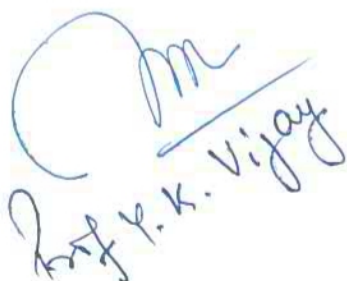


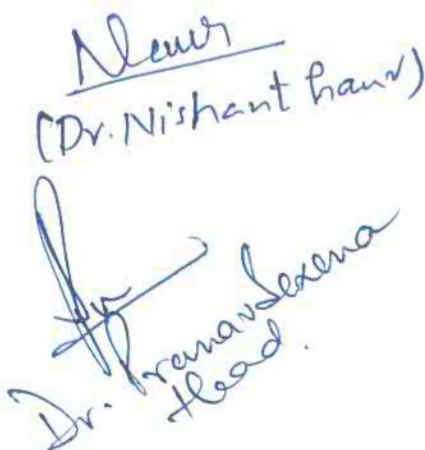
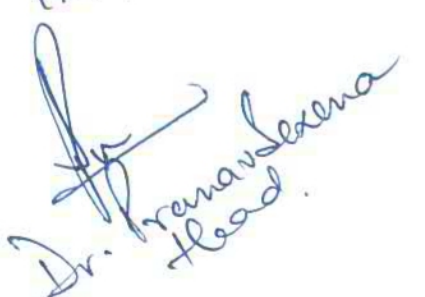
CHOICE BASED CREDIT SYSTEM

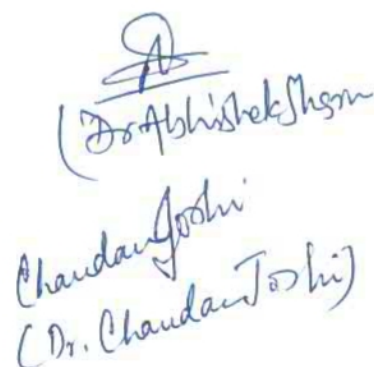
Department of Physics introduces the scheme of CBCS for BSc (Honors) program in School of Sciences, JECRC University, Jaipur. The details for CBCS scheme for Science and Arts (Humanities) are described in CSR Number CUS/268 (Cir)/18 dated 07.05.2018.

The choice based credit system is comprised of several type of courses, in which some courses are compulsory termed as Core Course (CC), fundamental (Skill Enhancement Courses) and foundation courses (Ability Enhancement Courses). In addition to these, two kind of open elective courses are also there with choices: Open Electives- It can be chosen from other disciplines and Departmental Electives- It can be chosen from subject oriented courses. Each course has definite credit, summarized as below-

Course Type	Description	Credit
Core Course (CC)	Compulsory Basic Course from Physics	60
Departmental Elective (DE)	Specialized Elective Courses from Physics [Started from 3 rd Semester]	41
Open Electives	Elective Courses other than Physics [In 3 rd , 5 th , and 6 th Semester]	15
Fundamental Course	Compulsory Course not related to Physics [In first four Semesters]	16
Foundation Course	Compulsory Course [In first Four Semester]	16


Prof. Y.K. Vijay


Dr. Nishant Bhanu

Dr. Premavati Sena
Head.


Dr. Abhishek Sharma
Chaudan Joshi
(Dr. Chaudan Joshi)

DEPARTMENT OF PHYSICS
FACULTY OF SCIENCE
BSC (HONORS) PHYSICS - STUDY SCHEME

S.No.	Semester	Subject code	Subject	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Lecture Credit	Tutorial Credit	Practical Credit	Total Credits	Course Type
1	1	BPH063A	Mechanics	4	0	0	4	4	0	0	4	Core
2	1	BPH011B	Mechanics (Lab)	0	0	2	2	0	0	1	1	Core
3	1	BPH006B	Optics	4	0	0	4	4	0	0	4	Core
4	1	BPH008C	Optics (Lab)	0	0	2	2	0	0	1	1	Core
5	1	BPH010B	Electricity & Magnetism	4	0	0	4	4	0	0	4	Core
6	1	BPH012B	Electricity & Magnetism (Lab)	0	0	2	2	0	0	1	1	Core
7	1	DCA001A	Web Development	2	0	0	2	2	0	0	2	Fundamental
8	1	DCA002A	Web Development Lab	0	0	2	2	0	0	1	1	Fundamental
9	1	DEN001A	Communication Skills	2	0	2	4	2	0	1	3	Foundation
10	1	DIN001A	Culture Education -1	2	0	0	2	2	0	0	2	Foundation
11	1	DCH101A	Environment Studies	3	0	2	5	3	0	1	4	Fundamental
			Total	21	0	12	33	21	0	6	27	

S.No.	Semester	Subject code	Subject	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Lecture Credit	Tutorial Credit	Practical Credit	Total Credits	Course Type
1	2	BPH064A	Thermodynamics & Statistical Physics	4	0	0	4	4	0	0	4	Core
2	2	BPH065A	Thermodynamics & Statistical Physics (Lab)	0	0	2	2	0	0	1	1	Core
3	2	BPH066A	Mathematical Physics & Relativity	4	0	0	4	4	0	0	4	Core
4	2		Mathematical Physics & Relativity (Tutorial)	0	1	0	1	0	1	0	1	Core
5	2	BPH067A	Elements of Modern Physics	4	0	0	4	4	0	0	4	Core
6	2	BPH068A	Elements of Modern Physics (Lab)	0	0	2	2	0	0	1	1	Core
7	2	BPH069A	Waves & Vibrations	4	0	0	4	4	0	0	4	Core
8	2	BPH070A	Waves & Vibrations (Lab)	0	0	2	2	0	0	1	1	Fundamental
9	2	DCA003A	Project Management Lab	0	0	2	2	0	0	1	1	Foundation
10	2	DEN002A	Professional Skills	2	0	2	4	2	0	1	3	Foundation
11	2	DIN002A	Culture Education -2	2	0	0	2	2	0	0	2	Foundation
			Total	20	1	10	31	20	1	5	26	

Name
(Dr. Nishant Graw)

(Dr. Abhishek Sharma)
Chandana Joshi

BSC (HONROS) PHYSICS - STUDY SCHEME

S.No.	Semester	Subject code	Subject	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Lecture Credit	Tutorial Credit	Practical Credit	Total Credits	Course Type
1	4	BPH017B	Solid State Physics	4	0	0	4	4	0	0	4	Core
2	4		Solid State Physics (Lab)	0	0	2	2	0	0	1	1	Core
3	4	BPH075A		4	0	0	4	4	0	0	4	Core
4	4	BPH021B	Nuclear and Particle Physics									
	4		Nuclear and Particle Physics (Tutorial)	0	1	0	1	0	1	0	1	Core
5	4	BPH087A/89A/91A	DE2	4	0	0	4	4	0	0	4	DE
6	4	BPH088A/90A/92A	DE2 (Lab/Seminar)	0	0	2	2	0	0	1	1	DE
7	4	DCA005A	Python Programming	2	0	0	2	2	0	0	2	Fundamental
8	4	DCA006A	Python Programming Lab	0	0	2	2	0	0	1	1	Fundamental
9	4	DEN004A	Life Skills-2 (Personality Development)	1	0	2	3	1	0	1	2	Foundation
10	4	DIN004A	Value Education and Ethics-2	1	0	0	1	1	0	0	1	Foundation
11	4	REM001	Research Methodology	3	1	0	4	3	1	0	4	Fundamental
			Total	19	2	8	29	19	2	4	25	

Dr. Abhishek Sharma
(Dr. Abhishek Sharma)
Chandauli
(Dr. Chandan Joshi)

DEPARTMENT OF PHYSICS
FACULTY OF SCIENCE

BSC (HONROS) PHYSICS - STUDY SCHEME

S.No.	Semester	Subject code	Subject	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Lecture Credit	Tutorial Credit	Practical Credit	Total Credits	Course Type
1	5	BPH014B	Quantum Mechanics	4	0	0	4	4	0	0	4	Core
2	5	BPH076A	Quantum Mechanics (Lab)	0	0	2	2	0	0	1	1	Core
3	5	BPH093A/95A/97A	DE3	4	0	0	4	4	0	0	4	DE
4	5	BPH094A/96A/98A	DE3 (Lab/Seminar)	0	0	2	2	0	0	1	1	DE
5	5	BPH099A/101A/103A/105A	DE4	4	0	0	4	4	0	0	4	DE
6	5	BPH100A/102A/104A/106A	DE4 (Lab/Seminar)	0	0	2	2	0	0	1	1	DE
7	5		Open Elective III	3	0	0	3	3	0	0	3	Interdisciplinary
8	5	BPH026A	Project	0	0	12	12	0	0	6	6	DE
				15	0	18	33	15	0	9	24	

S.No.	Semester	Subject code	Subject	Lecture Hours	Tutorial Hours	Practical Hours	Total Hours	Lecture Credit	Tutorial Credit	Practical Credit	Total Credits	Course Type
1	6	BPH0107A/109A/111A/113A	DE5	4	0	0	4	4	0	0	4	DE
2	6	BPH0108A/110A/112A	DE5 (Lab/Seminar)	0	0	2	2	0	0	1	1	DE
3	6	BPH0114A/116A/118A/120A	DE6	4	0	0	4	4	0	0	4	DE
4	6	BPH0115A/117A/119A/121A	DE6 (Lab/Seminar)	0	0	2	2	0	0	1	1	DE
5	6	BPH0122A/124A/126A/128A	DE7	4	0	0	4	4	0	0	4	DE
6	6	BPH0123A/125A/127A/129A	DE7 (Lab/Seminar)	0	0	2	2	0	0	1	1	DE
7	6		Open Elective-IV	3	0	0	3	3	0	0	3	Interdisciplinary
8	6		Open Elective-V	3	0	0	3	3	0	0	3	Interdisciplinary
				18	0	6	24	18	0	3	21	

Semester VI: **Note: In 6th Semester Student have a Choice either he can go for offered Courses or he may avail Internship in some reputed Institute / Industry or In House

Total Credit

Semester Credit	1	2	3	4	5	Total
	27	26	25	25	24	148

Nawaz
(Dr. Nishant Chauhan)

Chandrasekhar
Mr. Chandrasekhar

Dr. Abhishek Sharma

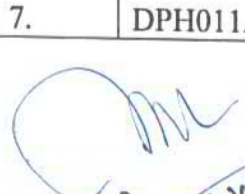
CODES OF CORE COURSES

S. No.	Codes	Course Name	Semester
1	BPH063A	Mechanics	I
2	BPH011B	Mechanics Lab	I
3	BPH006B	Optics	I
4	BPH008C	Optics Lab	I
5	BPH010B	Electricity & Magnetism	I
6	BPH012B	Electricity & Magnetism Lab	I
7	BPH064A	Thermodynamics and Statistical Physics	II
8	BPH065A	Thermodynamics and Statistical Physics Lab	II
9	BPH066A	Mathematical Physics and Relativity	II
10	BPH067A	Elements of Modern Physics	II
11	BPH068A	Elements of Modern Physics Lab	II
12	BPH069A	Waves & Vibrations	II
13	BPH070A	Waves & Vibrations Lab	II
14	BPH071A	Advanced mathematical Physics	III
15	BPH072A	Advanced mathematical Physics Lab	III
16	BPH073A	Circuit Analysis and Basic Electronics	III
17	BPH074A	Circuit Analysis and Basic Electronics Lab	III
18	BPH017B	Solid State of Physics	IV
19	BPH075A	Solid State of Physics Lab	IV
20	BPH021B	Nuclear and Particle Physics	IV
21	BPH014B	Quantum Mechanics	V
22	BPH076A	Quantum Mechanics Lab	V

OPEN ELECTIVES COURSES

[For BTech / BSc (Honors) other than Physics Honors]

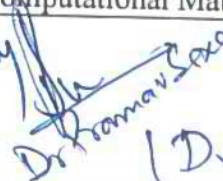
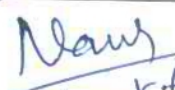
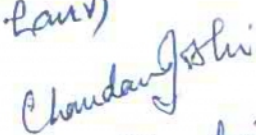
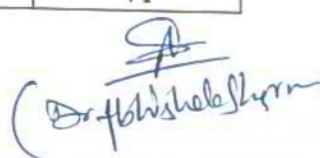
S. No.	Code	Course Name	Semester
1.	DPH005A	Mechanics	III, V
2.	DPH006A	Optics	III, V
3.	DPH007A	Electricity and Magnetism	III, V
4.	DPH008A	Circuit Analysis & Basic Electronics	III, V
5.	DPH009A	Elements of Modern Physics	VI
6.	DPH010A	Solid State Physics	VI
7.	DPH011A	Nuclear and Particle Physics	VI


 Dr. Nishant Prank
 (Dr. Nishant Prank)


 Dr. Chandan Joshi
 (Dr. Chandan Joshi)

CODES OF DEPARTMENTAL ELECTIVE (DE) COURSES
[Physics Oriented Elective Papers]

S. No.	Codes	Course Name	Semester
1	BPH081A	Digital Electronics and Devices	III
2	BPH082A	Digital Electronics and Devices Lab	III
3	BPH083A	Structure and Properties of Materials	III
4	BPH084A	Structure and Properties of Materials Lab	III
5	BPH085A	Introduction to Astronomy and Astrophysics	III
6	BPH086A	Introduction to Astronomy and Astrophysics Lab	III
7	BPH087A	Analog Circuits	IV
8	BPH088A	Analog Circuits Lab	IV
9	BPH089A	Mechanics of Materials	IV
10	BPH090A	Mechanics of Materials Lab	IV
11	BPH091A	Stellar Structure and Evolution	IV
12	BPH092A	Stellar Structure and Evolution Seminar	IV
13	BPH093A	Advanced Materials	V
14	BPH094A	Advanced Materials Seminar	V
15	BPH095A	Opto Electronics	V
16	BPH096A	Opto Electronics Lab	V
17	BPH097A	Physics of the Sun	V
18	BPH098A	Physics of the Sun Lab	V
19	BPH099A	Electromagnetic Theory	V
20	BPH100A	Electromagnetic Lab	
21	BPH101A	Communication Systems	V
22	BPH102A	Communication Systems Lab	V
23	BPH103A	Composite Materials	V
24	BPH104A	Composite Materials Lab	V
25	BPH105A	Galaxies and Universe	V
26	BPH106A	Galaxies and Universe Lab	V
27	BPH107A	Fundamental of Plasma Physics	VI
28	BPH108A	Fundamental of Plasma Physics Seminar	VI
29	BPH109A	Electronic Instrumentation	VI
30	BPH110A	Electronic Instrumentation Lab	VI
31	BPH111A	Computational Material Science	VI

 Prof. Y.K. Vijay
 Dr. Romav Saxena
 Dr. Nishant Raut
 Choudhury Jishi
 (Dr. Choudhury Jishi)
 (Dr. Bhishek Sharma)

32	BPH112A	Computational Material Science Lab	VI
33	BPH113A	Radiation Processes in Astrophysics	VI
34	BPH114A	Elements of Atomic and Molecular Physics	VI
35	BPH115A	Elements of Atomic and Molecular Physics Seminar	VI
36	BPH116A	Microprocessors and Microcontroller	VI
37	BPH117A	Microprocessors and Microcontroller Lab	VI
38	BPH118A	Material Characterization Techniques	VI
39	BPH119A	Material Characterization Techniques Seminar	VI
40	BPH120A	Planetary and Atmospheric Science	VI
41	BPH121A	Planetary and Atmospheric Science Seminar	VI
42	BPH122A	Renewable Energy	VI
43	BPH123A	Renewable Energy Seminar	VI
44	BPH124A	Antenna Theory and Propagation	VI
45	BPH125A	Antenna Theory and Propagation Lab	VI
46	BPH126A	Fundamental of Polymer Science	VI
47	BPH127A	Fundamental of Polymer Science Seminar	VI
48	BPH128A	Astronomical Techniques	VI
49	BPH129A	Astronomical Techniques Seminar	VI

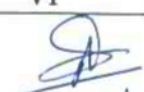

Prof. Y. K. Vijay


(Dr. Nishant Ram)


Dr. Pranav Sene


Chaudhary Joshi

(Dr. Chaudhary Joshi)


(Dr. P. Shrivastava)