

Course descriptions

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COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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: 27					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: PhDr. Alena Zemanová					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.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: FMFI.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: 38					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: PhDr. Alena Zemanová					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KTFDF/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: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.	

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFLKTFDF/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	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Ladislav Šamaj, DrSc.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 1					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Ladislav Šamaj, DrSc.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 16					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 14					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 17					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 15					
A	B	C	D	E	FX
93,33	0,0	0,0	6,67	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: prof. RNDr. Vladimír Bužek, DrSc.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 1					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: prof. RNDr. Vladimír Bužek, DrSc., doc. Mgr. Mário Ziman, PhD.					
Last change:					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 14					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Marián Fecko, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KTFDF/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: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. Mgr. Mário Ziman, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

STATE EXAM DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Mathematics, Physics and Informatics	
Course ID: FMFL.KTFDF/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: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.	

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: Mgr. Petr Beneš, PhD.					
Last change: 05.12.2016					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

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: 4					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: prof. Ing. Roman Martoňák, DrSc.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KTFDF/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: 2					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Vladimír Balek, CSc.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 16					
A	B	C	D	E	FX
87,5	12,5	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: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 13					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 13					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 13					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 9					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KTFDF/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	B	C	D	E	FX
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: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: RNDr. Ľubomír Martinovič, CSc.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFI.KTFDF/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	B	C	D	E	FX
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: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 1					
A	B	C	D	E	FX
100,0	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: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 12					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 13					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 10					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 5					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 4					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 2					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Tomáš Blažek, PhD.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

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: 20					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Richard Hlubina, DrSc.					
Last change: 18.10.2016					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					

COURSE DESCRIPTION

University: Comenius University in Bratislava					
Faculty: Faculty of Mathematics, Physics and Informatics					
Course ID: FMFL.KTFDF/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: 4					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Vladimír Balek, CSc.					
Last change: 02.06.2015					
Approved by: prof. Ing. Roman Martoňák, DrSc., prof. RNDr. Vladimír Bužek, DrSc.					