

**Table 16: Courses to be taken by 100 Level students in the
Department of Pure and Applied Physics**

Course Code	Course Title	Course Status	Total Units
1st Semester 100 Level			
GNS 101	Use of English I	C	2
GNS 103	People, Culture and Social Issues	C	2
BIO 101	Organisms and Environment	R	3
CHE 101	Introductory Physical Chemistry	R	3
CHE 191	Practical Chemistry I	R	1
CSC 101	Introduction to Computer Science	C	2
MAT 101	Elementary Mathematics I	C	3
PHY 101	General Physics I	C	3
PHY 191	General Physics Laboratory I	C	1
STA 101	Elementary Statistics I	R	3
	Total Units		23
2nd Semester 100 Level			
GNS 102	Use of English II	C	2
GNS 104	Basic Computer Applications	C	2
GNS 108	Introduction to Logic and Philosophy	C	2
CHE 102	Inorganic Chemistry I	R	3
CHE 192	Practical Chemistry II	R	1
MAT 102	Elementary Mathematics II	C	3
MAT 104	Vectors	C	2
PHY 102	General Physics II	C	3
PHY 192	General Physics Laboratory II	C	1
STA 102	Elementary Statistics II	C	2
	Total Units		21

Table 17: Courses to be taken by 200 - 400 Level students of Physics

Course Code	Course Title	Pre-Requisite	Course Status	Total Units
1st Semester 200 Level				
PHY 201	Classical Mechanics	PHY 101	C	2
PHY 203	Vibrations & Waves	-	C	2
PHY 211	Thermal Physics		C	2
PHY 291	Experimental Physics I	-	C	1
PHY 293	Workshop Practice	-	R	1
MAT 201	Mathematical Methods I	MAT 101	R	3
CSC 201	Computer Programming I	CSC 101	R	3
STA 201	Statistics for Non-Majors	STA 101	R	2
GNS 201	History & Philosophy of Science	-	C	2
GNS 203	Introduction to French I	-	C	2
	Total Units			20
2nd Semester 200 Level				
PHY 204	Modern Physics	PHY 102	C	2
PHY 208	Electric Circuits	PHY 102	C	2
PHY 210	Computational Physics	-	C	3
PHY 212	Introductory Material Science	-	R	2
PHY 214	Introduction to Electronics	-	C	2
PHY 292	Experimental Physics II	-	C	1
CSC 202	Computer Programming II	CSC 101	R	3
MAT 202	Introduction to Ord. Diff. Equation	MAT 102	R	2
MAT 206	Mechanics	-	E*	2
STA 202	Statistical Inference I	-	R	2
GNS 204	Introduction to French II	-	E*	2
CSC 211	Computer Operating Systems I	-	E*	3
	*Minimum of 4 Units Elective	Total Units		26

Course Code	Course Title	Pre-Requisite	Course Status	Total Units
1st Semester 300 Level				
PHY 301	Analytical Mechanics I	PHY 201	C	2
PHY 303	Electromagnetic Waves	PHY 203	C	3
PHY 305	Statistical Physics	-	C	3
PHY 391	Experimental Physics III	-	C	1
PHY 315	Optics	-	C	2
PHY 317	Quantum Mechanics I	-	C	3
PHY 319	Energy Studies	-	C	1
PHY 311	Introductory Reactor Physics	-	E*	2
PHY 321	Physics of Lower Atmosphere	-	E*	2
GNS 301	Entrepreneurial skills I	-	C	2
MAT 315	Vectors and Tensor Analysis	-	R	2
CSC 307	Computer Operating Systems II	-	R	3
*Maximum of 2 Units Elective and the Overall Minimum Unit is 25 Units		Total Units		27
2nd Semester 300 Level				
GNS 302	Entrepreneurial skills II	-	R	2
PHY 399	Seminar	-	C	2
PHY 398	SIWES	-	C	6
Total Units				10
1st Semester 400 Level				
PHY 401	Quantum Mechanics II	PHY 317	C	3
PHY 403	Mathematical Physics I	MAT 201, 202, 315	C	3
PHY 405	Solid State Physics I	-	C	2
PHY 407	Nuclear Physics I	-	C	2
PHY 413	Relativistic Physics	-	C	3
PHY 417	Analytical Mechanics II	PHY 201	C	2
PHY 409	Solid Earth Physics I	-	E*	2
PHY 431	Ionospheric Physics	-	E*	2

Course Code	Course Title	Pre-Requisite	Course Status	Total Units
PHY 433	Communication Physics	-	E*	2
PHY 451	Radiation Effects and Protection	-	E*	2
	*Minimum of 4 Units Elective	Total Units		23
2nd Semester 400 Level				
PHY 404	Mathematical Physics II	PHY 403	R	3
PHY 499	Research Project	-	C	6
PHY 408	Nuclear Physics II	PHY 407	E*	2
PHY 410	Solid Earth Physics II	-	E*	2
PHY 432	Intro to Solar Energy Physics	-	E*	2
PHY 434	Geomagnetism	-	E*	2
PHY 436	Intro to Astrophysics	-	E*	2
PHY 452	Biophysics	-	E*	2
	*Minimum of 6 Units Elective	Total Units		21

Table 18: Courses to be taken by 200 - 400 Level students of Physics with Computational Modelling

Course Code	Course Title	Pre-Requisite	Course Status	Total Units
1st Semester 200 Level				
PHY 201	Classical Physics	PHY 101	C	2
PHY 203	Vibrations & Waves	-	C	2
PHY 211	Thermal Physics		C	2
PHY 291	Experimental Physics I	-	C	1
PHY 293	Workshop Practice	-	R	1
CSC 201	Computer Programming I	CSC 101	R	3
MAT 201	Mathematical Methods I	MAT 101	R	3

Course Code	Course Title	Pre-Requisite	Course Status	Total Units
STA 201	Statistics for Non-Majors	STA 101	R	2
GNS 201	History & Philosophy of Science	-	C	2
GNS 203	Introduction to French I	-	C	2
		Total Units		20
Second Semester				
PHY 204	Modern Physics	PHY 102	C	2
PHY 208	Electric Circuits	PHY 102	C	2
PHY 210	Computational Physics	-	C	3
PHY 212	Introductory Material Science	-	R	2
PHY 214	Introduction to Electronics	-	C	2
PHY 292	Experimental Physics II	-	C	1
CSC 202	Computer Programming II	CSC101	R	3
MAT 202	Introduction to ODE	MAT 102	R	2
MAT 208	Introduction to Operation Research	-	E*	2
STA 202	Statistical Inference I	-	R	2
GNS 204	Introduction to French II	-	E*	2
CSC 211	Computer Operating Systems I	-	E*	3
* Minimum of 4 Units Elective		Total Units		23
1st Semester 300 Level				
PHY 301	Analytical Mechanics I	PHY 201	C	2
PHY 303	Electromagnetic Waves	PHY 203	C	3
PHY 305	Statistical Physics	-	C	3
PHY 315	Optics	-	C	2
PHY 317	Quantum Mechanics I	-	C	3
PHY 319	Energy Studies	-	R	1
PHY 391	Experimental Physics III	-	C	1
CSC 307	Computer Operating Systems II	-	R	3
CSC 311	Systems Analysis and Design	-	R	2

Course Code	Course Title	Pre-Requisite	Course Status	Total Units
MAT 315	Vector & Tensor Analysis	-	R	2
GNS 301	Entrepreneurial Skills I	-	C	2
Total Units				24
2nd Semester 300 Level				
GNS 302	Entrepreneurial Skills II	-	C	2
PHY 398	SIWES	-	C	6
PHY 399	Physics Seminar	-	C	2
Total Units				10
1st Semester 400 Level				
PHY 401	Quantum Mechanics II	PHY 317	C	3
PHY 403	Mathematical Physics I	MAT 201, 202, 315	C	3
PHY 413	Relativistic Physics	-	C	3
PHY 417	Analytical Mechanics II	PHY 201	C	2
PHY 415	General Relativity	-	R	2
PHY 423	Modelling Fields, Flows and Structures	-	R	3
PHY 421	Modelling Complex Systems	-	R	3
CSC 403	Modelling and Simulations	-	R	3
			Total Units	22
2nd Semester 400 Level				
PHY 404	Mathematical Physics II	-	R	3
PHY 499	Research Project	-	C	6
PHY 422	Simulation of Dynamic Systems	-	R	3
PHY 424	Modelling of Molecules, Solids and Liquids	-	R	3
CSC 412	Database Designs & Management	-	E*	3
CSC 422	Computer System Performance Evaluation	-	E*	3
* Minimum of 3 Units Elective		Total Units		21