

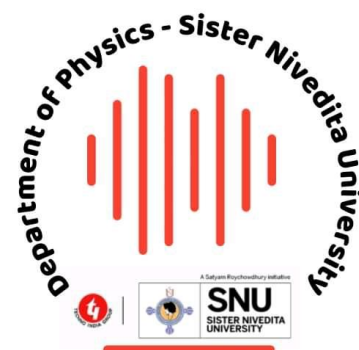


2020

SYLLABUS

School of Natural Sciences

**B.Sc. (H) in Physics
under UGC – CBCS**



B.Sc. Physics (H) Course Structure

Category definition with credit breakup

Semester	Credit						
	CC	DSE	GE	AECC	SEC	USC	Total/Sem
First	12		4	2		2	20
Second	12	6	4	2	1	2	27
Third	12	6	4	2	1	2	27
Fourth	12	6	4	2	1	2	27
Fifth	18	6			1		25
Sixth	24						24
Total Credit/ Course	90	24	16	8	4	8	
Total Credit							150

CC: Core Courses; GE: General Elective; AECC: Ability Enhancement Compulsory Course;
SEC: Skill Enhancement Courses; DSE: Discipline Specific Elective; USC: University specified course

First Year

Category	Course Name	Credit	Teaching Scheme		
			L	T	P
Semester – I					
CC – 1	Mechanics	4	4	0	0
	Mechanics Lab	2	0	0	4
CC – 2	Mathematical Methods (I)	4	4	0	0
	Mathematical Methods (I) Lab	2	0	0	4
GE – 1	Generic Elective	4	4	0	0
AECC – 1	Communicative English – I	2	2	0	0
USC – 1	Foreign Language I	2	2	0	0
Total Credit = 20			Teaching Hour = 24		
Semester – II					
CC – 3	Electricity and Magnetism	4	4	0	0
	Electricity and Magnetism Lab	2	0	0	4
CC – 4	Waves and Optics	4	4	0	0
	Waves and Optics Lab	2	0	0	4
DSE – 1	Mathematics	6	5	1	0
GE – 2	Generic Elective	4	4	0	0
AECC – 2	Communicative English – II	2	2	0	0
SEC – 1	Mentored Seminar – I	1	1	0	0
USC – 2	Foreign Language II	2	2	0	0
Total Credit = 27			Teaching Hour = 33		

Second Year

Category	Course Name	Credit	Teaching Scheme		
			L	T	P
Semester – III					
CC – 5	Thermal Physics	4	4	0	0
	Thermal Physics lab	2	0	0	4
CC – 6	Mathematical Methods II	4	4	0	0
	Mathematical Methods II Lab	2	0	0	4
DSE – 2	Fundamentals of Chemistry	4	4	0	0
	Fundamentals of Chemistry Lab	2	0	0	4
GE – 3	Generic Elective	4	4	0	0
AECC – 3	Environmental Science – I	2	2	0	0
SEC – 2	Mentored Seminar – II	1	1	0	0
USC – 3	Foreign Language III	2	2	0	0
Total Credit = 27			Teaching Hour = 33		
Semester – IV					
CC – 7	Statistical Mechanics	4	4	0	0
	Statistical Mechanics Lab	2	0	0	4
CC – 8	Condensed matter Physics	4	4	0	0
	Condensed matter Physics Lab	2	0	0	4
DSE – 3	Biophysical Chemistry and Instrumentation	4	4	0	0
	Biophysical Chemistry and Instrumentation Lab	2	0	0	4
GE – 4	Generic Elective	4	4	0	0
AECC – 3	Environmental Science – II	2	2	0	0
SEC – 3	Mentored Seminar – III	1	1	0	0
USC – 4	Foreign Language – IV	2	2	0	0
Total Credit = 27			Teaching Hour = 33		

Third Year

Category	Course Name	Credit	Teaching Scheme		
			L	T	P
Semester – V					
CC – 9	Electronics and Applications	4	4	0	0
	Electronics and Applications Lab	2	0	0	4
CC – 10	Quantum Mechanics and Elements of Modern Physics	4	4	0	0
	Quantum Mechanics and Elements of Modern Physics Lab	2	0	0	4
CC – 11	Nuclear and Particle Physics	4	4	0	0
	Nuclear and Particle Physics Lab	2	0	0	4
DSE – 4	Computer Science	4	4	0	0
	Computer Science Lab	2	0	0	4
SEC – 4	Mentored Seminar – IV	1	1	0	0
Total Credit = 25			Teaching Hour = 33		
Semester – VI					
CC – 12	Elements of Astrophysics and Space Science	6	5	1	0
CC – 13	Quantum Computation & Information Theory	4	4	0	0
	Quantum Computation & Information Theory Lab	2	0	0	4
CC – 14	History of Science and Evolution of Physics	6	5	1	0
CC – 15	Project	6	0	0	12
Total Credit = 24			Teaching Hour = 32		