyová, PhD., prof. RNDr. Miroslav Prokša, CSc., doc. RNDr. Katarína Pavličková, CSc., RNDr. Hubert Žarnovičan, PhD., PhDr. Michael Fuchs						
Last change:						
Approved by:						

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UXX-821/15		Course title: Teaching Practice in Physics (1)			
Educational activities: Type of activities: practice Number of hours: per week: per level/semester: 30s Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 26					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: PaedDr. Peter Horváth, PhD.					
Last change:					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bXDI-012/15		Course title: Theoretical Fundaments of Education			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 1 / 1 per level/semester: 14 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 281					
A	B	C	D	E	FX
28,11	40,21	21,0	8,19	1,78	0,71
Lecturers: PhDr. ThLic. Peter Ikhardt, PhD.					
Last change: 05.12.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KDPP/N-bUXX-037/15		Course title: Theory of Teaching			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning					
Number of credits: 4					
Recommended semester: 4.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 264					
A	B	C	D	E	FX
26,52	23,11	20,08	13,64	8,33	8,33
Lecturers: doc. RNDr. PaedDr. Zuzana Haláková, PhD.					
Last change: 03.12.2019					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KOrCh/N-bCXX-046/16		Course title: Toxicology			
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 1 / 1 per level/semester: 14 / 14 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 90					
A	B	C	D	E	FX
61,11	21,11	11,11	4,44	2,22	0,0
Lecturers: Mgr. Henrieta Stankovičová, PhD., prof. RNDr. Anton Gáplovský, DrSc.					
Last change: 14.11.2017					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KDMFI/1-UFY-265/15		Course title: Unconventional Physics			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 2					
Recommended semester: 6.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 36					
A	B	C	D	E	FX
97,22	0,0	0,0	0,0	0,0	2,78
Lecturers: doc. PaedDr. Klára Velmovská, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: FMFL.KEF/1-UFY-210/00		Course title: Waves and Optics			
Educational activities: Type of activities: practicals / lecture Number of hours: per week: 3 per level/semester: 13s / 42 Form of the course: on-site learning					
Number of credits: 5					
Recommended semester: 3.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus: Oscillations and oscillating systems (modes, resonators, oscillations and waves, Fourier analysis of oscillations). Waves (harmonic waves, complex notation, wave superposition, wave polarization, Doppler effect, wave diffraction, waves in physics, and waves at boundaries). Wave optics (light interference, light diffraction, holography, light dispersion in dielectrics, dispersion, polarization by reflection and refraction, spreading of light in anisotropic conditions). Geometrical optics and basics of optical projection. Photo metrics. Contemporary problems in optics.					
Recommended literature: Main I. G.: Kmity a vlny ve fyzice, Academia Praha 1990 Feynman R. P., Leighton R. B., Sands M.: Feynmanove prednášky z fyziky 2, Alfa Bratislava 1982 Z. Chorvátová: Kmity a vlny, skriptum MFF UK, Bratislava 1994 Štrba A., Mesaroš V., Senderáková D.: Optika s príkladmi I, skriptum MFF UK, Bratislava 1996 Hecht E.: Optics, Addison-Wenslez Publishing Company, Inc. 1987					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 93					
A	B	C	D	E	FX
24,73	20,43	32,26	12,9	8,6	1,08
Lecturers: prof. RNDr. Pavel Veis, CSc.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KTV/N-bUXX-201/00		Course title: Winter physic-educational meeting			
Educational activities: Type of activities: other Number of hours: per week: per level/semester: 7d Form of the course: on-site learning					
Number of credits: 1					
Recommended semester: 1., 3., 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 469					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Martin Mokošák, PhD.					
Last change: 02.06.2015					
Approved by:					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Natural Sciences					
Course ID: PriF.KPI/N-bEXX-115/19		Course title: Človek ako súčasť prírody			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning					
Number of credits: 3					
Recommended semester: 1., 3., 5.					
Educational level: I.					
Prerequisites:					
Course requirements:					
Learning outcomes:					
Class syllabus:					
Recommended literature:					
Languages necessary to complete the course:					
Notes:					
Past grade distribution Total number of evaluated students: 242					
A	B	C	D	E	FX
96,28	0,0	0,0	0,0	0,0	3,72
Lecturers: prof. RNDr. Pavel Dlapa, PhD., doc. RNDr. Katarína Pavličková, CSc., RNDr. Martina Zvaríková, PhD., RNDr. Ľubomír Jurkovič, PhD., Mgr. Tomáš Lánczos, PhD., prof. Ing. Eva Chmielewská, CSc.					
Last change: 18.09.2019					
Approved by:					