



VIVEKANANDA GLOBAL UNIVERSITY

(Established by Rajasthan State Legislature and covered u/s 2(f) of the UGC Act, 1956)

FACULTY OF BASIC AND APPLIED SCIENCES

SCHEME & SYLLABUS

FOR

Master of Science (Physics)

(Implemented from Academic Session 2018-19 and also for students admitted to Ist Semester in 2017-18)

Sem	I	II	III	IV	Total
Credits	24	22	22	22	90

SESSION: 2018-19

VIT Campus, Sector-36, NRI Road, Sisyawas, Jagatpura, Jaipur (Raj.)-303012

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Master of Science (Physics)

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M.SC. PHYSICS SCHEME EFFECTIVE FROM 2018-19

SEMESTER I

Course Code	University Course Type	Course Name	Teaching Load			
			L	T	P	C
PHY 201	Core Theory	Classical Mechanics	3	1	0	4
PHY 202	Core Theory	Advanced Electronics	3	1	0	4
PHY 203	Core Theory	Advanced Mathematical Physics	3	1	0	4
PHY 204	Core Theory	Electrodynamics	3	1	0	4
PHY 205	Core Practical	Computational Physics Lab	0	0	6	3
PHY 206	Core Practical	Electronics Lab	0	0	6	3
ENG 101	Skill Enhancement Course	Communicative English	2	0	0	2
Total			14	4	12	24

M.SC. PHYSICS SCHEME EFFECTIVE FROM 2018-19

SEMESTER II

Course Code	University Course Type	Course Name	Teaching Load			
			L	T	P	C
PHY 207	Core Theory	Quantum Mechanics	3	1	0	4
PHY 208	Core Theory	Thermal Physics	3	1	0	4
PHY 209	Core Theory	Advanced Solid State Physics	3	1	0	4
PHY 215	Department Specific Elective Theory	Instrumentation In Physics	3	1	0	4
PHY 216		Biomedical Physics				
PHY 210	Core Practical	Advanced Solid State Physics Lab	0	0	6	3
PHY 217	Department Specific Elective Practical	Instrumentation In Physics Lab	0	0	6	3
PHY 218		Biomedical Physics Lab				
Total			12	4	12	22

M.SC. PHYSICS SCHEME EFFECTIVE FROM 2018-19						
SEMESTER III						
Course Code	University Course Type	Course Name	Teaching Load			
			L	T	P	C
PHY 211	Core Theory	Advanced Spectroscopy	3	1	0	4
PHY 212	Core Theory	Materials Science	3	1	0	4
PHY 213	Core Theory	Advanced Nuclear and Particle Physics	3	1	0	4
PHY 219	Department Specific Elective Theory	Advanced Quantum Mechanics	3	1	0	4
PHY 220		Electronic Devices and Circuits				
PHY 214	Core Practical	Material Science and Nuclear Physics Lab	0	0	6	3
PHY 221	Department Specific Elective Practical	Advanced Quantum Mechanics Lab	0	0	6	3
PHY 222		Electronic Devices and Circuits Lab				
Total			12	4	12	22
M.SC. PHYSICS SCHEME EFFECTIVE FROM 2018-19						
SEMESTER IV						
Course Code	University Course Type	Course Name	Teaching Load			
			L	T	P	CREDIT
PHY 223	Department Specific Elective Theory	Physics for Nano Materials	3	1	0	4
PHY 224		Digital Electronics, Microprocessor and Microcontroller				
PHY 225	Department Specific Elective Theory	Thin Film Techniques	3	1	0	4
PHY 226		Microwaves				
PHY 227	Department Specific Elective Practical	Physics for Nano Materials Lab	0	0	8	4
PHY 228		Digital Electronics, Microprocessor and Microcontroller Lab				
PHY 229		Thin Film Techniques Lab				
PHY 230		Microwaves Lab				
PHY 231	Core Practical	Project	0	0	16	8
PHY 232	Core Practical	Seminar	0	0	4	2
Total			6	2	28	22

*Note: All Courses (Theory Paper and Labs) Carry Maximum 100 Marks

Theory - 2 Midterm Exams And Class Work* (40%), End Term Exam (60%)

Practical- 2 Midterm Exams And Class Work* (60%), End Term Exam (40%)

LIST OF DEPARTMENT SPECIFIC ELECTIVE COURSES

COURSE CODE	DEPARTMENT SPECIFIC ELECTIVE
PHY 215	INSTRUMENTATION IN PHYSICS
PHY 216	BIOMEDICALPHYSICS
PHY 217	INSTRUMENTATION IN PHYSICS LAB
PHY 218	BIOMEDICALPHYSICS LAB
PHY 219	ADVANCED QUANTUM MECHANICS
PHY 220	ELECTRONIC DEVICES AND CIRCUITS
PHY 221	ADVANCED QUANTUM MECHANICS LAB
PHY 222	ELECTRONIC DEVICES AND CIRCUITS LAB
PHY 223	PHYSICS FOR NANOMATERIALS
PHY 224	DIGITAL ELECTRONICS, MICROPROCESSOR AND MICROCONTROLLER
PHY 225	THIN FILM TECHNIQUES
PHY 226	MICROWAVES
PHY 227	PHYSICS FOR NANOMATERIALS LAB
PHY 228	DIGITAL ELECTRONICS, MICROPROCESSOR AND MICROCONTROLLER LAB
PHY 229	THIN FILM TECHNIQUES LAB
PHY 230	MICROWAVES LAB
PHY 231	PROJECT
PHY232	SEMINAR