

Course descriptions

TABLE OF CONTENTS

1. 3-MXX-101/15	Course of English for PhD Studies (1).....	2
2. 3-MXX-102/15	Course of English for PhD Studies (1).....	3
3. 3-FVM-990/15	Dissertation Thesis Defense (state exam).....	4
4. 3-FVMfu-206/14	Exactly Solvable Models in Quantum Mechanics and Statistical Physics.....	5
5. 3-FVM-211/15	Exactly Solvable Models in Quantum Mechanics and Statistical Physics.....	6
6. 3-FVM-105/15	Individual Study of Research Resources (1).....	7
7. 3-FVM-106/15	Individual Study of Research Resources (2).....	8
8. 3-FVM-107/15	Individual Study of Research Resources (3).....	9
9. 3-FVM-108/15	Individual Study of Research Resources (4).....	10
10. 3-FVMfu-204/14	Introduction to Quantum Processing of Information.....	11
11. 3-FVM-204/15	Introduction to Quantum Processing of Information.....	12
12. 3-FVM-007/10	Mathematical Methods of Theoretical Physics.....	13
13. 3-FVM-210/15	Mathematical Structures of Quantum Theory.....	14
14. 3-FVM-950/15	Passing Dissertation Examination (state exam).....	15
15. 3-FVM-213/16	Quantization on Curved Background and Hawking Radiation.....	16
16. 3-FKL-007/15	Quantum Simulations in Condensed Matter.....	17
17. 3-FVM-209/15	Quantum Theory of Gravity.....	18
18. 3-FVM-004/15	Relativistic Quantum Field Theory.....	19
19. 3-FVM-301/10	Research Work (1).....	20
20. 3-FVM-302/10	Research Work (2).....	21
21. 3-FVM-303/10	Research Work (3).....	22
22. 3-FVM-304/10	Research Work (4).....	23
23. 3-FVMfu-207/14	Selected Non-Erratic Methods in the Quantum Field Theory.....	24
24. 3-FVM-207/15	Selected Non-Erratic Methods in the Quantum Field Theory.....	25
25. 3-FVM-208/15	Selected Topics in Mathematical Physics.....	26
26. 3-FVM-212/15	Selected Topics in Quantum Theory of Information.....	27
27. 3-FVM-801/10	Teaching Activities (1).....	28
28. 3-FVM-802/10	Teaching Activities (2).....	29
29. 3-FVM-803/10	Teaching Activities (3).....	30
30. 3-FVM-804/10	Teaching Activities (4).....	31
31. 3-FVM-805/10	Teaching Activities (5).....	32
32. 3-FVM-806/10	Teaching Activities (6).....	33
33. 3-FVM-807/10	Teaching Activities (7).....	34
34. 3-FKL-006/15	Theory of Condensed Matter.....	35
35. 3-FVM-002/00	Theory of Gravitation and Cosmology.....	37

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KJP/3-MXX-101/15				Course title: Course of English for PhD Studies (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester:							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 120							
A	ABS	B	C	D	E	FX	NEABS
70,0	25,83	0,83	0,0	0,0	3,33	0,0	0,0
Lecturers: PhDr. Alena Zemanová							
Last change: 22.02.2019							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KJP/3-MXX-102/15				Course title: Course of English for PhD Studies (1)			
Educational activities: Type of activities: practicals Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester:							
Educational level: III.							
Prerequisites: FMFL.KJP/3-MXX-101/15 - Course of English for PhD Studies (1)							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 123							
A	ABS	B	C	D	E	FX	NEABS
71,54	21,95	0,0	0,0	0,0	0,0	0,0	6,5
Lecturers: PhDr. Alena Zemanová							
Last change: 22.02.2019							
Approved by:							

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KTF/3-FVM-990/15	Course title: Dissertation Thesis Defense
Number of credits: 30	
Recommended semester: 7., 8..	
Educational level: III.	
State exam syllabus:	
Last change: 02.06.2015	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVMfu-206/14			Course title: Exactly Solvable Models in Quantum Mechanics and Statistical Physics				
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Ladislav Šamaj, DrSc.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-211/15			Course title: Exactly Solvable Models in Quantum Mechanics and Statistical Physics				
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
33,33	33,33	33,33	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Ladislav Šamaj, DrSc.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-105/15			Course title: Individual Study of Research Resources (1)				
Educational activities: Type of activities: independent work Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester: 1.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 25							
A	ABS	B	C	D	E	FX	NEABS
96,0	4,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-106/15			Course title: Individual Study of Research Resources (2)				
Educational activities: Type of activities: independent work Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester: 2.							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
91,67	4,17	4,17	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-107/15				Course title: Individual Study of Research Resources (3)			
Educational activities: Type of activities: independent work Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester: 3.							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
87,5	8,33	0,0	4,17	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-108/15			Course title: Individual Study of Research Resources (4)				
Educational activities: Type of activities: independent work Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester: 4.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 23							
A	ABS	B	C	D	E	FX	NEABS
91,3	4,35	0,0	0,0	4,35	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVMfu-204/14			Course title: Introduction to Quantum Processing of Information				
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 2							
A	ABS	B	C	D	E	FX	NEABS
0,0	50,0	0,0	50,0	0,0	0,0	0,0	0,0
Lecturers: prof. RNDr. Vladimír Bužek, DrSc.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-204/15			Course title: Introduction to Quantum Processing of Information				
Educational activities: Type of activities: course Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
66,67	0,0	0,0	0,0	0,0	33,33	0,0	0,0
Lecturers: prof. RNDr. Vladimír Bužek, DrSc., doc. Mgr. Mário Ziman, PhD.							
Last change:							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-007/10			Course title: Mathematical Methods of Theoretical Physics				
Educational activities: Type of activities: lecture Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 18							
A	ABS	B	C	D	E	FX	NEABS
88,89	11,11	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Marián Fecko, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-210/15				Course title: Mathematical Structures of Quantum Theory			
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 2 per level/semester: 28 / 28 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 7							
A	ABS	B	C	D	E	FX	NEABS
57,14	14,29	14,29	14,29	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Mário Ziman, PhD.							
Last change: 02.06.2015							
Approved by:							

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KTF/3-FVM-950/15	Course title: Passing Dissertation Examination
Number of credits: 20	
Recommended semester: 3., 4..	
Educational level: III.	
State exam syllabus:	
Last change: 12.10.2016	
Approved by:	

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-213/16			Course title: Quantization on Curved Background and Hawking Radiation				
Educational activities: Type of activities: lecture / practicals Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester:							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 2							
A	ABS	B	C	D	E	FX	NEABS
100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Petr Beneš, PhD.							
Last change: 05.12.2016							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFLKEF/3-FKL-007/15				Course title: Quantum Simulations in Condensed Matter			
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, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 16							
A	ABS	B	C	D	E	FX	NEABS
87,5	0,0	6,25	6,25	0,0	0,0	0,0	0,0
Lecturers: prof. Ing. Roman Martoňák, DrSc.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFI.KTF/3-FVM-209/15				Course title: Quantum Theory of Gravity			
Educational activities: Type of activities: lecture Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 3							
Recommended semester:							
Educational level: III.							
Prerequisites:							
Antirequisites: FMFI.KTFDF/2-FTF-222/00							
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	ABS	B	C	D	E	FX	NEABS
100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Vladimír Balek, CSc.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-004/15			Course title: Relativistic Quantum Field Theory				
Educational activities: Type of activities: lecture Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
Prerequisites:							
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	ABS	B	C	D	E	FX	NEABS
73,68	15,79	10,53	0,0	0,0	0,0	0,0	0,0
Lecturers: prof. RNDr. Peter Prešnajder, DrSc., doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-301/10				Course title: Research Work (1)			
Educational activities: Type of activities: independent work Number of hours: per week: 10 per level/semester: 140 Form of the course: on-site learning, distance learning							
Number of credits: 20							
Recommended semester: 5.							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
95,24	4,76	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-302/10				Course title: Research Work (2)			
Educational activities: Type of activities: independent work Number of hours: per week: 12 per level/semester: 168 Form of the course: on-site learning, distance learning							
Number of credits: 25							
Recommended semester: 6.							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
90,48	9,52	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-303/10				Course title: Research Work (3)			
Educational activities: Type of activities: independent work Number of hours: per week: 12 per level/semester: 168 Form of the course: on-site learning, distance learning							
Number of credits: 25							
Recommended semester: 7.							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
85,0	15,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-304/10				Course title: Research Work (4)			
Educational activities: Type of activities: independent work Number of hours: per week: 10 per level/semester: 140 Form of the course: on-site learning, distance learning							
Number of credits: 20							
Recommended semester: 8.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 15							
A	ABS	B	C	D	E	FX	NEABS
80,0	20,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVMfu-207/14				Course title: Selected Non-Erratic Methods in the Quantum Field Theory			
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Štefan Olejník, DrSc., RNDr. Ľubomír Martinovič, CSc.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-207/15			Course title: Selected Non-Erratic Methods in the Quantum Field Theory				
Educational activities: Type of activities: seminar Number of hours: per week: 2 per level/semester: 28 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Ľubomír Martinovič, CSc.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFI.KTF/3-FVM-208/15				Course title: Selected Topics in Mathematical Physics			
Educational activities: Type of activities: lecture Number of hours: per week: 3 per level/semester: 42 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester:							
Educational level: III.							
Prerequisites:							
Antirequisites: FMFI.KTFDF/2-FTF-221/00							
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	ABS	B	C	D	E	FX	NEABS
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Pavel Bóna, CSc.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-212/15			Course title: Selected Topics in Quantum Theory of Information				
Educational activities: Type of activities: course Number of hours: per week: 3 per level/semester: 42 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
50,0	33,33	16,67	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Mário Ziman, PhD., Mgr. Daniel Nagaj, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-801/10				Course title: Teaching Activities (1)			
Educational activities: Type of activities: other Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester: 1.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 14							
A	ABS	B	C	D	E	FX	NEABS
100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-802/10				Course title: Teaching Activities (2)			
Educational activities: Type of activities: other Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester: 2.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 15							
A	ABS	B	C	D	E	FX	NEABS
93,33	6,67	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-803/10				Course title: Teaching Activities (3)			
Educational activities: Type of activities: other Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester: 3.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 15							
A	ABS	B	C	D	E	FX	NEABS
100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-804/10				Course title: Teaching Activities (4)			
Educational activities: Type of activities: other Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 5							
Recommended semester: 4.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 15							
A	ABS	B	C	D	E	FX	NEABS
100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-805/10				Course title: Teaching Activities (5)			
Educational activities: Type of activities: other Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester: 5.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 9							
A	ABS	B	C	D	E	FX	NEABS
100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-806/10				Course title: Teaching Activities (6)			
Educational activities: Type of activities: other Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester: 6.							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus:							
Recommended literature:							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 9							
A	ABS	B	C	D	E	FX	NEABS
100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-807/10				Course title: Teaching Activities (7)			
Educational activities: Type of activities: other Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester: 7.							
Educational level: III.							
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	ABS	B	C	D	E	FX	NEABS
66,67	33,33	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.							
Last change: 02.06.2015							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFLKEF/3-FKL-006/15	Course title: Theory of Condensed Matter
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, distance learning	
Number of credits: 10	
Recommended semester:	
Educational level: III.	
Prerequisites:	
Recommended prerequisites: 2-FTL-107 Structure and mechanical properties of solids AND 2-FTL-108 Electronic and optical properties of solids AND 2-FTL-205 Many body physics	
Course requirements: homeworks + oral exam A 90%, B 80%, C 70%, D 60%, E 50% Scale of assessment (preliminary/final): 55/45	
Learning outcomes: The students will become fluent in the language of the quantum field theory and its applications to condensed matter physics.	
Class syllabus: Linear response theory. Green's functions: relation to observables, formal properties. Perturbation theory and Feynman diagrams. Adiabatic continuity and renormalization group. Non-perturbative methods: variational methods and effective Hamiltonians. Formal results will be illustrated by examples from quantum magnetism, superconductivity, correlated electrons, and/or coupled electron-phonon problems, upon agreement with the students.	
Recommended literature: Condensed matter physics : Corrected printing / Michael P. Marder. New York : John Wiley, 2000 Principles of condensed matter physics / P. M. Chaikin, T. C. Lubensky. Cambridge : Cambridge University Press, 1995	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution							
Total number of evaluated students: 26							
A	ABS	B	C	D	E	FX	NEABS
84,62	15,38	0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Richard Hlubina, DrSc.							
Last change: 18.10.2016							
Approved by:							

COURSE DESCRIPTION

University: Comenius University in Bratislava							
Faculty: Faculty of Mathematics, Physics and Informatics							
Course ID: FMFL.KTF/3-FVM-002/00			Course title: Theory of Gravitation and Cosmology				
Educational activities: Type of activities: lecture Number of hours: per week: 4 per level/semester: 56 Form of the course: on-site learning, distance learning							
Number of credits: 10							
Recommended semester:							
Educational level: III.							
Prerequisites:							
Course requirements:							
Learning outcomes:							
Class syllabus: - spherically symmetric stars and black holes - linearized gravitation, gravitational waves - expanding Universe and cosmological models							
Recommended literature: L. D. Landau, E. M. Lifshitz: Teoria polia, Nauka, Moskva (1973) [English translation: Oxford, Pergamon Press (1975)] Ch. W. Misner, K. S. Thorne, J. A. Wheeler: Gravitation, W. H. Freeman and Comp., San Francisco (1973)							
Languages necessary to complete the course:							
Notes:							
Past grade distribution Total number of evaluated students: 6							
A	ABS	B	C	D	E	FX	NEABS
83,33	0,0	0,0	16,67	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Vladimír Balek, CSc.							
Last change: 02.06.2015							
Approved by:							