MEETING PROCEEDINGS

A meeting of "Board of Studies (BOS)" of "M.Sc. (Physics)" was held in the Director's office of the Prof. Rajendra Singh (Rajju Bhaiya) Institute of Physical Sciences for Study and Research, V.B.S. Purvanchal University, Jaunpur on 19.09.2022 at 11:00 a.m.. The following members were present in the meeting :

(1) PROF. DEVRAJ SINGH, CONVENER – Delsingh 19/09/2022

(2) PROF. RAM KRIPAL, EXTERNAL EXPERT – 19.9.2022

(3) DR. ANIL KUMAR YADAV, EXTERNAL EXPERT – Anil 19/09/2022

(4) DR. PROMOD KUMAR YADAWA, INTERNAL MEMBER – 19.09.2022

(5) DR. GIRIDHAR MISHRA, INTERNAL MEMBER – 19.9.22

(6) DR. PUNIT KUMAR DHAWAN, INTERNAL MEMBER – 19.09.22

The convener of BOS welcomed the committee members. The following resolutions were made after the discussion.

* Ordinance rules for M.Sc. (Final year) will be followed as per old syllabus.
* The syllabus of M.Sc. (Physics) i.e, seventh, eighth, nineth, and tenth semesters has been finalized as per C.B.C.S National Education Policy (NEP-2020).
* The lists of internal and external examiners have been finalized by B.O.S. members.
* Ordinance rules have been framed by the B.O.S. members as per NEP-2020.
* In view of laboratory facilities, specialisation papers and infrastructure, the separate B.O.S. is required for the benifits of the students. It is highly recommended by the B.O.S. members, Rajju Bhaiya Institute, Dept of Physics.

The meeting has been conducted successfully. The convener, BOS gave "VOTE OF THANKS" to esteemed member.

(DR. PROMOD KUMAR YADAWA) (DR. GIRIDHAR MISHRA) (DR. PUNIT KR. DHAWAN) (PROF. RAM KRIPAL) (DR. ANIL KUMAR YADAV) (PROF. DEVRAJ SINGH)

VEER BAHADUR SINGH PURVANCHAL UNIVERSITY JAUNPUR

Ordinance Governing Two Years (Four Semester) Post Graduate Degree (M.Sc.)

Department of Physics, Prof. Rajendra Singh (Rajju Bhaiya) Institute of Physical Sciences for Study & Research w.e.f. Session 2022-2023 as per NEP-2020

The following ordinances have been framed governing the admission, course structure, examination and other allied matters relating to the two years (four semesters: VII, VIII, IX, & X) postgraduate degree programme (M.Sc.) in Physics being offered by Prof. Rajendra Singh (Rajju Bhaiya) Institute of Physical Sciences for Study & Research, Veer Bahadur Singh Purvanchal University, Jaunpur.

A. ADMISSION

1. All matters relating to admission to this course shall be dealt with by the Admission Committee constituted for the purpose by the University.
2. A candidate, who have passed B.Sc. with Physics as a subject up to III year and mathematics as a subject at least up to I year from a recognized University is eligible for admission.
3. The intake of the students in this programme shall be fixed by Veer Bahadur Singh Purvanchal University, Jaunpur. The admission to M.Sc. course shall be made through merit based or Written Test through Purvanchal University Admission Test (PUCAT). The written test will comprise of multiple choice questions carrying 100 marks. The reservation norms for admission shall be guided by State Government notification issued from time to time.
4. On selection, the candidate shall deposit the fee prescribed for the purpose to get his/her admission confirmed within the time period fixed by the Admission Committee of the Veer

19/09/2022
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Dr. Giridhar Mishra (Internal Member)

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Prof. Ram Kripal (External Expert)

19.09.22
Prof. Devraj Singh (Convener)

Bahadur Singh Purvanchal University. If a candidate fails to do so his/her admission shall be automatically cancelled and the seat falling vacant shall be offered to another candidate as per the merit/category. However, matter concerning fee of candidate under SC/ST category would be governed by Government Order; as such there is no provision of fee concession/exemption/refund.

5. Admission to M.Sc. course can't be claimed by any candidate as a matter of right. The Admission Committee shall have right to refuse, reject or cancel any admission if it possesses sufficient reasons to do so.

B. COURSES OF STUDY AND EXAMINATION

6. To conduct the M.Sc. (Physics) programme systematically and within a time bound frame, the concerned Department shall draw up an "Academic Calendar" in the beginning of academic session and shall get it approved by the Vice-Chancellor of the University for its Strict Implementation.
7. A candidate admitted to the M.Sc. course shall pursue a regular course of study in all the four semesters of the course and attend at least 75% of the classes held to be eligible to appear in the examination.
8. If a student fails to attend requisite classes in a semester due to illness, he/she may be given relaxation of 15% attendance (10% at the level of Vice-Chancellor and 5% at the level of Head of Department on furnishing the medical certificate.
9. The examination for semester system in M.Sc. Course in Physics shall be by means of theory papers and practical as specified in the examination scheme which consist of:
   (i) Four theory papers and practical examination in each of the VII and VIII semesters.
   (ii) Four theory papers (two compulsory and two papers in each specialization) and practical examination in third semester.
   (iii) Four theory papers (one compulsory, one elective and two papers in each specialization), practical examination and Dissertation in fourth semester.

   Apart from the above papers, the students have to opt and complete one minor elective course of 4 credit offered by other departments of other faculties in VII or VIII semester.

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Additionally, the department will offer one minor elective course of 4 credit in both of the VII and VIII semesters to the students of other departments.

10. Matter pertaining to the syllabi and conduct of examination shall be dealt by the Board of Studies (BOS) constituted by the Vice-Chancellor.
11. The BOS shall recommend the panel of paper setters/examiners to the Vice-Chancellor. After getting approval from the Vice-Chancellor, the appointment letters shall be issued to the concerned paper setters/examiners by the Registrar/Controller of Examinations of Veer Bahadur Singh Purvanchal University, Jaunpur.
12. Papers for theory examination in sealed covers shall be handed over/sent by registered post to the Registrar/Controller of Examinations/ Technical Cell. The Registrar/Controller of Examinations/ Technical Cell will ensure the printing of papers and fair conduct of examinations.
13. The question papers shall be moderated by the committee consisting of the head of the department and senior faculty member.
14. After the examination, Controller of Examinations/Technical Cell shall ensure the evaluation of the answer books and declaration of results of semester examinations within a reasonable time so as to enable the department to adhere to the Academic Calendar.
15. Theory papers of all courses of VII, VIII, IX & X Semesters shall be carrying 100 marks [75 from final semester examination + 25 from sessional exam and attendance].
16. Practical examination of VII, VIII, IX & X Semesters shall be conducted by one internal examiner and one external examiner carrying 100 marks in all semesters out of which, 75% will of external examination and 25% will of internal assessment and record file.
17. There will be a Dissertation of 100 marks related to subject in each semester.
18. The evaluation of the dissertation will be done along with the practical examinations.
19. The candidates of M.Sc. course shall be examined in the subjects in accordance with course curriculum given at the end of ordinance.

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C. RESULTS, PROMOTION AND IMPROVEMENT

Rules for Preparation of Result:

A. Rules for Completion of Course:

Sr. No.	Grades Scores in Individual Courses	Status of Promotion	Eligibility of Completion of Course
1.	'P' or above in all courses/papers	Passed	---
2.	Below 'P' in one or two Courses/papers	Eligible for SE	Second Exam. in which scored below 'P' Grade
3.	Below 'P' in more than two Courses	Failed*	All courses as Ex-student for the semester

* The pass marks in each semester shall be (i) 36% marks in each theory paper and (ii) 36% marks in practical examination examinations

B. Grades and Grade Points:

Sr.	Percentage of Marks Obtained	Letter Grade	Grade Point (Gi)	Classification
1.	90% or above	O	10	Outstanding
2.	80% or above but below 90%	A+	9	Excellent
3.	70% or above but below 80%	A	8	Very Good
4.	60% or above but below 70%	B+	7	Good
5.	50% or above but below 60%	B	6	Above Average-
6.	40% or above but below 50%	C	5	Average
7.	36% or above but below 40%	P	4	Passed
8.	Below 36%	F	0	Failed
9.	Absent	Ab	0	Absent

C. Formulae: $Cpc = Ci \times Gi$; $SGPA = \Sigma Cpc / \Sigma Ci$; $CGPA = \Sigma(SGPA \times \Sigma Ci) / \Sigma(\Sigma Ci)$

D. Abbreviations used in Grade Card:
(Ci) Credit Index; (Gi) Grade Point; (Cpc) Credit Points in the Course;
(SGPA) Semester Grade Point Average; (CGPA) Consolidated Grade Point Average

E. The Multiplication factor for conversion of obtained CGPA into obtained percentage will be 9.5.

F. Duration for completion of the Programme will be "Duration of the Programme + 2 years".

20. In final semester examination of each theory paper and practical 36% marks must be obtained. Viz minimum 27 marks must be obtained out of 75 marks in final semester exam.
21. The pass marks in each semester shall be (i) 36% marks in each theory paper and (ii) 36% marks in practical examinations.
22. There will be no grace marks for any course.

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23. **If the student fails in more than 4 papers in an academic year (two semesters), he/she will not be promoted to next year. Such student should be re-admitted as Ex.-Student with coming batch and his/her seat will be additional.**
24. Student, who failed in 4 or lower number of papers in an academic year will be awarded 'back' and given two chances to reappear and pass in respective paper/papers in next year and the following year with regular semester examination. There will not be any supplementary/special examination for back papers. However, all such papers must be cleared within two years ending fourth semester.
25. In order to pass the two-year M.Sc. (Physics) course, the students must pass both the years separately. The final result shall be declared on the basis of formula described in section C of the **Rules for Preparation of Result.**

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Veer Bahadur Singh Purvanchal University
Prof. Rajendra Singh (Rajju Bhaiya) Institute of Physical Sciences for Study and Research
Syllabus of M. Sc. Physics as per NEP-2020
Courses and Credit Index

Semester -VII

Sr. No.	Course Title and Code	Credit Structure			
		L	T	P/D	C
	Four Compulsory Theory Papers				
1.	Mathematical Physics (B010701T)	3	1	0	4
2.	Classical Mechanics (B010702T)	3	1	0	4
3.	Electrodynamics and Relativity (B010703T)	3	1	0	4
4.	Quantum Mechanics – I (B010704T)	3	1	0	4
	Minor elective Course from other faculty				
5.	*Minor elective course from other department/faculty				4
	Lab and Dissertation Courses				
6.	General Lab. (B010705P) or Electronics Lab. (B010706P)	0	0	8	4
7.	Dissertation Phase 1: Literature Survey and to identify the problem (B010707R)	0	0	8	4
	Total credits earned in Semester-I ΣCi				**24 or 28#**
	Minor elective (value added) course for students of other departments				
8.	$Fundamentals of Physics (B010708M)	4	0	0	4

Semester – VIII

Sr. No.	Course Title and Code	Credit Structure			
		L	T	P/D	C
	Four Compulsory Theory Papers				
1.	Quantum Mechanics – II (B010801T)	3	1	0	4
2.	Statistical Mechanics (B010802T)	3	1	0	4
3.	Solid State Electronics (B010803T)	3	1	0	4
4.	Atomic and Molecular Physics (B010804T)	3	1	0	4
	Minor Course from other faculty				
5.	*Minor Course from other department/faculty				4
	Lab. and Dissertation Courses				
6.	General Lab. (B010806P) or Electronics Lab. (B010805P)	0	0	8	4
7.	Dissertation Phase 2: Data Collection on the Problem (B010807R)	0	0	8	4
	Total credits earned in Semester-II ΣCi				**24 or 28#**
	Minor elective (value added) course for students of other departments				
8.	$Frontiers of Physics (B010808M)	4	0	0	4

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Semester – IX

Sr. No.	Course Title and Code	Credit Structure			
		L	T	P/D	C
	Two Compulsory Theory Papers				
1.	Solid State Physics (B010901T)	3	1	0	4
2.	Nuclear and Particle Physics (B010902T)	3	1	0	4
	Two Theory Papers from any of the three Specialization	**Credit Structure for EACH PAPER**			
3.	(i) Analog & Digital Electronics (B010903T), (ii) Laser Spectroscopy (B010905T) **or** (iii) Condensed Matter Physics-I (B010907T)	3	1	0	4
4.	(i) Microwaves (B010904T), (ii) Electronic Spectra of Diatomic Molecules (B010906T) **or** (iii) Condensed Matter Physics-II (B010908T)	3	1	0	4
	One Lab. Course from the chosen specialization and Dissertation				
5.	(i) Electronics Lab. (B010909P), (ii) Spectroscopy Lab. (B010910P) **or** (iii) Condensed Matter Physics Lab. (B010911P)			8	4
6.	Dissertation Phase 3: Data Analysis (B010912R)			8	4
	Total credits earned in Semester-III ΣCi				**24**

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Semester – X

Sr. No.	Course Title and Code	Credit Structure			
		L	T	P/D	C
	One Compulsory Theory Paper				
1.	Experimental Techniques and Control Systems (B011001T)	3	1	0	4
	One elective paper from three papers				
2.	(i) Computational Physics with Python (B011002T)	2	1	1	4
	(ii) Advanced Electrodynamics and Second Quantization (B011003T) **or**	3	1	0	4
	(iii) Group Theory (B011004T)	3	1	0	4
	Two Theory Papers from any of the three Specialization	**Credit Structure for EACH PAPER**			
3.	(i) Microprocessor (B011005T), (ii) Advanced Atomic Spectroscopy (B011007T) **or** (iii) Condensed Matter Physics-III (B011009T)	3	1	0	4
4.	(i) Physics of Semiconductor Devices (B011006T), (ii) IR & Raman Spectra of Polyatomic Molecules (B011008T) **or** (iii) Condensed Matter Physics-IV (B011010T)	3	1	0	4
	One Lab. Course from the chosen specialization and Dissertation				
5.	(i) Electronics Lab. (B011011P), (ii) Spectroscopy Lab. (B011012) **or** (iii) Condensed Matter Physics Lab. (B011013P)			8	4

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19.09.22

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6.	Dissertation Phase 4: Final Report submission and Presentation. (B011014R)			8	4
	Total credits earned in Semester-III ΣCi				24

* - Students of M. Sc. (Physics) programme have to opt and complete one minor course of 4 credits offered by other departments of other faculties in Semester VII or VIII.

- Credit of one minor course is accounted for.

$ - Students of other departments can opt for minor (value added) courses offered at our department.

Students will earn total of 52 credits (24+28 or 28+24) in first year and 48 credits (24+24) in final (second) year of M. Sc. (Physics) programme.

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