

University of Mosul جامعة الموصل



First Cycle – Bachelor's Degree (B.Sc.) -
Physics

بكالوريوس – علوم الفيزياء



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1. Overview

This catalogue is about the courses (modules) given by the program of Department of Physics to gain the Bachelor of Physics Science degree. The program delivers (48) Modules with (6000) total student workload hours and 240 total ECTS. The module delivery is based on the Bologna Process.

نظرة عامة

يتناول هذا الدليل المواد الدراسية التي يقدمها برنامج قسم الفيزياء للحصول على درجة بكالوريوس علوم فيزياء. يقدم البرنامج (48) مادة دراسية، مع (٦٠٠٠) إجمالي ساعات حمل الطالب و ٢٤٠ إجمالي وحدات أوروبية. يعتمد تقديم المواد الدراسية على عملية بولونيا.

2. Undergraduate Courses 2023-2024

Module 1

Code	Course/Module Title	ECTS	Semester
PHY1101	Mechanics and properties of matter I	8.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USSWL (hr/w)
2	4	108	92
Description			
This section includes a description of the module, 100-150 words			

Module 2

Code	Course/Module Title	ECTS	Semester
PHY1102	Electricity	8.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	108	92
Description			
This section includes a description of the module, 100-150 words			

Module 3

Code	Course/Module Title	ECTS	Semester
Sci-101	Mathematics I	2.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2		33	17
Description			
This section includes a description of the module, 100-150 words			

Module 4

Code	Course/Module Title	ECTS	Semester
PHY1103	General Astronomy	8.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	93	107
Description			
This section includes a description of the module, 100-150 words			

Module 5

Code	Course/Module Title	ECTS	Semester
UOM104	Democracy & Human Right	2.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	38	12
Description			
This section includes a description of the module, 100-150 words			

Module 6

Code	Course/Module Title	ECTS	Semester
UOM101	Arabic Language	2.00	1
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	35	15
Description			
This section includes a description of the module, 100-150 words			

Model 7

Code	Course/Module Title	ECTS	Semester
PHY1214	Mechanics and properties of matter II	8.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	4	108	92
Description			
This section includes a description of the module, 100-150 words			

Model 8

Code	Course/Module Title	ECTS	Semester
PHY1215	Magnetism	8.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
3	4	108	92
Description			
This section includes a description of the module, 100-150 words			

Module 9

Code	Course/Module Title	ECTS	Semester
PHY1217	Mathematics 2	4.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 10

Code	Course/Module Title	ECTS	Semester
UOM103	Computers I	3.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
	3	48	27
Description			
This section includes a description of the module, 100-150 words			

Module 11

Code	Course/Module Title	ECTS	Semester
PHY1206	General Chemistry	5.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	78	47
Description			
This section includes a description of the module, 100-150 words			

Module 12

Code	Course/Module Title	ECTS	Semester
UOM102	English Language	2.00	2
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2		33	17
Description			
This section includes a description of the module, 100-150 words			

Module 13

Code	Course/Module Title	ECTS	Semester
PHY2308	Modern Physics 1	6.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

Module 14

Code	Course/Module Title	ECTS	Semester
PHY2309	Heat and Thermodynamic	6.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

Module 15

Code	Course/Module Title	ECTS	Semester
PHY23010	Analytical Mechanics 1	4.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 16

Code	Course/Module Title	ECTS	Semester
PHY23011	Analog Electronics	6.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

Module 17

Code	Course/Module Title	ECTS	Semester
UOM201	Baath Crimes	4.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 18

Code	Course/Module Title	ECTS	Semester
PHY23112	Computers 2	4.00	3
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
	4	63	37
Description			
This section includes a description of the module, 100-150 words			

Module 19

Code	Course/Module Title	ECTS	Semester
PHY24114	Modern Physics 2	6.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

Module 20

Code	Course/Module Title	ECTS	Semester
PHY24015	Thermodynamic and Statistical	6.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

Module 21

Code	Course/Module Title	ECTS	Semester
PHY24116	Analytical Mechanics 2	4.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 22

Code	Course/Module Title	ECTS	Semester
PHY24017	Digital Electronics	6.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

Module 23

Code	Course/Module Title	ECTS	Semester
PHY24113	Mathematics 3	4.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 24

Code	Course/Module Title	ECTS	Semester
PHY24018	Sound and wave motion	4.00	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 25

Code	Course/Module Title	ECTS	Semester
PHY35019	Geometrical Optics	6.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

Module 26

Code	Course/Module Title	ECTS	Semester
PHY35020	Laser Physics 1	6.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

Module 27

Code	Course/Module Title	ECTS	Semester
PHY35021	Quantum Mechanics I	4	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 28

Code	Course/Module Title	ECTS	Semester
PHY35022	Material Physics 1	5.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	64	61
Description			
This section includes a description of the module, 100-150 words			

Module 29

Code	Course/Module Title	ECTS	Semester
PHY35023	Mathematics 4	5.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	77
Description			
This section includes a description of the module, 100-150 words			

Module 30

Code	Course/Module Title	ECTS	Semester
PHY35024	Spectra	4.00	5
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	63	37
Description			
This section includes a description of the module, 100-150 words			

Module 31

Code	Course/Module Title	ECTS	Semester
PHY36025	Physical Optics	7.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	81
Description			
This section includes a description of the module, 100-150 words			

Module 32

Code	Course/Module Title	ECTS	Semester
PHY36126	Laser Physics 2	6.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	3	79	71
Description			
This section includes a description of the module, 100-150 words			

Module 33

Code	Course/Module Title	ECTS	Semester
PHY36127	Quantum Mechanics 2	4.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 34

Code	Course/Module Title	ECTS	Semester
PHY36128	Material physics 2	7.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	81
Description			
This section includes a description of the module, 100-150 words			

Module 35

Code	Course/Module Title	ECTS	Semester
PHY36029	Molecular Physics	3.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	27
Description			
This section includes a description of the module, 100-150 words			

Module 36

Code	Course/Module Title	ECTS	Semester
PHY36030	Nano physics	3.00	6
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	27
Description			
This section includes a description of the module, 100-150 words			

Module 37

Code	Course/Module Title	ECTS	Semester
PHY47031	Nuclear physics 1	7	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	81
Description			
This section includes a description of the module, 100-150 words			

Module 38

Code	Course/Module Title	ECTS	Semester
PHY47032	Solid State Physics 1	7.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	81
Description			
This section includes a description of the module, 100-150 words			

Module 39

Code	Course/Module Title	ECTS	Semester
PHY47033	Electromagnetic Theory 1	4.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	49	51
Description			
This section includes a description of the module, 100-150 words			

Module 40

Code	Course/Module Title	ECTS	Semester
PHY47034	Research Methodology	4.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 41

Code	Course/Module Title	ECTS	Semester
PHY47035	Elective1 (solar energy +Nuclear reactors)	4.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 42

Code	Course/Module Title	ECTS	Semester
PHY47036	Bio-physics	4.00	7
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	47	53
Description			
This section includes a description of the module, 100-150 words			

Module 43

Code	Course/Module Title	ECTS	Semester
PHY48137	Nuclear Physics 2	7.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	81
Description			
This section includes a description of the module, 100-150 words			

Module 44

Code	Course/Module Title	ECTS	Semester
PHY48138	Solid State Physics 2	7	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	4	94	81
Description			
This section includes a description of the module, 100-150 words			

Module 45

Code	Course/Module Title	ECTS	Semester
PHY48139	Electromagnetic Theory 2	4.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	49	51
Description			
This section includes a description of the module, 100-150 words			

Module 46

Code	Course/Module Title	ECTS	Semester
PHY48040	Plasma physics	4.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

Module 47

Code	Course/Module Title	ECTS	Semester
PHY48041	Research project	4.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	2	63	37
Description			
This section includes a description of the module, 100-150 words			

Module 48

Code	Course/Module Title	ECTS	Semester
PHY48042	Elective 2 (Special Relativity+ Medical physics)	4.00	8
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2	1	48	52
Description			
This section includes a description of the module, 100-150 words			

5. Contact

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