

HOMI BHABHA NATIONAL INSTITUTE

(A University established under Section-3 of the UGC Act. 1956)



ACADEMIC TRANSCRIPT

Programme Conducted at

**NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
BHUBANESWAR**

(An Off-Campus Centre of HBNI under Department of Atomic Energy, Govt. of India)



Homi Bhabha National Institute, Mumbai

(A University established under Section-3 of the UGC Act, 1956)

Programme conducted at
National Institute of Science Education and Research, Bhubaneswar
 (An Off-Campus Centre of Homi Bhabha National Institute, Mumbai, India)

TRANSCRIPT OF RECORDS

Programme Name	: M.Sc. (5 Year Integrated)	Discipline	: Physics (Major) Mathematics (Minor)
Student Name	: Viraj Thakkar	Enrollment No.	: PHYS11201413029
Date of Joining	: 01/08/2014	Date of Completion	: 20/05/2019

Semester	Course Code	Course Name	Credits	Grade	Grade Point	SGPA
I	B101	BIOLOGY I: SCIENCE OF LIFE	3	BC	21	
	B141	BIOLOGY LABORATORY-I	2	BB	16	
	C101	CHEMISTRY I	3	BC	21	
	C141	CHEMISTRY LAB I	2	AB	18	
	H101	INTRODUCTION TO ECONOMICS	2	BB	16	
	H109	TECHNICAL COMMUNICATION-I	2	BB	16	
	M101	MATHEMATICS I	3	AB	27	
	M141	COMPUTATIONAL LABORATORY I	2	CC	12	
	P101	MECHANICS & THERMODYNAMICS	3	AB	27	
	P141	PHYSICS LABORATORY I	2	AB	18	
Total			24		192	8.00
II	B102	BIOLOGY II: CELLULAR AND GENETIC BASIS OF LIFE	3	BB	24	
	B142	BIOLOGY LABORATORY-II	2	BB	16	
	C102	CHEMISTRY II	3	AB	27	
	C142	CHEMISTRY LAB II	2	AB	18	
	H110	TECHNICAL COMMUNICATION-II	2	AB	18	
	H133	INTRODUCTION TO SOCIOLOGY	2	AB	18	
	M102	MATHEMATICS II	3	BC	21	
	M142	COMPUTATIONAL LABORATORY II	2	BB	16	
	P102	ELECTRICITY, MAGNETISM AND OPTICS	3	AA	30	
	P142	PHYSICS LABORATORY II	2	AB	18	
Total			24		206	8.58
III	H225	INTRODUCTION TO PSYCHOLOGY	2	BC	14	
	H235	SOCIOLOGY OF SCIENCE AND TECHNOLOGY	2	BB	16	
	M202	GROUP THEORY	4	CC	24	
	P201	CLASSICAL MECHANICS	4	AB	36	
	P202	MATHEMATICAL METHODS I	4	AB	36	
	P203	ELECTRONICS	4	BB	32	
	P241	GENERAL PHYSICS LAB	2	BB	16	
	P242	BASIC ELECTRONICS LAB	2	AB	18	
Total			24		192	8.00
IV	H205	ENVIRONMENTAL ECONOMICS AND ENVIRONMENTAL IMPACT ASSESSMENT	2	BB	16	
	H227	ORGANIZATIONAL BEHAVIOUR	2	BB	16	
	M206	PROBABILITY THEORY	4	BB	32	
	P204	ELECTROMAGNETISM I	4	AB	36	
	P205	MATHEMATICAL METHODS II	4	AB	36	
	P206	QUANTUM MECHANICS I	4	AB	36	
	P243	ADVANCED ELECTRONICS LAB	2	BB	16	
	P244	MODERN PHYSICS-I	2	AA	20	
Total			24		208	8.67
V	M303	DIFFERENTIAL EQUATIONS	4	AB	36	
	P302	STATISTICAL MECHANICS	4	BC	28	
	P303	QUANTUM MECHANICS II	4	BC	28	
	P304	SPECIAL THEORY OF RELATIVITY	4	CC	24	
	P307	NUCLEI AND PARTICLES	4	BB	32	
	P341	NUCLEAR PHYSICS AND INSTRUMENTATION LAB	2	AB	18	
	P342	COMPUTATIONAL LAB	2	AB	18	
Total			24		184	7.67
VI	M205	LINEAR ALGEBRA	4	BB	32	
	P301	ELECTROMAGNETISM II	4	CC	24	
	P305	ATOMS, MOLECULES & RADIATION	4	CC	24	
	P306	INTRODUCTION TO CONDENSED MATTER PHYSICS	4	BC	28	
	P343	MODERN PHYSICS LAB-II	2	AB	18	
	P344	SOLID STATE PHYSICS LAB-I	2	AB	18	
	P398	6TH SEMESTER PROJECT	4	AB	36	
Total			24		180	7.50

Semester	Course Code	Course Name	Credits	Grade	Grade Point	SGPA
VII	M201	REAL ANALYSIS	4	BC	28	
	P401	CLASSICAL MECHANICS-II	4	BC	28	
	P441	SOLID STATE PHYSICS LAB-II	4	BB	32	
	P442	LASER AND SPECTROSCOPY LAB	4	BB	32	
	P453	QUANTUM FIELD THEORY I	4	CC	24	
	P467	NONLINEAR PHYSICS, CHAOS AND TURBULANCE	4	BB	32	
Total			24		176	7.33
VIII	M204	METRIC SPACES	4	BC	28	
	M311	NUMERICAL ANALYSIS	4	BC	28	
	P443	INTEGRATED PHYSICS LAB-I	4	BC	28	
	P444	INTEGRATED PHYSICS LAB-II	4	BC	28	
	P457	GENERAL RELATIVITY AND COSMOLOGY	4	CC	24	
	P472	EXPERIMENTAL HIGH ENERGY PHYSICS	4	CC	24	
Total			24		160	6.67
IX	B203	BIOPHYSICS AND BIostatISTICS	4	AB	36	
	M305	STATISTICS	4	BB	32	
	P463	ASTRONOMY AND ASTROPHYSICS	4	BC	28	
	P598	PHYSICS PROJECT	12	AB	108	
Total			24		204	8.50
X	CS202	DISCRETE STRUCTURES AND COMPUTATION	4	BC	28	
	M455	INTRODUCTION TO STOCHASTIC PROCESS	4	BC	28	
	P464	PLASMA PHYSICS AND MAGNETOHYDRODYNAMICS	4	BC	28	
	P599	PHYSICS DISSERTATION	12	AB	108	
Total			24		192	8.00
Total Credits = 240						CGPA : 7.89

Date: 20.05.2019

bp saha

Dean (AA)

[Signature]

Director

P.K. Mishra

Checked by: APO/AO-III

Sandeepa Sahoo

Prepared by: OPERATOR/OA MS



The number grades in the 10-point scale corresponds to letter grades

AA	AB	BB	BC	CC	CD	DD
10	9	8	7	6	5	4

SGPA: Semester Grade Point Average

CGPA: Cumulative Grade Point Average