



NOTIFICATION

In pursuance to powers delegated to the Academic Council by Syndicate vide its Resolution No.Syn-186.4(b) dated 26-10-2018, it is hereby notified that the Academic Council vide its Resolution No. AC-161.5(v) dated 05-09-2023 has approved change in degree title of BS (Applied Physics) to BS (Physics) for pipeline Batches 2021 & 2022 at the Department of Physics

Scheme of Studies for Batch 2021

FIRST YEAR									
Fall					Spring				
Course Code	Course Title	Th.	Pr.	Total	Course Code	Course Title	Th.	Pr.	Total
CS-101	Introduction to Computer	2	1	3	CY-116	General Chemistry-II	2	1	3
CY-115	General Chemistry-I	2	1	3	EL-255	Programming Language	2	1	3
HS-105 OR HS-127	Pakistan Studies OR Pakistan Studies (For Foreigners)	2	0	2	HS-104	Functional English	3	0	3
MT-100	Introduction to Mathematics	0	0	0	HSK-1 OR HS-231	Chinese Language Or Turkish Language-I	-	-	NC
MT-173	Calculus	3	0	3	MT-227	Differential Equations	3	0	3
PH-101	Mechanics & Properties of Matter	3	0	3	PH-104	Waves & Oscillations	2	0	2
PH-102	Heat & Thermodynamics	2	0	2	PH-105	Electricity & Magnetism	3	0	3
PH-103	Physics Lab-I	0	1	1	PH-106	Physics Lab-2	0	1	1
	Total	14	3	17		Total	15	3	18

SECOND YEAR									
Fall					Spring				
Course Code	Course Title	Th.	Pr.	Total	Course Code	Course Title	Th.	Pr.	Total
EL-232	Electronics	3	1	4	EL-238	Digital Electronics	3	1	4
HS-201	Oral Communication	2	1	3	HS-200	Community Service	-	-	NC
HS-205 OR HS-209	Islamic Studies Or Ethical Behavior For Non-Muslims	2	0	2	MT-228	Complex Variables & Fourier transform	3	0	3
HSK-2 OR HS-232	Chinese Language Or Turkish Language – II	-	-	NC	MT-331	Probability and Statistics	3	0	3
MT-272	Linear Algebra & Geometry	3	0	3	PH-206	Physics Lab-IV	0	1	1
PH-201	Optics	2	0	2	PH-204	Introduction to Material Science	3	0	3
PH-202	Modern Physics	3	0	3	PH-205	Classical Mechanics	3	0	3
PH-203	Physics Lab-III	0	1	1					
	Total	15	3	18		Total	15	2	17

Vide its Resolution No. AC-161.5(v) dated 05-09-2023

THIRD YEAR									
Fall					Spring				
Course Code	Course Title	Th.	Pr.	Total	Course Code	Course Title	Th.	Pr.	Total
EA-301	Business and Organizational Communication	3	0	3	MG-110	Fundamentals of Management	2	0	2
PH-301	Quantum Mechanics-I	3	0	3	PH-307	Mathematical Physics-II	3	0	3
PH-303	Mathematical Physics-I	3	0	3	PH-309	Electromagnetic Theory-II	3	0	3
PH-304	Electromagnetic Theory-I	3	0	3	PH-311	Physics Lab-V	0	1	1
PH-310	Solid State Physics-I	3	0	3	PH-403	Solid State Physics-II	3	0	3
					PH-415	Statistical Mechanics	2	0	2
	Total	15	0	15		Total	13	1	14

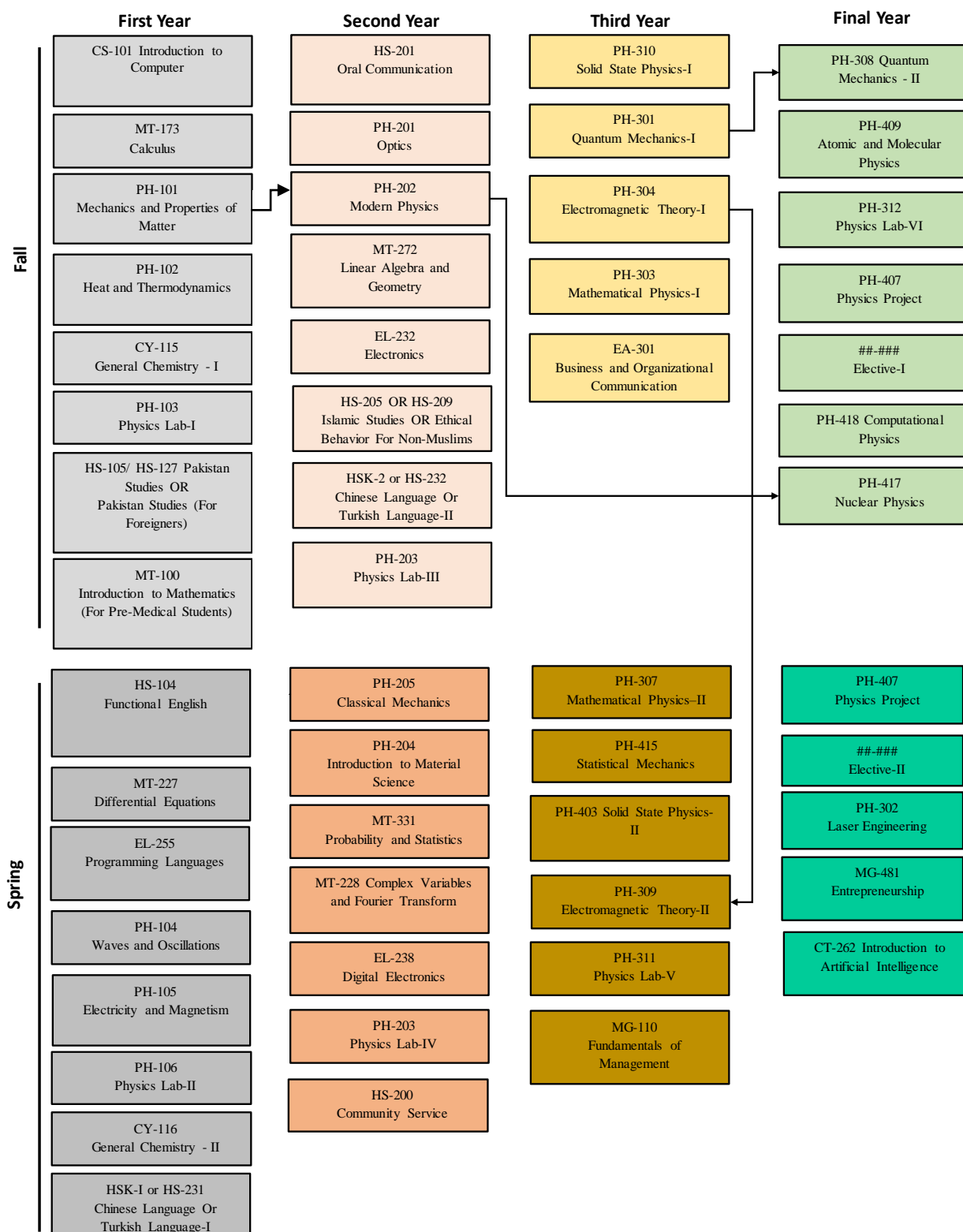
FOURTH YEAR									
Fall					Spring				
Course Code	Course Title	Th.	Pr.	Total	Course Code	Course Title	Th.	Pr.	Total
##-###	Elective-I	3	0	3	##-###	Elective-II	3	0	3
PH-308	Quantum Mechanics-II	3	0	3	CT-262	Introduction to Artificial Intelligence	2	1	3
PH-312	Physics Lab-VI	0	1	1	MG-481	Entrepreneurship	3	0	3
PH-407	Physics Project	0	3	3	PH-302	Laser Engineering	3	0	3
PH-409	Atomic and Molecular Physics	2	0	2	PH-407	Physics Project	0	3	3
PH-417	Nuclear Physics	2	0	2	-	-	-	-	-
PH-418	Computational Physics	3	0	3	-	-	-	-	-
	Total	13	4	17		Total	11	4	15
-	-	-	-	-	-	Grand Total Credit Hours			131

List of Elective Courses for the approved retrofitted Scheme of Studies Batch 2021

<u>ELECTIVE COURSES</u>					
S. No	Course	Title	Cr Hr.	Cr Hr.	Cr Hr.
1.	MY-402	Advanced Materials	3	0	3
2.	PH-313	Cosmology and Theory of Relativity	3	0	3
3.	PH-419	Fundamentals of Medical Physics	3	0	3
4.	PH-420	Nano Science and Nanotechnology	3	0	3
5.	PH-411	Applications of Space Physics	3	0	3
6.	PH-421	Vacuum Science	3	0	3
7.	PH-422	Plasma Physics	3	0	3
8.	PH-423	Surface Science and Applications	3	0	3
9.	PH-424	Essentials of Health Physics	3	0	3
10.	PH-425	Microwave Systems	3	0	3
11.	PH-426	Essentials of Quantum Field Theory	3	0	3
12.	PH-427	Dielectric Materials	3	0	3
13.	PH-428	Renewable Energy Sources	3	0	3
14.	PH-429	Environmental Physics	3	0	3
15.	PH-430	Optoelectronic Devices	3	0	3

Vide its Resolution No. AC-161.5(v) dated 05-09-2023

Retrofitted Course Dependency Chart for Batch 2021



Vide its Resolution No. AC-161.5(v) dated 05-09-2023

Retrofitted Scheme of Studies for Batch 2022

FIRST YEAR									
Fall					Spring				
Course Code	Course Title	Th.	Pr.	Total	Course Code	Course Title	Th.	Pr.	Total
CS-101	Introduction to Computer	2	1	3	CY-116	General Chemistry-II	2	1	3
CY-115	General Chemistry-I	2	1	3	EL-255	Programming Language	2	1	3
HS-105 OR HS-127	Pakistan Studies OR Pakistan Studies (For Foreigners)	2	0	2	HS-104	Functional English	3	0	3
MT-100	Introduction to Mathematics	-	-	NC	HSK-1 OR HS-231	Chinese Language Or Turkish Language-I	-	-	NC
MT-173	Calculus	3	0	3	MT-227	Differential Equations	3	0	3
PH-101	Mechanics & Properties of Matter	3	0	3	PH-104	Waves & Oscillations	2	0	2
PH-102	Heat & Thermodynamics	2	0	2	PH-105	Electricity & Magnetism	3	0	3
PH-103	Physics Lab-I	0	1	1	PH-106	Physics Lab-II	0	1	1
	Total	14	3	17		Total	15	3	18

SECOND YEAR									
Fall					Spring				
Course Code	Course Title	Th.	Pr.	Total	Course Code	Course Title	Th.	Pr.	Total
CT-262	Introduction to Artificial Intelligence	2	1	3	EL-238	Digital Electronics	3	1	4
EL-232	Electronics	3	1	4	EA-200	Community Service	-	-	NC
HSK-2 OR HS-232	Chinese Language Or Turkish Language – II	-	-	NC	EA-214	Academic Writing	3	0	3
MT-272	Linear Algebra & Geometry	3	0	3	MT-331	Probability and Statistics	3	0	3
PH-202	Modern Physics	3	0	3	PH-203	Physics Lab-III	0	1	1
PH-207	Optics and Laser	3	0	3	PH-204	Introduction to Material Science	3	0	3
ES-205 OR ES-209	Islamic Studies Or Ethical Behavior	2	0	2	PH-205	Classical Mechanics	3	0	3
	Total	16	2	18		Total	15	2	17

THIRD YEAR									
Fall					Spring				
Course Code	Course Title	Th.	Pr.	Total	Course Code	Course Title	Th.	Pr.	Total
EA-301	Business and Organizational Communication	3	0	3	MG-110	Fundamentals of Management	2	0	2
PH-301	Quantum Mechanics-I	3	0	3	PH-307	Mathematical Physics-II	3	0	3
PH-303	Mathematical Physics-I	3	0	3	PH-309	Electromagnetic Theory-II	3	0	3
PH-304	Electromagnetic Theory-I	3	0	3	PH-311	Physics Lab-V	0	1	1
PH-310	Solid State Physics-I	3	0	3	PH-403	Solid State Physics-II	3	0	3
PH-206	Physics Lab-IV	0	1	1	PH-415	Statistical Mechanics	2	0	2
	Total	15	1	16		Total	13	1	14

FOURTH YEAR									
Fall					Spring				
Course Code	Course Title	Th.	Pr.	Total	Course Code	Course Title	Th.	Pr.	Total
##-###	Elective-I	3	0	3	##-###	Elective-II	3	0	3
PH-308	Quantum Mechanics-II	3	0	3	##-###	Elective-III	3	0	3
PH-312	Physics Lab-VI	0	1	1	##-###	Elective-IV	3	0	3
PH-407	Physics Project	0	3	3	MG-481	Entrepreneurship	3	0	3
PH-409	Atomic and Molecular Physics	2	0	2	PH-407	Physics Project	0	3	3
PH-417	Nuclear Physics	2	0	2	-	-	-	-	-
PH-418	Computational Physics	3	0	3	-	-	-	-	-
	Total	13	4	17	-	Total	12	3	15
-	-	-	-	-	-	Grand Total Credit Hours	132		

Vide its Resolution No. AC-161.5(v) dated 05-09-2023

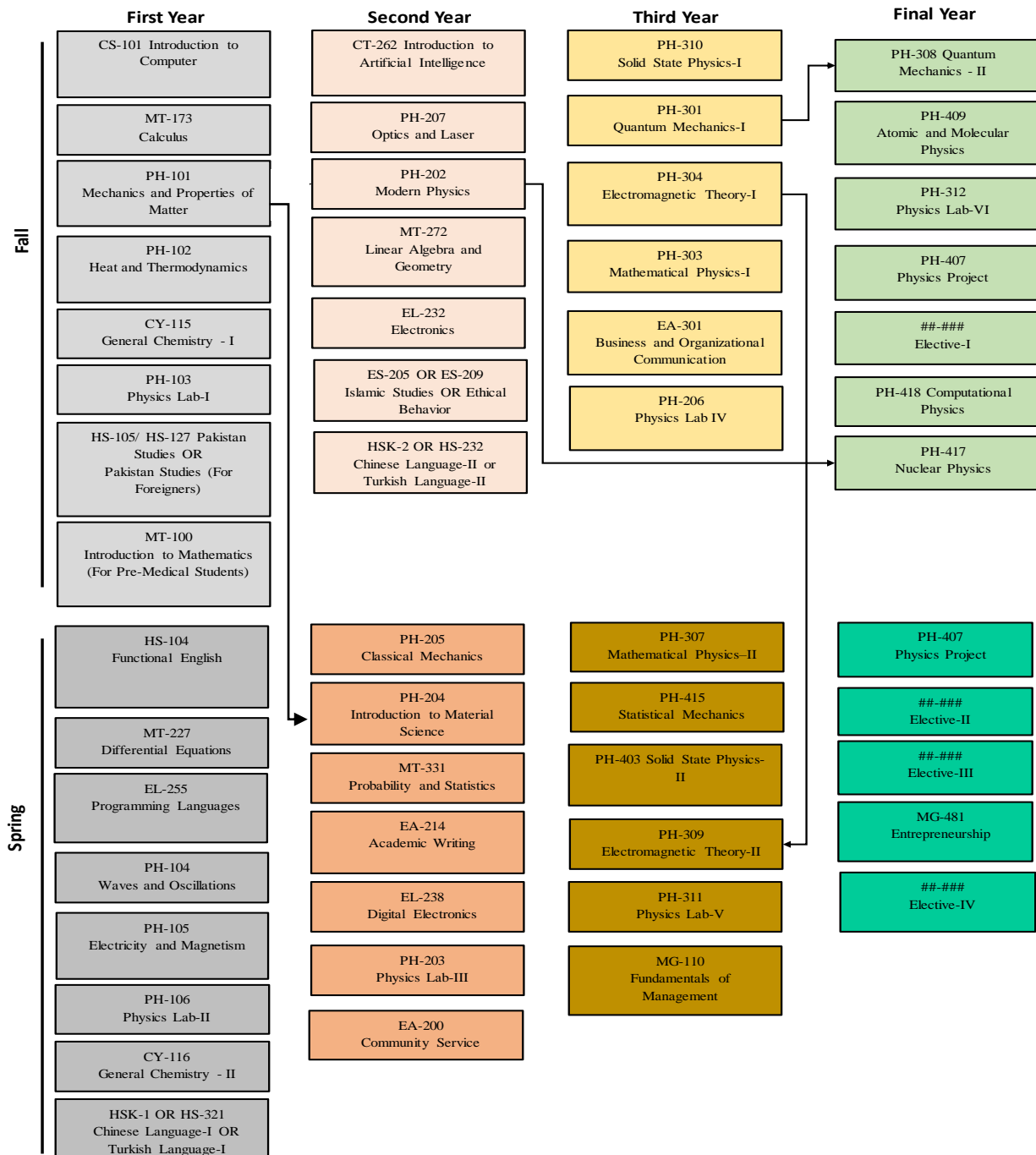
List of Elective Courses for the approved retrofitted Scheme of Studies Batch 2022

<u>ELECTIVE COURSES</u>					
S. No	Course Code	Title	Cr Hr. Theory	Cr Hr. Practical	Cr Hr. Total
1.	MY-402	Advanced Materials	3	0	3
2.	PH-313	Cosmology and Theory of Relativity	3	0	3
3.	PH-419	Fundamentals of Medical Physics	3	0	3
4.	PH-420	Nano Science and Nanotechnology	3	0	3
5.	PH-411	Applications of Space Physics	3	0	3
6.	PH-421	Vacuum Science	3	0	3
7.	PH-422	Plasma Physics	3	0	3
8.	PH-423	Surface Science and Applications	3	0	3
9.	PH-424	Essentials of Health Physics	3	0	3
10.	PH-425	Microwave Systems	3	0	3
11.	PH-426	Essentials of Quantum Field Theory	3	0	3
12.	PH-427	Dielectric Materials	3	0	3
13.	PH-428	Renewable Energy Sources	3	0	3
14.	PH-429	Environmental Physics	3	0	3
15.	PH-430	Optoelectronic Devices	3	0	3

Vide its Resolution No. AC-161.5(v) dated 05-09-2023

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Retrofitted Course Dependency Chart for Batch 2022



Muhammad Hussain
REGISTRAR

To,

Chairperson, Department of Physics

Copy to:-

- 1- Dean (ASC)
- 2- Controller of Examinations
- 3- Director, I.T. Department
- 4- Mr. Muhammad Riaz, AR (Acad)

Copy for information to:-

- 1- PS to the Vice Chancellor
- 2- PA to Pro-Vice Chancellor
- 3- Director QEC