



**Central University of Himachal Pradesh**  
Department of Physics and Astronomical Science  
School of Physical and Material Sciences

**Agenda of 7<sup>th</sup> Board of Studies Meeting**

**Date and Time:** 7<sup>th</sup> November, 2017, 2:00 PM.  
**Venue:** TAB-II campus, CUHP, Dharamshala

- **PAS-BOS-7.1:** To approve the list of courses for M. Sc. Programmes (**Annexure-I**).
- **PAS-BOS-7.2:** To approve the course code of "Functional and Communication Skill in English" course as EEL 111 offered to B. Sc. 1st year which was inadvertently written and passed as EEL 110 in the previous meeting.
- **PAS-BOS-7.3:** To approve new external paper setters/external examiners for End-Term examination (**Annexure-II**).
- **PAS-BOS-7.4:** To approve the revised Research Degree (RD) programme course structure and Guidelines in concurrence with updated university ordinance no. 42 (**Annexure-III**).
- **PAS-BOS-7.5:** To approve Ph. D. supervisors for the new RD students as (Batch admitted in 2017):

S. No.	Roll No.	Name	Supervisor
1.	To be allotted	Aditi Sharma	Dr. P. Rai
2.		Anil Khachi	Dr. Dalip Singh Verma
3.		Ankush	Dr. B.C. Chauhan
4.		Himani Thakur	Dr. R.K.Singh
5.		Jithin Bhagavathi	Dr. O.S.K.S. Sastri
6.		Monal Keshav	Dr. Surender Verma
7.		Neha Katoch	Dr. Dr. Jagdish Kumar
8.		Parul Kumar Sharma	Dr. Dr. R.K.Singh
9.		Rishu Verma	Dr. B.C. Chauhan
10.		Virender Thakur	Dr. B.C. Chauhan

- **PAS-BOS-7.6:** To approve
  - Dr. Bhupender Singh, Deptt. of Ceramic Engineering, IIT(BHU), Varanasi as Co-supervisor of RD student Miss Nitika Devi, CUHP15RDPHY01 as per provisions in university ordinance no. 42.
  - Dr. Surender Soni, Department of Physics, Government College Nagrota Bagwan, Distt. Kangra (H. P.) as Co-supervisor of RD student Miss Swapna as per provisions in university ordinance no. 42.
- **PAS-BOS-7.7:** To approve the Synopsis of the following RD students:

S. No.	Roll No.	Name	Supervisor	Title
1.	CUHP15RDPHY01	Nitika Devi	Dr. Rajesh Kumar Singh	Synthesis of Graphene Oxide-Metal/Metal Oxide Composites and their Applications.
2.	CUHP15RDPHY03	Shiwani Kalia	Dr. Padmnabh Rai	Light Detection by Graphene and Carbon Nanotube Field Effect Transistors.
3.	CUHP15RDPHY05	Swapna	Dr. O. S.K. S. Sastri	Activity based pedagogy incorporating guided

				inquiry strategy and modeling theory for liquid drop model.
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- **PAS-BOS-7.8:** To cancel the admission of RD student Mrs. Sushma Devi (CUHP15RDPHY04): The student has failed to complete her Ph. D. course work in stipulated time.
- **PAS-BOS-7.9:** To place before the BOS members, the previous question papers and course contents.
- **Any other agenda item with the permission of the Chair.**

*Sushma Devi*

**Central University of Himachal Pradesh**  
Department of Physics and Astronomical Science  
School of Physical and Material Sciences

Minutes of the 7<sup>th</sup> meeting of the Board of Studies of Department of Physics and  
Astronomical Science

**Date and Time:** 7<sup>th</sup> November 2017 at 2:00 PM

**Venue:** TAB-II campus, CUHP, Dharamshala

The meeting of the 7<sup>th</sup> Board of Studies (BOS) of Department of Physics and Astronomical Science (DPAS) held on 7<sup>th</sup> November 2017 at 2:00 PM at TAB-II campus, CUHP, Dharamshala. Following members attended the meeting:

- 1. Dr. B. C. Chauhan**  
Chairman and Convener, BOS  
Dean and Head  
Department of Physics and Astronomical Science, CUHP
- 2. Prof. Raja Ram Yadav**  
External Member  
Vice Chancellor  
Veer Bahadur Singh Purvanchal University, Jaunpur
- 3. Dr. O. S. K. S. Sastri**  
Member  
Department of Physics and Astronomical Science, CUHP
- 4. Dr. Roshan Lal Sharma**  
Dean  
School of Humanities and Languages, CUHP
- 5. Dr. Bhagwan Singh**  
Head  
Department of Marketing and Supply Chain Management, CUHP
- 6. Dr. Surender Verma**  
Member  
Department of Physics and Astronomical Science, CUHP

The Chairman, Dr. B. C. Chauhan, welcomed and thanked the BOS members for sparing their valuable time for the meeting. He briefed the members about the activities and progress made by the department since last meeting and outlined the plan of the meeting. Thereafter, agenda items were taken up, sequentially, to place before the members. The BOS members held comprehensive deliberations on all the agenda items and following decisions were unanimously taken:

**Item PAS-BOS-7.1:**

The BOS approve the list of courses for M. Sc. Programme (Annexure-I).

**Item PAS-BOS-7.2:**

The BOS approve the course code of 'Functional and Communication Skill in English' as EEL 111 and 'Sanskrit Bhashanaipunyama' as SKT 202 to be offered to B. Sc. 1<sup>st</sup> year.

**Item PAS-BOS-7.3:**

The BOS approve the list of new external paper setters/external examiners for End-Term examination (Annexure-II).

**Item PAS-BOS-7.4:** The BOS approve, the revised Research Degree (RD) programme course structure and Guidelines in concurrence with updated university ordinance no. 42 (Annexure-III).

**Item PAS-BOS-7.5:** The BOS approve Ph. D. supervisors for the new RD students as (Batch admitted in 2017):

S. No.	Roll No.	Name	Supervisor
1.	To be allotted	Aditi Sharma	Dr. P. Rai
2.		Anil Khachi	Dr. Dalip Singh Verma
3.		Ankush	Dr. B. C. Chauhan
4.		Himani Thakur	Dr. R. K. Singh
5.		Jithin Bhagavathi	Dr. O.S.K.S. Sastri
6.		Monal Keshav	Dr. Surender Verma
7.		Neha Katoch	Dr. Jagdish Kumar
8.		Parul Kumar Sharma	Dr. Dr. R. K. Singh
9.		Rishu Verma	Dr. B. C. Chauhan
10.		Virender Thakur	Dr. B. C. Chauhan

**Item PAS-BOS-7.6:** The BOS approve, Dr. Bhupender Singh, Deptt. of Ceramic Engineering, IIT(BHU), Varanasi and Dr. Surender Soni, Deptt. of Physics, Government College Nagrota Bagwan, H. P. as Co-supervisors of RD student Miss Nitika Devi, CUHP15RDPHY01 and Miss Swapna, respectively, subject to the conditions envisaged in university ordinance no. 42 and stated hereunder:

The BOS approve agenda item PAS-BOS-7.6 subject to the conditions that:

- Research Advisory Committee (RAC) constituted by the department should be asked to give approval for Co-supervisor.
- As per the provisions contained in points 6.2, 6.4 and 6.5 of ordinance 42, Co-supervisor has to furnish No Objection Certificate (NOC) from his Institute/University.
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**Item PAS-BOS-7.7:** The BOS approve, the Synopsis of the following RD students:

S. No.	Roll No.	Name	Supervisor	Title
1.	CUHP15RDPHY01	Nitika Devi	Dr. Rajesh Kumar Singh	Synthesis of Graphene Oxide-Metal/Metal Oxide Composites and their Applications.
2.	CUHP15RDPHY03	Shiwani Kalia	Dr. Padmnabh Rai	Light Detection by Graphene and Carbon Nanotube Field Effect Transistors.
3.	CUHP15RDPHY05	Swapna	Dr. O. S.K. S. Sastri	Activity based pedagogy incorporating guided inquiry strategy and modeling theory for liquid drop model.

**Item PAS-BOS-7.8:** The BOS approve the cancellation of admission of RD student Mrs. Sushma Devi (CUHP15RDPHY04).


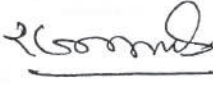
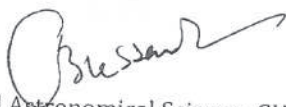
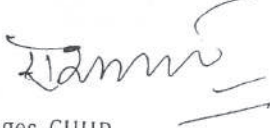


**Item PAS-BOS-7.9:** The BOS members reviewed the previous year question paper(s)/course contents of various courses offered by the department and expressed their satisfaction over the standard and contents.

**Item PAS-BOS-7.10:** The BOS considered the request of Mr. Ajay Sharma regarding his candidature for PhD admission and recommended the case for further approval (Annexure-IV).

**Item PAS-BOS-7.11:** Consequent to the inability, expressed by Dr. Sastri, to supervise Ph. D. of Mr. Rakesh Rathore (CUHP14RDPHY05), the BOS approves that the student may be allowed to change the supervisor, in concurrence to university ordinance no. 42.

The meeting ended with vote thanks to all the board members by the Chairman.

**Signatures:**

1. **Dr. B. C. Chauhan**   
Chairman and Convener, BOS  
Dean and Head  
Department of Physics and Astronomical Science, CUHP
2. **Prof. Raja Ram Yadav**   
External Member  
Vice Chancellor  
Veer Bahadur Singh Purvanchal University, Jaunpur
3. **Dr. O. S. K. S. Sastri**   
Member  
Department of Physics and Astronomical Science, CUHP
4. **Dr. Roshan Lal Sharma**   
Dean  
School of Humanities and Languages, CUHP
5. **Dr. Bhagwan Singh**   
Head  
Department of Marketing and Supply Chain Management, CUHP
6. **Dr. Surender Verma**   
Member  
Department of Physics and Astronomical Science, CUHP

## Annexure- I

### Complete List of Courses offered by the department

#### Core Compulsory (CC)

Course Code	Name of Course	Credits
PAS 401	Classical Mechanics	2
PAS 401A ✓	Classical Mechanics	4
PAS 402	Mathematical Physics	2
PAS 402A	Mathematical Physics	4
PAS 403	Classical Electrodynamics	2
PAS 403A ✓	Classical Electrodynamics	4
PAS 404	Quantum Mechanics	2
PAS 404A ✓	Quantum Mechanics	4
PAS 406	Statistical Mechanics	2
PAS 406A ✓	Statistical Mechanics	4
PAS 407	Advanced Quantum Mechanics	2
PAS 407A ✓	Advanced Quantum Mechanics	4
PAS 408	Elements of Condensed Matter Physics	2
PAS 408A ✓	Condensed Matter Physics	4
PAS 409	Nuclear and Particle Physics	2
PAS 409A ✓	Nuclear and Particle Physics	4
PAS 411	Atomic and Laser Physics	2
PAS 411A ✓	Atomic, Molecular and Laser Physics	4
PAS 413 ✓	General Physics Laboratory	2
PAS 423 ✓	Modern Physics Lab	2
PAS 427	Computational Physics Laboratory	2
PAS 428A ✓	Computational Physics	4
PAS 503	Advanced Condensed Matter Physics	2
PAS 505	Advanced Nuclear Physics	2
PAS 521	Atomic & Molecular Physics	2
PAS 554	Advanced Modern Physics Laboratory	2

#### Core Open (CO)

Course Code	Name of Course	Credits
PAS 402 ✓	Mathematical Physics	2
PAS 405 ✓	Electronic Circuits	2
PAS 405A	Analog and Digital Electronics	2
PAS 412 ✓	Semiconductor Devices	4
PAS 414 ✓	Computer Simulations in Physics	2

PAS 415 ✓	Electronics Lab	2
PAS 421	Advanced Classical Mechanics	2
PAS 422	Classical Field Theory	2
PAS 424	Advanced Classical Electrodynamics	2
PAS 425	Quantum Electrodynamics	2
PAS 426	Quantum Field Theory	4
PAS 426A	Quantum Field Theory	2
PAS 427 ✓	Computational Physics Laboratory	2
PAS 428	Computational Physics	4
PAS 428A	Computational Physics	2
PAS 506 ✓	General Theory of Relativity	4
PAS 506A	Theory of General Relativity	2
PAS 507	Advanced Mathematical Physics	2
PAS 508	Advanced Laser Physics	2
PAS 510	Advanced Semiconductor Material and Devices	2
PAS 511	Semiconductor Microelectronic Technology	2
PAS 512	Solid State Devices and Circuits	2
PAS 528 ✓	Accelerator and Reactor Physics	2
PAS 529 ✓	Group Theoretical Physics	2
PAS 533	Advanced Computational Physics Lab	2

### Foundation Human Making (FHM)

Course Code	Name of Course	Credits
PAS 416	History of Physics	2
PAS 417	Philosophy of Physics	2
PAS 417A ✓	History and Philosophy of Science	2
PAS 418	Physics for Everyone	2
PAS 420	Environmental Physics	2
PAS 429	Vedic Physics	2
PAS 430	Indigenous Studies in Physics	2
PAS 555	Philosophy of Quantum Physics	2
PAS 556 ✓	Science of Yoga	2

### Foundation Skill (FS)

Course Code	Name of Course	Credits
PAS 418	Physics for Everyone	2
PAS 419	Science and Technology of Alternative and Renewable Sources of Energy	2
PAS 427A ✓	Scientific Writing and Presentation	2
PAS 428B ✓	Elements of Scientific Programming	2
PAS 432	Ionizing Radiation & Safety Aspects	4
PAS 434	Science, Technology and Society	4
PAS 501	Simulation and Computer Applications	2
PAS 536	Informatics	2

PAS 556 ✓	Science of Yoga ✓	2
PAS 523	Biomedical Physics	2
PAS 435	Ultrasonics: Ultrasound and Applications	2

### Elective Open (EO)

Course code	Name of Course	Credits
PAS 406	Statistical Mechanics	2
PAS 410	Physics of Earth Atmosphere	2
PAS 410A	Physics of Earth & Atmosphere	4
PAS 416	History of Physics	2
PAS 417	Philosophy of Physics	2
PAS 418	Physics for Everyone	2
PAS 420	Environmental Physics	4
PAS 429A	Vedic Physics	4
PAS 430	Indian Traditional Physics	4
PAS 431	Musical Acoustics	4
PAS 433	Geo-Physics	2
PAS 502	Advanced Atmospheric Physics	2
PAS 504	Engineering Physics	2
PAS 516	Nanoscience and Technology	2
PAS 516A	Nanoscience and Technology	4
PAS 518 ✓	Opto-electronics	2
PAS 522	Microprocessors and Micro-controllers	2
PAS 523	Biomedical Physics	2
PAS 528	Accelerators and Reactor Physics	2
PAS 537	Space Physics and Communication	2
PAS 539 ✓	Cosmology	2
PAS 540	Elements of Astronomy	2
PAS 545 ✓	Unitary Symmetry in Quantum Physics	2
PAS 435	Ultrasonics: Ultrasound and Applications	2
PAS 436	Ultrasonics: Ultrasound and Applications	2

### Elective Specialization (ES)

Course code	Name of Course	Credits
PAS 426A ✓	Quantum Field Theory	4
PAS 506A ✓	Theory of General Relativity	4
PAS 509	Advanced Quantum Field Theory	4
PAS 513	Magnetic Materials	2
PAS 514	Superconducting Materials	2
PAS 515	Polymers, Ceramics and Composites	2
PAS 517	Characterization of Materials	2
PAS 518	Opto-electronics	2
PAS 519	Ferroelectric Materials and Devices	2
PAS 520	Seminar	2
PAS 524	Advanced Statistical Mechanics	4
PAS 525	Non-linear Physics	2
PAS 526	Fourier Optics	2

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PAS 527 ✓	Theoretical Nuclear Physics	4
PAS 528A ✓	Particle Accelerators, Detectors and Reactors	4
PAS 530	Soft Condensed Matter Physics	2
PAS 531	Mesoscopic Physics	2
PAS 532	Quantum theory of Many Body Physics	4
PAS 533	Advanced Computational Physics Laboratory	2
PAS 534	Quantum Computing	2
PAS 535	Quantum Electronics	4
PAS 538	Celestial Mechanics	2
PAS 539A	Cosmology	4
PAS 541	Perspectives of Astrophysics	2
PAS 542	High Energy Physics	2
PAS 543	Quantum Chromo-Dynamics	2
PAS 544	Quantum Flavor Dynamics	2
PAS 545	Unitary Symmetry in Quantum Physics	2
PAS 546	Neutrino Physics	2
PAS 546A ✓	Neutrino Physics	4
PAS 547	Plasma Physics	2
PAS 548	Project work	4
PAS 549 ✓	Elementary Particles & Interactions	4
PAS 551	Advanced Computational Physics	4
PAS 552 ✓	Molecular Simulations in Material Science	4
PAS 553	Standard Model, Higgs Physics & Beyond	4

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Semester	Core Courses		Elective Courses		Foundation Courses		Total Credits
	Compulsory	Open	Specialization	Open	Skill Development	Human Making	
I	CC-I (4) CC-II (4) CC-III (4) CC-X (2)	CO-I (2)	--	--	SD-I (2)	HM-I (2)	20
II	CC-IV (4) CC-V (4)	CO-II (2) CO-III (2) CO-IV (2) CO-V (2)	--	--	SD-II (2)	HM-II (2)	20
III	CC-VI (4) CC-VII (4) CC-VIII (4) CC-XI (2)	--	ES-I (4)	EO-I (2)	--	--	20
IV	CC-IX (4)	CO-VI (2)	ES-II (4) ES-III (4) ES-IV/Project (4)	EO-II (2)	--	--	20
<b>Total</b>	<b>40</b>	<b>12</b>	<b>16</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>80</b>

## Annexure- II

### List of External Paper Setters/Examiners/Experts

S. No.	Name	Address
1.	Dr. Vimal Sharma	Assistant Professor Department of Physics, National Institute of Technology, Hamirpur Hamirpur, HP-177005 Tel no.: 0197-2254101, 09459275085 Mail id: vimal.sharma277@gmail.com
2.	Prof. Nainjeet Singh Negi	Professor Department of Physics, Himachal Pradesh University, Shimla Summerhill, HP-171005 Tel no.: 0177-2833742, 09805038756 Mail id: nainjeet12@gmail.com
3.	Dr. Ajay Soni	Assistant Professor School of Basic Sciences, Indian Institute of Technology, Mandi Academic Block A4, Office #309, Kamand Campus, HP - 175001 Tel no.: 01905-267154 Mail id: ajay@iitmandi.ac.in
4.	Prof. Surya Kant Tripathi	Professor Department of Physics Panjab Universit, Chandigarh Chandigarh-160014 Tel no.: 0172-2534462 Mail id: surya@pu.ac.in
5.	Dr. Kamlesh Yadav	Assistant Professor Centre for Physical Sciences Central University of Punjab, Bathinda Punjab-151001 Tel no.: 08968742800 Mail id: kamlesh_yadav@cup.ac.in, kamlesh.yadav001@gmail.com
6.	Dr. Sourav Bhattacharya	Department of Physics, IIT, Ropar. sbhatta@iitrpr.ac.in, +91-1881-242147
7.	Dr. S. K. Soni	Deptt. of Physics, Govt. College Nagrota Bagwan E-mail: sksoniphy@yahoo.co.in, Mob. No. 94184-59801
8.	Dr. Kuldeep Sharma	Department of physics, NIT Hamirpur, kks@nith.ac.in, 01972-254116
9.	Dr. Monika Randhawa	University Institute of Engineering and Technology, Panjab University, Chandigarh-160014, 1

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		monika@pu.ac.in
10.	Dr. Pankaj Sood	Deptt. of Physics, Shaheed Capt. Vikram Batra Govt. College Palampur, Palampur-176061 pkj_sood@yahoo.co.in, Mob. No.- 9418473555.
11.	Prof. Patrick Das Gupta	Department of physics and astrophysics, University of Delhi, Delhi-110007. Email:patrickdasgupta1@gmail.com ph: 0091-11-2766-7793
12.	Prof. K. B. Joshi	Department of physics, Mohanlal Sukhadia University Udaipur 313001 Rajasthan, India Email:k.joshi@yahoo.com/kbjoshicuhp@gmail.com Ph: 2413955(O), 9414263540(M)
13.	Dr. Sourav Sur	Department of physics and astrophysics, University of Delhi, Delhi-110007. Email:sourav@physics.du.ac.in ph: 0091-11-2766-7725 Extn: 1356
14.	Dr. C. S. Yadav	School of basic sciences, IIT Mandi, Kamand Campus, VPO Kamand, Distt. Mandi - 175005 Himachal Pradesh India Phone: 01905-267135 EMail: shekhar@iitmandi.ac.in
15.	Prof. Ranjan Kumar	Department of Physics, Panjab University, Chandigarh 160014. Email:ranjan@pu.ac.in Phone: +91 172 2534457
16.	Dr. Pawan Kumar Sharma	Govt. College Sanjauli, Shimla pawankumarsolan@gmail.com
17.	Dr. Dalip Singh	Deptt. of Physics, Govt. College Mandi Himachal Pradesh, Mob No. 9418476165
18.	Dr. Ashok Kumar	Assistant Professor, Department of Physics, Central University of Punjab, Bathinda email: ashok.1777@yahoo.com; ashok@cup.ac.in, Ph: +91- 9418581622
19.	Dr. Rahul Tripathi	Assistant Professor, Department of Physics, Ch. Bansi Lal Univesity, Bhiwani, Haryana email: rtrnpl@gmail.com, Ph: +91-9468155116
20.	Dr. Arun Kumar	Assistant Professor, Department of Physics, Government College Ghumarwin (Bilaspur), 175123 email: arun242493@yahoo.com, Ph: +91-9418110563

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21.	Dr. Rajesh Kumar	Assistant Professor, Department of Physics, Panjab University, Chandigarh email: rajeshbaboria@gmail.com, +91-9023861049
22.	Dr. Rajesh Kumar Sharma	Assistant Professor, Department of Physics, NIT Hamirpur email: rajeshsharma@nith.ac.in, +91-9882464452
23.	Prof. Anchal Srivastava	Department of Physics, Institute of Science, Banaras Hindu University, Varanasi-221005 Phone :0542-2307308, Mobile: 9453203122 anchalbhu@gmail.com
24.	Dr. Jai Singh	Dept of Physics, Dr. Harisingh Gour Central University, Sagar, M.P.-470003 Mobile no-9424459805 email id :jai.bhu@gmail.com
25.	Dr. Raghvendra Pandey	Assistant Professor Department of Physics A.R.S.D. College, University of Delhi DhauraKuan, New Delhi-110021 Email: raghvendra@arsd.du.ac.in Mob No.: +91-9560111832
26.	Dr. Devinder Singh	DST Inspire Faculty Department of Physics Panjab University, Sector-14, Chandigarh 160014 Email:devinderbhu@yahoo.com,devinderpu@pu.ac.in Contact: +91-9455222876
27.	Dr. Ajay Tripathi	Department of Physics Sikkim University Tadong-737102 Gangtok, Sikkim Phone No.: 9679900115 e-mail: atripathi@cus.ac.in
28.	Dr. Ajay Soni	Assistant Professor School of Basic Sciences, Indian Institute of Technology, Mandi Academic Block A4, Office #309, Kamand Campus, HP - 175001 Tel no.: 01905-267154 Mail id: ajay@iitmandi.ac.in
29.	Prof. Surya Kant Tripathi	Professor Department of Physics Panjab Universit, Chandigarh Chandigarh-160014

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		Tel no.: 0172-2534462 Mail id: surya@pu.ac.in
30.	Dr. Kamlesh Yadav	Assistant Professor Centre for Physical Sciences Central University of Punjab, Bathinda Punjab-151001 Tel no.: 08968742800 Mail id: kamlesh_yadav@cup.ac.in, kamlesh.yadav001@gmail.com
31.	Prof. S. S. Malik	Deptt. of Physics, GNDU, ASR, Mob: 9464229800
32.	Dr. Suresh Kumar	Deptt. of Physics and Astrophysics, Delhi university, Mob: 9599762352, Email: skumar@physics.du.ac.in
33.	Dr. Arjun Singh	Scientist-E, TBRL, DRDO, Chandigarh Tel no.: 09463598496
34.	Dr. Subhash Chand	Deptt. of Physics, NIT Hamirpur Email:schand@nith.ac.in Phone : 254136 (0)
35.	Dr. Arvind Kumar	Deptt. of Physics, NIT Hamirpur Email:akgathania@nith.ac.in Phone : 254148 (0)
36.	Dr. N.K. Sharma	Dept. of Physics , DAV Kangra 9418360921
37.	Sh. Vijay Sharma	Dept. of Physics , DAV Kangra 9418095129
38.	Dr. Priyanka Sharma	MAU Baddi Email:royprianka04@gmail.com Tel no.: 9816140415
39.	Dr. Vivek Kumar	Centre of Medical Physics (U.I.E.A.S.T.) Email: vivek@pu.ac.in Tel no.:2534591, 8146738713
40.	Dr. Yuvraj Singh Pathania	Govt. College Shahpur Email:ypchingi@gmail.com Tel no.:9418125398
41.	Dr. Kartar Singh Attri	Govt. College Dharamshala Email: Tel no.:
42.	Dr. Sunil Katoch	Girl College, Palampur Email: katochsk1@gmail.com Tel no.:

43.	Dr. Rajesh Kharab	Department of Physics, KU Email:kharabrajes@rediff.com
44.		

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### Annexure- III

#### Course Work for RD Scholars

The students are required to complete towards their course work minimum of 12 and upto 16 credits. One or more courses could be taken as audit courses (zero credit and shall be reflected in the grade card) not exceeding 20 credits.

**Choice Based Credit System:** The typical course work shall have 6 credits of Core Compulsory, 2 to 6 credits from Core Open, 2 to 4 credits Elective Specialization, 2 credits (optional) from either of Elective Open or Human making/Skill development.

**Ordinance No: 42.7 deals with Course work requirements.**

**7.4 The Department where the scholar pursues his/ her research shall prescribe the course(s) to him/her based on the recommendations of the Research Advisory Committee.**

(9.1 The Research Advisory Committee (RAC) shall comprise the research supervisor of the PhD student who shall be the convener of the committee, Head of the Department / Director of the Centre who shall be the ex-officio chairman, and at least one subject expert nominated by the Head/Director upon the recommendation of the concerned supervisor.)

**7.5 All candidates admitted to PhD programmes shall be required to complete the course work prescribed by the Department within one semester, but cannot extend beyond two semesters in any case.**

**Note:** The courses other than the Core compulsory shall be offered only with the discretion of the Head of the Department depending on the availability of various resources.

#### Core Compulsory (CC)

Course Code	Name of Course	Credits
PAS 610A	Advanced Computational Methods in Physics (Lab)	2
PAS 611	Research Methodology	4
PAS 699	Thesis (Ph.D)	60

#### Core Open (CO)

Course Code	Name of Course	Credits
PAS 533	Advanced Computational Physics Lab	2
PAS 601	Advanced Techniques in Theoretical Physics	4
PAS 604	Classical Dynamical Systems	2
PAS 604A	Advanced Classical Mechanics	2 ✓
PAS 605	Classical Electromagnetic Theory	2
PAS 606	Quantum Physics	2
PAS 607	Statistical Physics	2
PAS 607A	Statistical Physics	4 ✓



### Foundation Human Making (FHM)

Course Code	Name of Course	Credits
PAS 416	History of Physics	2
PAS 417	Philosophy of Physics	2
PAS 417A	History and Philosophy of Science	2
PAS 429	Vedic Physics	2
PAS 430	Indigenous Studies in Physics	2
PAS 555	Philosophy of Quantum Physics	2
PAS 556	Science of Yoga	2

### Foundation Skill (FS)

Course Code	Name of Course	Credits
PAS 427A	Scientific Writing and Presentation	2
PAS 615	Research Report Writing	2

### Elective Open (EO)

Course Code	Name of Course	Credits
PAS 616	Modeling and Simulation	2
PAS 617	Data Acquisition System	2
PAS 618	Geometric Algebra	2
PAS 426	Quantum Field Theory	2
PAS 517	Characterization of Materials	2
PAS 619	Signal Processing	2
PAS 620	Detectors and Transducers	2

### Elective Specialization (ES)

Course Code	Name of Course	Credits
PAS 426A	Quantum Field Theory	4
PAS 506A	Theory of General Relativity	4
PAS 509	Advanced Quantum Field Theory	2
PAS 527	Theoretical Nuclear Physics	4
PAS 532	Quantum theory of Many Body Physics	4
PAS 549	Elementary Particles & Interactions	4
PAS 551	Advanced Computational Physics	4
PAS 552	Molecular Simulations in Material Science	4
PAS 553	Standard Model, Higgs Physics & Beyond	4
PAS 602	Physics Education Research	4
PAS 603	Advanced Neutrino Physics	4
PAS 608	Gauge Theory	4
PAS 609	Advanced Course in General Relativity	4
PAS 610	Advanced Computational Methods in Physics (Lab)	4

PAS 611	Nano-Scale Electronics and Optoelectronics	4
PAS 612	Science & Technology of Thin Films	4
PAS 613	Characterization of Materials	4

**General Guidelines:** All the contents shall be delivered as per the ordinances of CUHP with more detail to the process as given below:

1. The **Core Open and Elective Open courses** shall constitute

a. **2 hours of direct contact hours** of teaching –learning process:

- i. The pre-requisites of the concepts for solving the problems (which shall be circulated in advance by the teacher to the student) are discussed and
- ii. The philosophy and inter-connectedness between the various concepts and ideas among various courses are deliberated

b. **2 hours of reading materials per week** are provided to the student.

Actually, 1 credit means 10 hours of lectures plus 5 hours of teacher lead activity/guided interactive sessions, but for the RD core courses it shall be 10 hours of lectures plus 5 hours of discussion on the reading materials which the students are provided for preparation which is content beyond what is taught in the lectures.

c. Weekly assignments and problem solving shall constitute 15% of the marks, **10% of the marks shall be for a viva** that shall be conducted on the core courses content and mid-term examination shall constitute 25% of the marks, a total of 50% of marks towards the continuous internal assessment.

d. End-term examination shall constitute 50% of the marks.

2. **Research Methodology Course** shall have the following (suggestive) modules so as to cover the various aspects such as:

- a. Appreciate the nature, rationale, aims and limitations of the natural sciences
- b. Understand the importance of quality research, in particular as regards to justification, measurement and experimentation
- c. Develop the qualities and competencies required to undertake such research in his or her own field of study
- d. Perform review of published research in the relevant field and write a scientific report.
- e. Learn the methodology of research design in respect of theoretical modeling, simulation and experiment
- f. Importance of uncertainty in measurements and statistical analysis

- g. Develop an awareness as to the ethical and spiritual dimensions of research.
3. **Laboratory Course on Advanced Computational Methods in Physics** is compulsory for all the students with emphasis on the following:
- a. Modeling of the Physics Problem
  - b. Numerical methods for solving the system of equations governing the physics problem
  - c. Algorithm and Program development
  - d. Generation of output data in numerical and graphical form for various input parameters
    - i. involving the numerical method/technique such as time step/mesh size for determining the appropriateness of the parameter for improving the accuracy of the method,
    - ii. varying the physical parameters of the system to understand their significance in governing the dynamics of the system
    - iii. obtaining the affect of Initial or Boundary conditions on the system
    - iv. Error analysis
  - e. Interpretation and
  - f. Modification of the problem by varying the internal/external parameters governing the system
4. The **Elective Specialization course** on and around the topic of research shall be offered in self learning mode and has a combination of project and seminar components of the Master's program.
- a. The content around the topic of research shall have the components of a seminar such as
    - i. Lectures by the student
    - ii. Assignments and problem solving
    - iii. Identification of topics and review of literature from various resources
    - iv. Mid-term seminar presentation and viva
    - v. End-term seminar presentation and viva
    - vi. Term-paper(s) on the various identified topic(s)
  - b. The content on the topic of research shall have the components of a project work such as
    - i. Identification of problem and related review of literature

- ii. Maintaining the Logbook
- iii. Mid-term project presentation (continuation of seminar presentation) and viva
- iv. End-term project presentation (continuation of seminar presentation) and viva
- v. Project report (should have been presented in a National/International level conference or publication in a journal)

**Note:** In case, the student in consultation with the supervisor wishes to undertake the specialization course from any other research institution in the country, then the internal assessment component shall be graded by the concerning department of the research institution and the final presentation and viva shall be held at CUHP. The project report shall be graded by the supervisor.

**5. Research Report Writing:** This course is practical lab based course with hands-on experience of Latex for writing Project Proposals, Articles/Papers, Project report, Thesis including Bibtex for references and making presentations using Beamer.

**Note:** Students who have no previous knowledge of Latex are advised to take this course. The theoretical aspects related to the topic are covered as part of Research Methodology course.



# Central University of Himachal Pradesh

[Established under Central Universities Act 2009]

Department of Physics & Astronomical Science  
School of Physical & Material Sciences

To

Date: 06/11/17

The Dean and Head  
Department of Physics and Astronomical Science,  
School of Physical & Material Sciences  
Central University of Himachal Pradesh,  
TAB, Kangra

**Subject:** Regarding RD Student Rakesh Rathore, with Registration No. CUHP14RDPHY05.

Dear Sir,

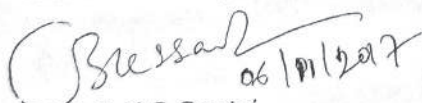
I am highly pained to write this letter bringing to your notice, repeated unethical conduct of RD student Rakesh Rathore regarding publication of papers in journals and sending papers for conferences.

I have already warned him twice regarding this issue and yet he has not taken cognisance of my stern guidelines, and has once again sent a paper for presentation in IAPT Conference at Haridwar without discussing with me and with out my consent. He has used my idea of utilising Nuclear Wallet Cards for making students come up with the radioactive series and yet he has sent the abstract with his name as single author which is absolutely unpardonable. He has not been interacting through any means inspite of repeated reminders from my side. He has his own personal ideas of research which do not match with mine. Hope you remember my discussions regarding Rakesh Rathore and my reservations that I have expressed to you. Keeping all this in mind, I would request you to change the research supervisor for Rakesh as per ordinance no42.12.1(i) and 42.12.1(iv).

I would not like to continue as his supervisor hence forth and appropriate action may be taken regarding the continuation of Mr. Rakesh Rathore for his Ph.D.

Thanking You,

Yours Sincerely,

  
06/11/2017

Dr. O.S.K.S. Sastri  
Associate Professor,  
Department of Physics and Astronomical Science  
School of Physical & Material Sciences

Pub. in the minutes  
of the 1<sup>st</sup> BOS meeting  
on no. 7.11.  
Bachchan



Bhag Chauhan <bcawake@gmail.com>

**Fwd: Sharing good news of becoming professor by Swami's grace**

2 messages

Sastri Osks <sastri.osks@gmail.com>  
To: "B. C. Chauhan" <bcawake@gmail.com>

Mon, Nov 13, 2017 at 10:10 AM

Dear Sir

Please see this email. This is what is the problem when a Research Scholar sends a paper without the consent of the supervisor.

I was always afraid of this and this is the reason I have decided to finally call it quits.

Please take this issue seriously as this could lead to very serious repercussions with love

sastri

----- Forwarded message -----

From: Sarmistha Sahu <sarmistha.sahu@gmail.com>  
Date: Mon, Nov 13, 2017 at 8:17 AM  
Subject: Re: Sharing good news of becoming professor by Swami's grace  
To: Sastri Osks <sastri.osks@gmail.com>

Dear Sastri,  
Well done, Keep it up. You shall progress as you proceed ..

Cheers,  
Sarmistha

PS,

One of your students, Dr SS gave a oral presentation at Haridwar on Radioactivity. It is courtesy to acknowledge from where they are lifting the idea , methodology, etc. (he told me later that he has been supplied my paper by his guide) . [I had sent you all my work, when you shifted to HP, and you are using them liberally for your students].

Probably it is an essential **etiquette to acknowledge**, in your research field too. Two other students of yours had worked on Macrostate and Microstate . Of course, the idea was lifted from my papers but the methodology was very different. They have completed their Ph D s and I am happy about that. Hope you will take care of that in future.

All the best,  
Sarmistha

On Sat, Nov 11, 2017 at 1:05 PM, Sastri Osks <sastri.osks@gmail.com> wrote:

Dear friends

By Swami's grace i have been promoted as Professor of Physics with retrospect from 14th march, 2015.

Swami has blessed me to fulfill one of my childhood dreams.

I am grateful to all of you for being there in my life

13-11-2017, 10

Thanks  
with love  
Sastri

--  
**Dr. O.S.K.S. Sastri**

Founder Dean (Former), School of Physical and Material Sciences  
Central University of Himachal Pradesh  
TAB, Shahpur,  
Kangra, H.P. - 176206

--  
Sarmistha Sahu

Associate Prof., Physics  
Maharani Lakshmi Ammanni College for Women, Science Post,  
Bangalore 560012  
(M) 09448437747, 080 23641741

--  
**Dr. O.S.K.S. Sastri**

Founder Dean (Former), School of Physical and Material Sciences  
Central University of Himachal Pradesh  
TAB, Shahpur,  
Kangra, H.P. - 176206

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Sastri Osks <sastri.osks@gmail.com>  
To: "B. C. Chauhan" <bcawake@gmail.com>

Mon, Nov 13, 2017 at 10:22 AM

Just for your information

----- Forwarded message -----

From: Sastri Osks <sastri.osks@gmail.com>  
Date: Mon, Nov 13, 2017 at 10:21 AM  
Subject: Re: Sharing good news of becoming professor by Swami's grace  
To: Sarmistha Sahu <sarmistha.sahu@gmail.com>

Dear Madam

As regards to your second claim regarding microstate and macrostate, i want to make it clear that i have been working on these concepts even before you and i have papers published on it and we have not used your paper for our work at all. if at all it had any resemblance, it might be because the concepts need such a treatment. But, sincerely we have not referred to your paper for the ideas.

They were purely ideas that emerged from a paper published in Physics Teacher from AAPT  
Please share your paper on microstate and macrostate and we shall also ensure it shall appear in our future papers as reference

Thanking you  
with love  
sastri

On Mon, Nov 13, 2017 at 10:17 AM, Sastri Osks <sastri.osks@gmail.com> wrote:  
Dear Madam

## Annexure-IV

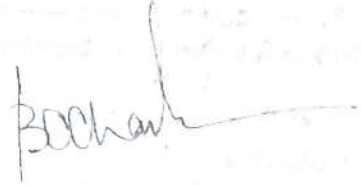
Agenda Item: PAS-BOS-7.10 with per missing of the Chair.

This is regarding the request of an independent scholar Sh. Ajay Sharma.

माननीय कुलपति महोदय की इच्छानुसार श्री० अजय शर्मा, प्राचार्य, राजकीय वरिष्ठ माध्यमिक पाठशाला, शिमला की याचिका पात्रता को विभाग में उनके द्वारा किये गए शोध कार्य तथा दिनांक 22-09-2017 को विभाग में उनके द्वारा दिया गया व्याख्यान को ध्यान में रखते हुए जांचा गया था। भौतिकी एवं खगोलीय विज्ञान विभाग कौंसिल की बैठक दिनांक 11-10-2017 में यह प्रस्ताव रखा गया था, जिसका विवरण इस प्रकार से है :

**एजेंडा:** श्री० अजय शर्मा, प्राचार्य, राजकीय वरिष्ठ माध्यमिक पाठशाला, शिमला ने कुलपति महोदय से अनुरोध किया है कि उनके शोध कार्यों की गुणवत्ता को ध्यान में रखते हुए उन्हें पीएचडी शोधकर्ताओं की पात्रता मानदंडों में ढील देकर विश्वविद्यालय के पीएचडी पाठ्यक्रम प्रवेश करवा दिया जाये। इसके अतिरिक्त शोध-पाठ्यक्रम (कोर्स वर्क) में भी छूट मिलने के लिए भी अर्ज किया है। कुलपति महोदय ने इ-मेल (संलग्न-1) द्वारा भौतिकी एवं खगोलीय विज्ञान विभाग की काउंसिल में प्रस्तुत करने और टिप्पणी को आगे प्रेषित करने के लिए कहा है।

**कार्यवृत्त:** भौतिकी एवं खगोलीय विज्ञान विभाग कौंसिल की बैठक दिनांक 11-10-2017 को संपन्न हुई, जिसमें श्री० अजय शर्मा द्वारा किये गए शोध कार्य और सम्बंधित credentials तथा उनके द्वारा विभाग में दिनांक 22-09-2017 को दिया गया व्याख्यान को ध्यान में रखते हुए यह निर्णय लिया गया कि भौतिकी एवं खगोल विज्ञान विभाग में पीएचडी प्रवेश का यह मामला विशुद्ध है अतः सक्षम प्राधिकारी के समक्ष स्वीकृति के लिए प्रेषित किया जाये।





## CURRICULUM VITA: AJAY SHARMA

1. Name AJAY SHARMA
2. Date of Birth 02 March 1963
3. Father's name Mr Dev Dutt Sharma, ...was teacher and revolutionary poet
4. Mother Smt Kala Rani Sharma ....was house wife
5. Address for correspondence  
AJAY SHARMA Assistant Surgeon Block Set No 4. Opp. Ram Temple Ripon Campus Ram Bazar Shimla  
171001 India

**Permanent Address**

Ajay Sharma s/o Sh. Dev Dutt Sharma  
VPO Chakmoh, Raipuri Tehs. Bijahri Distt. Hamirpur 176039 HP  
Phones Mobile 94184 50899 94183 09989, (0)177-2804546  
Email [ajay.plus@gmail.com](mailto:ajay.plus@gmail.com), [www.AjayOnLine.us](http://www.AjayOnLine.us)

**6 Educational Qualification**

- (i) Matric in 1979 (72 % First Division)  
Baba Bank Nath High School, Chakmoh, Hamirpur HP
  - (ii) BSc. In 1983 (69% First Division )  
SVSD College College Bhatoli, Distt Una HP  
Started independent research in BSc about works Archimedes, Newton and Einstein
  - (iii) MSc.(Physics) 62% in 1985 [OAGP 3.1 on 4 basis First division ]
- 7. Marital Status** Married, Two children Spouse Dietician, Ripon Hospital Shimla 171001  
Daughter Engineer at TCS, Gurgaon

**8. Professional**

- (i) DAV College Chandigarh Taught Physics in 1985-86 to undergraduate classes.
- (ii) Education Department Shimla Joined as Lecturer Physics.
- (iii) Promoted as Principal, in April 2008
- (iv) Working as Assistant Director in O/O Deputy Director of Elementary Education Shimla since 1<sup>st</sup> May 2013.

**8 Educational Qualification**

- (i) Matric in 1979 (72 % First Division)  
Baba Bank Nath High School, Chakmoh, Hamirpur HP
- (ii) BSc. In 1983 (69% First Division )  
SVSD College College Bhatoli, Distt Una HP  
Started independent research in BSc about works Archimedes, Newton and Einstein
- (iii) MSc.(Physics) 62% in 1985 [OAGP 3.1 on 4 basis First division ]
- (v) Life Member : Various associations and societies

**9. Conferences abroad invitation from abroad over 100**

Invitation from BHARAT BODH (IDEA OF BHAARAT) IGNOU, New Delhi Febraury 2017, Physics Year,  
Himachal Science Conference, 2013 Peterhoff, Shimla

back

Indian Science Congress 2018 , 3<sup>rd</sup> -7<sup>th</sup> January 2018. Paper to be presented  
**Third Law of Motion: Revisited and Generalized.**

(visited twice USA and twice England to present papers in international conferences)  
 USA, ENGLAND, GERMANY, RUSSIA UKRAIN, Kahajakistan, TAIWAN, THAILAND, JORDAN, QATAR  
 Next Visit : Texas, USA in September, 10-13, 2017 not materialized as received VISA late on 18 Oct.  
 2017.

This year I have got nearly half dozen invitations for conferences from abroad. But due to non-availability of funds could not visit any of them. Whenever I send abstract/paper to relevant conference I get invitation, but difficult part is to visit due to lack of funds.

Numerous articles on newspapers, magazines, TV channels, websites etc. on Newton, Archimedes and Einstein

### Publications of Ajay Sharma

#### 1. Books

Book being written

Second Law is not Newton's, Third Law Generalized

Expected year of publication: 2018, January/February

pp. 100-120 e book self publication and distribution. Then printed version is planned.

(i) Beyond Newton and Archimedes

Year of publication; September 2013

Publisher Cambridge International Science Publishing, Cambridge England

(ii) Beyond Einstein and  $E=mc^2$

Publisher Cambridge International Science Publishing, Cambridge England

(iii)  $E=mc^2$  after 100 years

Year of Publication; 2007

Publisher Raider Publication, New York, USA

(iv) Einstein's Mass Energy Equation

Year of Publication; 2011

Publisher Lambert Academic Publisher, 2009

(v) Einstein and Archimedes : Generalized

Year of Publication; 2007

Publisher Lambert Academic Publisher, 2011

Hindi Poetry,

260 Naye Geet Nayee Gazlay, Princess Publishers, New Shimla (Also wrote a song for Film Kanoon Ki Zanzeer, shooted 2000. Left Mumbai as I had more interest in PHYSICS.)

#### Awards & Honours

1. Shimla Gaurav Award, given by Department of Youth Services and Sports, 2010

(ii) Himachali of Year Award given by Divya Himachal Group of Newspapers 2012

(iii) Himachal Gaurav Samman given by Delhi Aaj Samaj Award 2015

I am not much interested in awards and honors, my only aim is to give better and better arguments in favor of new perceptions, so that extensions in Newton's laws, Archimedes principle, Einstein's  $E=mc^2$  etc, may be accepted. It is important for me.

#### 2. International Peer Review Journals and Conferences

Paper in published and in press 2017

(i) The Various Equations of Variation of Mass with Velocity

Link <http://www.indjst.org/index.php/indjst/article/view/96640>

(ii) The Generalized Form of Principia's Third Law of Motion

Link <http://www.indjst.org/index.php/indjst/article/view/115866>

(iii) Newton's Second Law of Motion,  $F=ma$ ; Euler's or Newton's?

In press

(vi) **Third Law of Motion: Revisited and Generalized**

In Press likely to be published on 25<sup>th</sup> November 2018

Submitted

Galileo's Law of Inertia and Euler's  $F = ma$  play pivotal role in Newtonian Mechanics.

Significance of Characteristics of Materials in Generalized Form of Newton's Third Law of Motion.

- (1) Sharma, A. *Physics Essays*, Vol. 17, pp.195–222 (2004)
- (2) Sharma, A. *Apeiron* Vol. 18 No 3 (2011)
- (3) Sharma, A. *Apeiron* Vol. 18 No 4 (2011)
- (4) Sharma, A. *Progress in Physics*, Vol. 3 pp. 76-83 (2008)
- (5) Sharma, A. *Abstract Book: A Century After Einstein Physics 2005*, (Organizer Institute of Physics, Bristol) University of Warwick, UK, 10–14 April. (2005)
- (6) Sharma, A. *Proceedings on International Conference on Computational methods in Sciences and Engineering* ( World Scientific , Singapore , 2003) pp.585
- (7) Sharma, A. *Proc. Int. Conf. on Number, Time, Relativity*, United Physical Society of Russian Federation, Moscow, p.81 (2004)
- (8) Sharma, A. *Proceedings of the 4<sup>th</sup> international conference of IMBIC*, (2012) to be published.
- (9) Sharma, A. *Concepts of Physics*, Vol. III, No. 4, pp.345–373  
(2006), [http://merlin.fic.uni.lodz.pl/concepts/2006\\_4/2006\\_4\\_351.pdf](http://merlin.fic.uni.lodz.pl/concepts/2006_4/2006_4_351.pdf).
- (10) Sharma, A. *Concepts of Physics*, Vol. V, No. 3, pp.553–558 (2006),
- (11) Sharma, A submitted to *Physics Essays*
- (12) Sharma, A. *International Conference on World Year of Physics*, University of Rajasthan, Jaipur pp.14 (2005)
- (13) Sharma, A. *Proceedings of the Natural Philosophy Alliance*, Vol.6 No. 2 pp. 261-263 (2011).

- (14) Sharma A. Galilean Electrodynamics Vol. 22 SI No 3 pp. 42 , 58-60 (2011)
- (15) Sharma, A *Einstein and Archimedes Generalized*, Lambert Academic Publishers (2009) ,Saarbrucken , Germany
- (16) Sharma, A *American Journal of Scientific Research* , Vol. 12 pp.67-112 (2010)
- (17) Sharma , A *Proceedings of the 4<sup>th</sup> international conference of IMBIC*, pp. 21 (2010).
- (18) Sharma, A. *Journal of Vectorial Relativity* . JRV (4) 1-28 (2009)
- (19) Sharma, A *Einstein's Mass Energy Equation*, Lambert Academic Publishers (2009) ,Saarbrucken , Germany
- (20) Sharma, A *Einstein's  $E=mc^2$  Generalized* Raider Publishing International (2007) New York , USA
- (21) Sharma, A. *Galilean Electrodynamics*, Vol. 18, No. 5, pp 99-100 (2007).
- (22) Sharma, A. *Kurt Godel Society Collegium Logicum* Volume IX pp. 67-71 (2007)
- (23) Sharma, A *Proceedings of the Natural Philosophy Alliance* , Vol.6 No. 2 pp. 261-263 (2011).
- (24) Sharma, A *International Journal of Nuclear Science and Technology* Vol. 3 No 4 pp. 370-77 (2007)
- (25) Sharma, A. *Presented in 19th International Conference on the Applications of Accelerators in Research and Industry*, Fort Worth, Texas, USA, 20–25 August. 2005
- (26) Sharma, A. Abstract Book , Oral presentación (Lecture) on 21<sup>st</sup> September 2005, in *The 5<sup>th</sup> British Gravity Meeting* , Oxford, England.
- (27) Sharma, A *Acta Ciencia Indica* Vol. XXIV P No. 4 pp.153-158 (1998).
- (28) Sharma, A *Acta Ciencia Indica* Vol. XXVI P. No. 1 pp.013-016 (1998).
- (29) Sharma, A. III international Young Scientists Conference, Kyiv National University , Scientific works pp. 19 ( 2002).
- (30) Sharma, A *Journal of Theoretics* Vol.6-5 2004
- (31) Sharma, A. Infinite Energy be published in January issue

#### On Archimedes principle

1. (32). Sharma, A *International Journal of Fluid Mechanics Research*,  
Title **Consequences of indeterminate form of volume of floating balloons in water.**  
Vol. 38 No 5 pp. 444-449 (2012)
- (33) Sharma, A *Acta Ciencia Indica* ,  
Theoretical Deduction Favour the Generalized form of Archimedes principle in case of completely submerged floating bodies.  
XXIV P No. 1 pp.019-022 (1998).
- (34) Sharma, A. *International Journal of Fluid Mechanics*,

*Beach*

**Torricelli's experiment in case of glycerine and water: A critical analysis**

Vol. 3 No. 2 pp. 121-123 (2011)

(35) Sharma, A *Acta Ciencia Indica* .

Stokes Law revalidates Aristotle's assertion

XXIV P No. 1 pp. 65-67 (1997).

(36) Sharma, A *Acta Ciencia Indica* .

The measurement of viscosity of fluids by method of rising bodies

XXII P No. 1 pp. 22-24 (1996).

(37) Sharma, A. International Journal of Fluid Mechanics,

**Consequences of indeterminate form of volume**

Vol. 3 No. 2 pp. 111-120 (2011)

(37) Sharma, A *Acta Ciencia Indica* .

The measurement of viscosity of fluids by method of rising bodies

XXII P No. 1 pp. 22-24 (1996).

(38) Sharma, A *Acta Ciencia Indica* .

Inconsistencies in theoretical derivación of Archimedes principle

XXV P No. 1 pp. 043-048 (1998).

(39) Sharma, A *Acta Ciencia Indica* .

Effect of capilarity and viscosity on classic Torrecelli's experiment and its critical analysis

XXV P No. 1 pp. 043-048 (1998).

(40). Sharma, A *Acta Ciencia Indica*

**Limitations of existing theories and an alternate theory on rising, falling and floating bodies**

Vol. XXIII P No 3 171-184 (1997)

**On Newton's Law**

(41) Sharma, A. *Infinite Energy* ,

**Title Formation of water, Glycerine and alcohol barometer**

Vol. 18 No. 104 2012

(42) Sharma, A *Acta Ciencia Indica*

**Title Elastic collisions in one dimension at macroscopic level and Newton's Third law of motion**

Vol. XXV P No 3 113-116 (1999).

(43) Sharma, A *Acta Ciencia Indica*

**Title A practical realization of one dimensional elastic collisions at macroscopic level**

Vol. XXIV P No 4 127- 130 (1999).

(44) Sharma, A *Acta Ciencia Indica*

**Title The generalized equation of force in dynamics and its applications.**

*Handwritten signature*

Vol. XXIV P No 4 181 -190 (1999).

(45) Sharma, A *Acta Ciencia Indica*

Title **A critical analysis of escape velocity.**

Vol. XXIV P No 3 109-112 (1999).

Publications in 2013-14

(46) Sharma , A *Physics Essays*

Title **Is  $E=\Delta mc^2$  mathematically derived or speculated in Einstein's September 1905 paper?**

Volume 26: Pages 509-515, 2013

(47) Sharma , A *Physics Essays*

Title **Did the Cockcroft-Walton experiment really confirm Einstein's  $\Delta E=\Delta mc^2$  first of all ?**

Volume 27: Pages 139-142, 2014

(49) Sharma, A *Infinite Energy Magazine*

Title **Velocity dependent of derivation of  $E=mc^2$**

(50) Sharma, A **Various equations of variation of mass with velocity** , *Indian Journal of Science and Technology*, Vol 10(21), DOI: 10.17485/ijst/2017/v10i21/96640, June 2017

Plus many more

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*Handwritten signature*



Central University of Himachal Pradesh  
[Established under Central Universities Act 2009]  
Department of Physics & Astronomical Science  
School of Physical & Material Sciences

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To

The Dean and Head  
Department of Physics and Astronomical Science,  
School of Physical & Material Sciences  
Central University of Himachal Pradesh,  
TAB, Kangra

**Subject:** Regarding inducting Dr S.K, Soni as Co-supervisor for my RD student Swapna Gora.

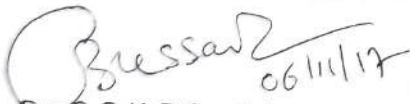
Dear Sir,

Our research needs constant inputs from the teaching fraternity and also need assistance for creating control and experimental groups. Keeping these points in mind, we have requested Dr. S. K. Soni, Associate Professor in the Department of Physics at Government College, Dharamshala to become part of our PER group and also give his consent for being Co-Supervisor for my RD student Swapna Gora. He is a PhD in Nuclear Physics and would be providing valuable guidance for our work.


Kindly include his name as Co-supervisor for RD student Swapna Gora.

Thanking You,

Yours Sincerely,

  
06/11/17

Dr. O.S.K.S. Sastri  
Associate Professor,  
Department of Physics and Astronomical Science  
School of Physical & Material Sciences

To be put as  
agenda no. 7.6.  
  
06-11-17

NEW

1

**ORDINANCE NO: 42**

**MEDIUM OF INSTRUCTION, EXAMINATION, EVALUATION AND GRADING SYSTEM FOR THE  
AWARD OF DOCTOR OF PHILOSOPHY**

*(Under Section 28(1) (b), 28 (1) (c) and 28(1)(g) of the Central Universities Act 2009)*

**1. Admission to PhD Programme:**

**1.1** The university shall notify well in advance the number of seats available for admission in various subjects/ disciplines from time to time depending on the number of vacant seats (in specialized research areas), availability of research supervisors and available physical/infrastructural facilities.

**1.2** However, applications for admission to PhD programme shall also be received throughout the year.

**1.3** Admission to PhD programme shall be made in each semester.

**2. Minimum Eligibility Criteria:** The following candidates shall be eligible to seek admission to the PhD programme:

**2.1** Candidates for admission to the PhD programme shall have a Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions.

**2.2** A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to 19th September 1991. The eligibility marks of 55% (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

**2.3** Candidates who have cleared the MPhil course work with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in



a point scale wherever grading system is followed) and successfully completing the M.Phil Degree shall be eligible to proceed to do research work leading to PhD degree in the same Institution in an integrated programme. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/ differently-abled and other categories of candidates as per the decision of the Commission from time to time. Further, a person whose MPhil dissertation has been evaluated and the viva voce is pending may be admitted to the PhD programme of the same institution.

2.4 Candidates who have cleared the MPhil course work with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) and successfully completing the M.Phil Degree shall be eligible for admission to PhD degree. A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/ differently-abled and other categories of candidates as per the decision of the Commission from time to time. Further, a person whose MPhil dissertation has been evaluated and the viva voce is pending may be admitted to the PhD programme.

2.5 - Candidates possessing a degree considered equivalent to MPhil of an Indian Institution, from a Foreign Educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions, shall be eligible for admission to PhD programme.

2.6 An employee of any university/ institution/ college/ government department/ public sector undertaking / R & D organization/ private industry, who is sponsored as a full time candidate by the said organization, with at least three years of experience and who is relieved on study leave for a period of not less than two years for pursuing PhD programme in a department/centre of the university.

2.7 To be eligible, the applicant must have qualified any of the following:

- i. UGC-NET (Including JRF)
- ii. UGC-CSIR NET (Including JRF)
- iii. ICAR-NET (Including JRF)
- iv. SLET

- v. GATE
- vi. Teacher Fellowship Holder
- vii. M.Phil
- viii. Himachal Pradesh Kendriya Vishwavidyalaya Shodh Patrata Pariksha (HPKVSP)
- ix. Any other eligibility criterion as notified by UGC from time to time

**2.8** The university shall conduct its own Research Eligibility Test for category as per clause 2.7 (viii) above namely Himachal Pradesh Kendriya Vishwavidyalaya Shodh Patrata Pariksha (HPKVSP), which will remain valid for two years from the date of declaration of result. The eligibility, content, qualifying percentage, validity of HPKVSP shall be decided by the university from time to time.

### **3. Duration of PhD Programme:**

**3.1** PhD programme shall be for a minimum duration of three years from the date of admission, including course work, and a maximum of six years. Provided further that for a candidate admitted to Ph.D. Programme after completing M.Phil Degree, the Ph.D. Programme shall be for a minimum duration of two years from the date of admission including course work and a maximum of five years.

**3.2** Provided further, that for Part-time PhD programme, a minimum duration of PhD programme shall be four years including course work, and a maximum of six years.

**3.3** Under special circumstances, extension beyond six years may be granted on genuine grounds by the Vice Chancellor for one more year.

**3.4** The women candidates and Persons with Disability (more than 40% disability) may be allowed extension of two years for PhD in the maximum duration. In addition, the women candidates may be provided Maternity Leave/Child Care Leave once in the entire duration of MPhil /PhD for up to 240 days.

### **4. Admission Procedure:**

**4.1** The eligible candidates as per clause 2 may apply throughout the year for PhD programme. Their application should be accompanied with a research proposal comprising 1000 words and two recommendation letters out of which one must be from the faculty of concerned Department/ Centre of CUHP. Nevertheless, these applications shall be processed / considered for admission on 30 June and 15 December every year.

**4.2.1** Admission to PhD programme shall follow two-stage process:

**4.2.2** The eligible candidates shall be required to qualify entrance test with at least 50% marks. The syllabus of the entrance test shall comprise 100 marks. The syllabus will consist of 50 % research methodology and 50 % subject specific knowledge. The test shall be conducted by the concerned Department/ Centre as notified in advance by the university.

**4.2.3** Admission to PhD programme of study of the candidate who has qualified entrance test shall be made on the basis of merit of the composite score comprising: a) Academic Score, b) Score of the entrance test and c) Score of Personal Interview (PI). To prepare the merit list, a composite score with the following weight-ages shall be calculated as under:

- a) **Academic Score: 40 %** (25% of percentage of marks obtained in PG examination, 15% of marks obtained in UG examination)
- b) **Entrance Test: 30%** of total marks scored in entrance test
- c) **Personal Interview: 30%** of total scored in PI

#### **4.3**

- a) Entrance test shall comprise 100 marks with 30% weight-age in the composite score
- b) Personal Interview (PI) shall consist of 100 marks with 30% weight-age in the composite score.

**4.4 The Personal Interview Committee shall be constituted as follows:**

- a) Head of the Department/ Director of the Centre
- b) All eligible research supervisors from the Department
- c) Representatives for different social categories wherever applicable

### **5. Enrollment and Registration for PhD:**

**5.1** After admission to the PhD programme, the candidate shall apply for enrollment on a prescribed pro forma as per **ANNEXURE I**. Further, s/he will be registered only from the date s/he completes the course work satisfactorily. The Controller of Examinations (CoE) shall notify the enrollment of the PhD scholar after admission, and registration after the successful completion of the course work upon the recommendation of the Head/ Director of the concerned Department/ Centre that the candidate has successfully/ satisfactorily completed the course work. For **ANNEXURE II**, the PhD scholar shall be deemed registered from the date of enrolment.

**5.2** The University shall maintain the list of all the PhD registered students on its website on year-wise basis. The list shall include the name of the registered candidate, topic

of her/his research, name of her/his supervisor/co-supervisor, date of enrolment, and registration.

**6. Allocation of Supervisor & Eligibility Criteria to be a Research Supervisor, Co-Supervisor, Number of PhD scholars Permissible per Supervisor, etc.**

**6.1** Any regular Professor of the University with at least five research publications in refereed journals and any regular Associate/Assistant Professor of the university with a PhD degree and at least two research publications in refereed journals shall be recognized as Research Supervisor. Provided that in areas/disciplines where there is no or only a limited number of refereed journals, the university may relax the above condition for recognition of a person as Research Supervisor with reasons recorded in writing.

**6.2** Only a full time regular teacher of the University shall act as a supervisor. The external supervisors are not allowed. However, Co-supervisor can be allowed in inter-disciplinary areas from other departments of the CUHP or from other related institutions with the approval of the Research Advisory Committee (RAC).

**6.3** The allocation of Research Supervisor for a selected research scholar shall be decided by the Department concerned depending on the number of scholars per Research Supervisor, the available specialization among the supervisors and research interests of the scholars as indicated by them at the time of interview/viva voce.

**6.4** In case of topics which are of inter-disciplinary nature where the Department concerned feels that the expertise in the Department has to be supplemented from outside, the Department may appoint a Research Supervisor from the Department itself, who shall be known as the Research Supervisor, and a Co-Supervisor from outside the Department/ or centre of the university on such terms and conditions as may be specified and agreed upon by the consenting Institutions.

**6.5** A Research Supervisor/Co-supervisor who is a Professor, at any given point of time, cannot guide more than Eight (8) PhD scholars. An Associate Professor as Research Supervisor can guide up to a maximum of six (6) PhD scholars and an Assistant Professor as Research Supervisor can guide up to a maximum of four (4) PhD scholars.

**6.6** In case of relocation of a PhD woman scholar due to marriage or otherwise, the research data shall be allowed to be transferred to the University to which the scholar intends to relocate provided all the other conditions in these regulations are followed in letter and spirit and the research work does not pertain to the project secured by the

parent institution/ supervisor from any funding agency. The scholar will, however, give due credit to the parent guide and the Institution for the part of research already done.

6.7 The superannuated teachers along with those having lien with CUHP will continue to supervise students registered under them.

**7. Course Work: Credit Requirements, Number, Duration, Syllabus, Minimum Standards for Completion, etc.**

7.1 The credits assigned to PhD course work shall be a minimum of 12 and a maximum of 16.

7.2 The successful completion of the course work shall be a prerequisite for pursuing PhD programme. A minimum of four credits shall be assigned to one or more courses on Research Methodology which could cover areas such as quantitative methods, computer applications, research ethics and review of published research in the relevant field, training, field work, etc. Other courses shall be advanced level courses preparing the students for PhD degree.

7.3 All courses prescribed for PhD course work shall be in conformity with the credit hour instructional requirement of CUHP and shall specify content, instructional and assessment methods duly approved by the Board of Studies.

7.4 The Department where the scholar pursues his/ her research shall prescribe the course(s) to him/her based on the recommendations of the Research Advisory Committee, as stipulated under sub-Clause 8.1.

7.5 All candidates admitted to PhD programmes shall be required to complete the course work prescribed by the Department within one semester, but cannot extend beyond two semesters in any case.

7.6 Candidates already holding MPhil degree and admitted to the PhD programme, or those who have already completed the course work in MPhil may be exempted by the Department from the PhD course work. All other candidates admitted to the PhD programme shall be required to complete the PhD course work prescribed by the Department.

7.7 Grades in the course work, including research methodology courses shall be finalized by the Department and the final grades shall be communicated to the Controller of Exams (CoE) who will notify the result.

7.8 A PhD scholar has to obtain a minimum of 55% marks or its equivalent grade as per CUHP in the course work in order to be eligible to continue the programme and write the thesis eventually.

**8. Submission of Synopsis:**

8.1 A PhD scholar shall have to prepare a synopsis in consultation with his/ her supervisor on her/his topic of research. S/he shall have to submit it to the concerned Centre/ Department and defend it before Research Advisory Committee (RAC) within three semesters, or one and a half year. The synopsis has to be approved by the Board of Studies (BoS) and the School Board of the concerned Department/Centre and School respectively.

8.2 A PhD scholar shall get one chance to request for modifications in any part of his/her synopsis to her/his supervisor six months prior to the actual submission of the thesis. On the recommendation of the concerned supervisor, the PhD student shall have to defend the modifications in synopsis before her/his RAC. Modifications in the synopsis have to be approved by the BoS and School Board of the concerned Centre/ Department/School before the thesis is submitted for evaluation.

**9. Monitoring of Research Work by the Research Advisory Committee (RAC)**

For monitoring research work, there shall be a Research Advisory Committee (RAC) for each PhD scholar.

9.1 The Research Advisory Committee (RAC) shall comprise the research supervisor of the PhD student who shall be the convener of the committee, Head of the Department / Director of the Centre who shall be the *ex-officio* chairman, and at least one subject expert nominated by the Head/Director upon the recommendation of the concerned supervisor.

This Committee shall have the following responsibilities:

9.1.1 To review the research proposal and finalize the topic of research;

9.1.2 To guide the research scholar to develop the study design and methodology of research and identify the course(s) that s/he may have to undertake;

9.1.3 To periodically review and assist in the progress of the research work of the research scholar.

9.2 A research scholar shall appear before the Research Advisory Committee (RAC) once in six months to make a presentation of the progress of his/her work for evaluation and

further guidance. The six-monthly progress report shall be submitted by the Research Advisory Committee (RAC) to the Department/ Centre with a copy to the research scholar.

9.3 In case the progress of the research scholar is unsatisfactory in three consecutive progress reports, the RAC shall record in writing and suggest corrective measures. If the research scholar fails to implement these corrective measures, the Research Advisory Committee may recommend to the Board of Studies (BoS) with specific reasons for cancellation of registration.

#### 10. Removal of Name of a PhD Student from the Rolls of the University:

10.1 The name of a PhD scholar shall automatically stand removed from the rolls of the university if s/he:

- a) does not clear the course work within first two semesters of the admission to PhD programme.
- b) does not submit the thesis within the maximum permissible period of time.
- c) does not pay university fees and other dues in time.
- d) indulges in any behaviour/ conduct that violates university rules / discipline leading to punishment, or removal of the name from the rolls of the university as per relevant Ordinances / Regulations of the university.
- e) breaches the provisions of this Ordinance or any other relevant Ordinances/Rules of the University, or on account of her/his unsatisfactory progress.

10.2 Till such time that a candidate admitted to PhD programme completes the minimum specified period of time for completing her/his PhD as prescribed in clause 3.1 above, no candidate shall:

- i) take up any employment.
- ii) avail two fellowships at a time.
- iii) join any other degree programme except part-time certificate, or diploma offered by CUHP.

**iv)** appear in any other examination of a course other than those prescribed by Department / Centre concerned without the prior permission of the Head/ Director respectively.

**10.3** If a candidate admitted to a PhD programme has completed her/his course work, and whose synopsis has been duly approved by the BoS, may undertake employment. In that case, s/he shall be treated as a part-time PhD student, and will conduct herself/himself as per clause 18.

**10.4** In case a candidate is removed from the rolls of the University as per clause 10.1 above, the name of the candidate along with her/his registration number shall be placed before the Board of Studies and the School Board for information.

**10.5** The Vice Chancellor on the recommendation of Research Advisory Committee (RAC) may, however, subsequently accept the request of a candidate whose name has been removed from the rolls of the University under Clause 10.1(c) above, to get re-enrolled and become eligible for submission of her/his thesis by paying fee as prescribed by the University from time to time, provided that s/he submits her/his thesis as per clause 3.1.

#### **11. Modification of the Title of the Thesis/Research:**

**11.1** If there is a need for modification of the title of thesis/ research, the candidate shall submit an application to Research Advisory Committee (RAC) through supervisor at least four months before the date of submission of the thesis for approval. The same must be gotten ratified in the BoS and School Board.

#### **12. Change of Supervisor:**

**12.1** A candidate confirmed for PhD program shall be allowed to change her/his supervisor in case:

- (i)** the supervisor is not in a position to guide the candidate due to his personal reasons/problems.
- ii)** there is some drastic change in the field of research.
- (iii)** the supervisor leaves the University, or ends her/his association with the University.
- (iv)** there is incompatibility due to temperamental, or inter-personal issues
- v)** of an eventuality like death.



**12.2** Under the circumstances described above, a research scholar can make a written request listing the reasons for change of supervisor to the Head of the Department.

**12.3** The Head of the Department/ Director of a Centre shall place such request before the Board of Studies in its next meeting and if Board of Studies is satisfied with the reasons stated by the candidate for change of supervisor, a new supervisor shall be allotted to the research scholar after obtaining mutual consent of the scholar and supervisor to be.

### **13. Submission of Thesis:**

**13.1** A PhD scholar shall be permitted to submit her/his PhD thesis for evaluation subject to the condition that s/he has

- a) completed course work successfully and satisfactorily.
- b) completed three years period after enrollment.
- c) published 2 papers in refereed journals and made two presentations in seminars/ conferences.
- d) made pre-PhD submission before the RAC in a seminar open for all.
- e) produced certificate to the effect that the research work is original and has not been plagiarized.
- f) fulfilled any other condition required for the evaluation of the thesis.

**13.2** After fulfilling all the above conditions as per Clause 13.1 above, the candidate shall be permitted to submit the thesis. The thesis shall contain a detailed account of research work carried out by the candidate and should constitute a significant contribution to knowledge characterized either by discovery of new facts or re-interpretation of known facts, or development of new techniques/methodologies/ models.

**13.3** The first page of the thesis shall be as per ANNEXURE – III.

**13.4** The thesis shall also contain a certificate as per ANNEXURE - IV to the effect that the thesis incorporates the results of investigations carried out by the candidate herself / himself and that the results are not submitted earlier to any other institution / university for the award of any degree.

**13.5** There shall also have to be an undertaking from the research scholar and a certificate from the Research Supervisor attesting to the originality of the work, vouching that there is no plagiarism as per ANNEXURE V. This certificate shall be signed by the candidate as well as the supervisor(s).

**13.6** The candidate shall also be required to submit a "No Dues Certificate" from concerned offices of the University prior to the submission of his/her thesis.

**13.7** The candidate shall be required to submit five hard copies of the thesis and its soft copy on four CDs along with four copies of the approved synopsis and the summary of the research work not exceeding 5000 words to the Controller of Examination through the supervisor and the Head of the Department / Director of the Centre.

**13.8** The thesis shall be written in Hindi or English. However, when the subject matter relates to or is based on a language other than Hindi or English, it may be written in the relevant language.

#### **14. Appointment of Examiners for the Evaluation of the Thesis:**

(a) Once a candidate has submitted the thesis for the award of PhD, the supervisor concerned shall prepare a panel of nine external examiners not below the level of Associate Professor who are not in the service of the University and/or not Members of the Board of Studies of Department/Centre concerned or the concerned School Board for the evaluation of the thesis, and submit the panel through the Head of the Department / Director of the Centre concerned to the Vice-Chancellor.

(b) The Vice-Chancellor shall, from the panel so submitted, appoint two examiners to evaluate the thesis. Provided that, if the Vice-Chancellor is not satisfied with the Panel submitted to her/him, she/he may refer the Panel back through the Head/Director asking for a fresh panel of external examiners. Provided further that the Vice-Chancellor, while appointing the examiners for the evaluation of the thesis shall also indicate as to who of the two examiners shall conduct the viva voce in case the examiners recommend that the thesis be accepted for the award of PhD degree and viva voce be conducted.

#### **15. Evaluation of the Thesis:**

**15.1** The PhD thesis submitted by a research scholar shall be evaluated by her/his Research Supervisor and two external examiners, who are not in employment of the CUHP. The viva-voce examination, based among other things, on the critiques given in the evaluation report, shall be conducted by the Viva voce Board consisting of Head/director of department/ Centre, Research Supervisor and at least one of the two external examiners, and shall be open to be attended by Members of the Research Advisory Committee (RAC), all faculty members of the Department, other research scholars and other interested experts/researchers.

**15.2** The public viva-voce of the research scholar to defend the thesis shall be conducted only if the evaluation report(s) of the external examiner(s) on the thesis are satisfactory and include a specific recommendation for conducting the viva-voce examination. If one of the evaluation reports of the external examiner in case of PhD thesis is unsatisfactory and does not recommend viva-voce, the university shall send the thesis to another external examiner out of the approved panel of examiners and the viva-voce examination shall be held only if the report of the latest examiner is satisfactory. If the report of the latest examiner is also unsatisfactory, the thesis shall be rejected and the research scholar shall be declared ineligible for the award of the degree.

**15.3** The university shall develop appropriate methods so as to complete the entire process of evaluation of PhD thesis within a period of six months from the date of submission of thesis.

**15.4** After obtaining the consent of the examiners so appointed by the Vice-Chancellor, the Controller of Examination shall arrange to dispatch the thesis along with the approved synopsis and summary to each examiner for the evaluation of the thesis and submission of their report.

**15.5** Each examiner shall be required to submit a detailed report to the Controller of Examinations containing a clear recommendation whether in her/his opinion: (i) the thesis be accepted for the award of the degree of PhD and viva-voce examination of the candidate be held; or (ii) the thesis be referred back to the candidate for revision; or (iii) the thesis be rejected.

**15.6** The examiner(s) shall not recommend that the thesis be accepted for the award of the degree and viva-voce examination be held unless he/she is satisfied that the thesis constitutes a contribution to knowledge characterized either by the discovery of new facts or by re-interpretation of known facts or development of new techniques / methodologies / models and that the methodologies pursued by the candidate are sound and its literary presentation is satisfactory.

**15.7** In case an examiner recommends that the thesis be referred back to candidate for revision, he/she shall be required to give in his detailed report the reasons for such a recommendation and also clearly delineate the details of the revision that is required to be made by the candidate in the thesis.

**15.8** In case an examiner recommends that the thesis should be rejected, he/she shall be required to give detailed reasons in her/his report justifying the recommendation.

**16. Viva-Voce Examination:**

(a) The Controller of Examinations shall forward the reports of the examiners of a thesis to the Head of the Department/ Director of Centre concerned for further necessary action.

(b) Head of the Department, after the receipt of the detailed reports and recommendations of both the examiners that the thesis be accepted for the award of the degree and viva-voce examination be held shall forward these reports to the supervisor who shall in consultation with the Head of the Department arrange to hold the Viva voce examination under intimation through Head to the Dean of the concerned School.

(c) In case the examiners of the thesis have not unanimously recommended that the thesis be accepted for the award of the degree and the holding of the viva-voce examination, the Head of the Department/ Director of Centre concerned shall be required to act as under:

(i) In case an examiner has recommended that the thesis be referred back to the candidate for revision, the candidate shall be required to submit the revised thesis within a period of one year and that the revised thesis shall be sent for evaluation to the same examiner who had recommended for the revision. If upon revision, the examiner recommends that the thesis be accepted for the award of the degree and viva voce examination be held, the Head of the Department / Director of the Centre shall arrange to hold the Viva voce of the candidate under intimation to the Dean.

(ii) In case the examiner after evaluation of the revised thesis recommends either that the thesis be further revised or be rejected, the Head of the Department / Director of the Centre shall recommend to the Vice-Chancellor that a third examiner be appointed out of the panel of experts as originally submitted to him/her for the evaluation of the thesis and that the Dean shall act in accordance with the recommendation of the third examiner.

(iii) In case an examiner has recommended that the thesis be rejected, the

Head/Director of the Department/ Centre shall recommend to the Vice-Chancellor that a third examiner be appointed out of the panel of experts as originally submitted to her/him for the evaluation of the thesis and that the Head/ Director of the Department/ Centre shall act in accordance with the recommendation of the third examiner.

(iv) No thesis shall earn a degree unless two external examiners have recommended that the thesis be accepted for the award of the degree and viva voce be held.

(d) The viva-voce of the candidate shall be conducted by a Viva voce Board consisting of (i) the external examiner of the thesis, as appointed by the Vice-Chancellor to conduct the Viva voce; (ii) the Head of the Department / Director of the Centre and (iii) the Supervisor(s) concerned. The Viva voce examination shall be conducted under the supervision of the Head of the Department/ Director of the Centre.

(e) The viva voce shall be open to all members of the Faculty and Research Scholars of the University.

(f) The viva voce shall ordinarily be held on the University Campus. However, the Vice-Chancellor may, in exceptional circumstances and on the recommendation of the Head of the Department / Director of the Centre of the School concerned, allow the viva voce examination of a candidate to be held at a centre of higher learning outside the University Campus.

(g) The viva voce Board having satisfied itself that the thesis submitted by the candidate is his/her own work and that the candidate has defended his/her thesis satisfactorily, shall recommend for the award of the degree of PhD to the candidate. In case of any difference of opinion in this regard, the decision of the external examiner shall be considered final.

(h) The recommendation of the viva voce Board together with all other relevant documents shall be forwarded by the Head/ Director to the Controller of Examinations (COE) for submission and approval of the Vice-Chancellor for the issue of the notification and the award of provisional certificate and further approval of AC for the award of the degree.

#### **17. Award of PhD Degrees Prior to Notification of These Regulations, or Degrees Awarded by Foreign Universities:**

**17.1** Award of degrees to candidates registered for the PhD programme on or after July 11, 2009 till the date of notification of these Regulations shall be governed by the provisions of

the UGC (Minimum Standards and procedure for Awards of MPhil/ PhD Degree) Regulation, 2016.

17.2 If the MPhil/ PhD degree is awarded by a foreign university, the issue shall be placed before Standing Committee on Equivalence of Examinations/ Degree (provided in Ordinance 29) constituted by the University for the purpose of determining the equivalence of the degree awarded by the foreign university.

#### 18. Part-time PhD:

The CUHP shall allow part-time PhD provided the candidate:

- a) fulfills minimum eligibility criterion to seek admission to PhD programme as per clause/s 2.1 to 2.6.
- b) has completed two years of regular service in any university including CUHP/ institution/ college/ government department/ public sector undertaking / R & D organization/ private industry.
- c) completes the course work on regular basis as per clause 7.5.
- d) fulfills all other conditions as per clause 9 and other relevant clauses.

#### 19. Depository with INFLIBNET:

19.1 Following the successful completion of the evaluation process and before the announcement of the award of the PhD degree, the university shall submit an electronic copy of the PhD thesis to the INFLIBNET, for hosting the same so as to make it accessible to all institutions/colleges.

18.2 Prior to the actual award of the degree, the University shall issue a provisional certificate to the effect that the Degree has been awarded in accordance with the provisions of the UGC Regulations, 2016.

(Application form for enrolment as a candidate for the degree of Doctor of Philosophy)

Note: The applicant must carefully read the Regulations/Rules and Instructions before filling up this form. Please fill in all the columns and clearly indicate 'NOT APPLICABLE' wherever not relevant.

1. Department: .....

2. School: .....

3. (i) Name (IN BLOCK LETTERS):  
Mr./Ms. ....

(ii) (a) Father's Name : Shri .....  
(b) Mother's Name: Smt. ....

4. Date of birth .....

5. (i) Permanent House Address :  
.....

(ii) Local Address: .....  
.....

.....Tel. No. ....Mobile .....

Fax No. ....E-mail Address .....

6. Particulars about Master's Degree (Please also state whether it is M.A./M.Sc./M.Com./M.Ed./M.Phil., etc)

(i) Year..... (ii) University .....

(iii) Division ..... Percentage of Marks obtained .....

(iv) Subject ..... (v) Registration Number .....

7. Department of the University/approved Centre where research work will be carried out  
.....

(in case of approved Centre, permission of Head of the Centre be enclosed)

8. Fees of Rs. .... remitted vide SBI Receipt No. D.D. No. ....

Dated ..... Post Office/Bank .....

9. Whether receiving any scholarship/fellowship?  
.....

If yes, its nature, amount, tenure and source .....

10. Whether employed ?  
.....

If yes, name and address of the Institution/Organisation.....  
(NOC from the employer be enclosed) .....

.....Tel. No. ....

Post held .....since .....Permanent/temporary/ad hoc.....

DECLARATION

I declare that I shall abide by the regulations, rules and instructions for the degree of Doctor of Philosophy of Central University of Himachal Pradesh which I have read.

Date .....

.....  
(Signature of Applicant)

CONSENT OF THE PROPOSED SUPERVISOR(S)

1. \_\_\_\_\_ 2. \_\_\_\_\_

Date .....

Signatures of the proposed Supervisor(s)

With complete address, Phone Number etc.

ANNEXURE II

CENTRAL UNIVERSITY OF HIMACHAL PRADESH

(Application form for Registration as a candidate for the degree of Doctor of Philosophy, PhD)

- (i) Name (IN BLOCK LETTERS): Mr./Ms.....
- (a) Father's Name : .....
- (b) Mother's Name: .....
- (c) Registration Number .....
- (ii) Permanent Address : .....
- .....
- e-mail : ..... Phone No. ....
- (iii) Present Address for Correspondence Address : .....
- .....
- .....Tel. No. ....Mobile .....
- Email : .....Phone No. ....
- (iv) Department of the University/Approved Centre where research work will be carried out by the candidate.....
- (v) Name of the Department/Centre of Central University of Himachal Pradesh.....
- (vi) School .....
- (vii) Date of enrolment for PhD.....Enrolment No.....
- (viii) Tentative title of thesis/broad area of work: .....
- .....
- .....

I am appending herewith the attested copy of the result card to the effect that I have satisfactorily completed PhD course work.

Date .....

.....  
(Signature of Applicant)



**ANNEXURE – III**

-----  
-----  
-----

**(Title of the Thesis)**

A thesis

submitted to the Central University of Himachal Pradesh

for the Partial Fulfilment of the Degree of

**DOCTOR OF PHILOSOPHY**

In the School of -----

In the Department of \_\_\_\_\_

**EMBLEM**

Under the Supervision (s) of \_\_\_\_\_

(by)

-----  
(Name of the Candidate)

Month & Year

**CENTRAL UNIVERSITY OF HIMACHAL PRADESH**

**ANNEXURE - IV**

Dated:

\_\_\_\_\_ (Department)

\_\_\_\_\_ (School)

Central University of Himachal Pradesh, Dharamshala

[Established under the Central Universities Act 2009]

PO Box 21, Dharamshala, District Kangra,

**Himachal Pradesh [India] – 176215**

This to certify that I \_\_\_\_\_ have carried out the

research embodied in the present thesis for the full period prescribed under PhD ordinances of the University.

I declare to the best of my knowledge that no part of this thesis was earlier submitted for the award of research degree of any university.

**(SIGNATURE OF THE CANDIDATE)**

**Name:**

**Enrolment No.**

**(SIGNATURE OF THE SUPERVISOR HEAD OF THE DEPARTMENT)**

**ANNEXURE – V**

**UNDERTAKING**

**Dated:**

\_\_\_\_\_ (Department)

\_\_\_\_\_ (School)

Central University of Himachal Pradesh, Dharamshala  
[Established under the Central Universities Act 2009]  
PO Box 21, Dharamshala, District Kangra,  
Himachal Pradesh [India] – 176215

I, [name of the candidate], hereby undertake that I have carried out the research embodied in

the present thesis and that the work is original and without plagiarism. In case any such evidence is found my degree shall be liable to be cancelled by the university.

**(SIGNATURE OF THE CANDIDATE)**

**Name:**

**Enrolment No.**

This is to certify that the above claim is correct to the best of my knowledge.

**(SIGNATURE OF THE SUPERVISOR)**

**Time-Table for (B. Sc., M. Sc.) Spring Semester, 2017 (w.e.f. 27/02/2017)**  
**Department of Physics and Astronomical Science (CUHP)**

Day	Semester	8:30-9:25	9:30-10:25	10:30-11:25	11:30-12:25	12:30-1:25	1:30-2:25	2:30-3:25	3:30-4:25	4:30-5:25	
Monday	B.Sc. II	Mentoring (all faculty) CR11, L1,2	CCS102L Chem. Lab, SC	CCS102 CR11, DSR	Lunch	PAS104	Lunch	PAS124			
	M.Sc. II					CR11, JK		CR11, SM			
	B.Sc. IV					PAS415 L2, DSV	Lunch	PAS407A L2, AC	Mentoring Session		
	M.Sc. IV										
PAS351, OSKS, BCC, PR, RKS+Mentoring											
Tuesday	B.Sc. II	PAS103L L1, PR, Shwani			Lunch	PAS104 L1, JK	PAS124 L1, SM	PAS524 L1, BCC	PAS552 CR-11, JK	PAS520/PAS548 CR11, L1, 2, All Faculty	
	M.Sc. II	PAS414 L2 BCC+OSKS+JB		PAS406A CR11, SV	PAS507 CR11, SM	Lunch	PAS417A CR11, BCC	PAS407A CR-11, AC			
	B.Sc. IV				PAS202 L1, AC	PAS301 CR11, SV	Lunch	PAS206 CR11, RKS		PAS301L L1, SV, SM	
	M.Sc. IV				PAS428A L2, OSKS	PAS527 L2, DSV	PAS428A L2, OSKS	Lunch	PAS552 CR11, JK	PAS520/PAS548 CR11, L1&L2, All Faculty	
Wednesday	B.Sc. II	PAS104L L1, JK+JB		CCS102 CR11, DSR	Lunch	PAS104 L1, JK	PAS103 L1, PR	ENV121 L1, AT			
	M.Sc. II		PAS415 L2, DSV		PAS405 CR11, DSV	Lunch	PAS417A CR11, BCC				
	B.Sc. IV		PAS301 CR11, SV	PAS202 CR11, AC	PAS206 CR11, RKS	Lunch	PAS301L L2, SV		PAS552 CR11, JK	PAS520/PAS548 CR11, L1&L2, All Faculty	
	M.Sc. IV				PAS428A L2, OSKS	PAS527 CR11, DSV	Lunch	Mentoring Session CR11			
Thursday	B.Sc. II	PAS104L L1, JK+JB		CCS102 CR11 DSR	Lunch	PAS104 L1, JK	PAS103 L1, PR	ENV121 L1, AT			
	M.Sc. II		PAS406A L2, SV	PAS414 L2, BCC+OSKS+JB	PAS202L L2, AC	Lunch	PAS427A JB, L2				
	B.Sc. IV		PAS206 CR-11, RKS	PAS202 CR11, AC	PAS428A CR11, OSKS	Lunch	PAS527 CR11, DSV	PAS301 CR11, SV	PAS427 L2, OSKS	PAS206L L1, RKS, DSV	
	M.Sc. IV									PAS520/PAS548 CR11, L2, All Faculty	
Friday	B.Sc. II		PAS103L L1, PR, Shwani		Lunch	CCS102L tut. L2, DSR	CCS102 L1, DSR	PAS427 L2, OSKS			
	M.Sc. II		PAS407A CR11, AC	PAS405 CR11, DSV	Lunch	PAS406A L1, SV	PAS427A JB, L2				
	B.Sc. IV			PAS301 L2, SV	PAS206 L2, RKS	Lunch	PAS202 L2, AC			PAS206L L2, RKS, DSV	
	M.Sc. IV				PAS552 CR11, JK	PAS527 CR11, DSV	Lunch	PAS427 L1, OSKS		PAS524 L1 BCC	

AC: Dr. A. Chatterjee, BCC: Dr. B.C. Chaudhary, DSV: Dr. D.S. Verma, JK: Dr. J. Kumar, OSKS: Dr. OSKS Sastri,

PR: Dr. P. Rai, SV: Dr. S. Verma, RKS: Dr. Rajesh Kumar Singh, AT: Dr. Ankit Tandon, DSR: Dilbag Singh Rana, SM: Shagun Manohari, JB: Jyoti Bhardwaj

Time Table Committee: Dr. D.S. Verma & Dr. Jagdish Kumar

*(Signature)*

HOD: Dr. B. Charan

**Time-Table for (B. Sc., M. Sc.) Monsoon Semester, 2017 (w.e.f. 21/08/2017)**  
**Department of Physics and Astronomical Science (CUHP)**

Day	Semester	8:30-9:25	9:30-10:25	10:30-11:25	11:30-12:25	12:30-1:25	1:30-2:25	2:10-3:25	3:10-4:25	4:30-5:25
Monday	B.Sc. I	PAS101 (AC) (CR-8)	PAS102 (SV) (CR-8)	EE110 (CR-8)	Lunch					
	M.Sc. I	PAS404 (BS) (CR-11)	PAS102 (SN) (CR-11)	PAS103A (AC) (CR-11)	PAS401A (SV) (CR-11)	Lunch	PAS412 (EM) (AC+SV) (CR-11)			
	B.Sc. III		PAS200 (DN) (CR-7)	PAS204 (FR) (CR-7)	Lunch		PAS201 (RKS+) (Lab-2)			
	B.Sc. V				PAS107 (DK) (CR-8)	PAS314 (SM) (CR-8)		PAS204 (FR+MS) (Lab-2)		PAS109 (SV) (CR-11)
	M.Sc. III				PAS126 (BCC) (CR-7)	PAS304 (PR+) (CR-7)	Lunch	PAS108A (MS) (CR-11)		PAS116 (MS) (CR-11)
Tuesday	B.Sc. I	PAS101 (AC) (CR-8)	PAS102 (SV) (CR-8)	EE110 (CR-8)	Lunch					
	M.Sc. I	PAS402 (SS) (CR-11)	PAS404A (FB) (CR-11)	PAS403A (AC) (CR-11)	PAS401A (SV) (CR-11)	Lunch	PAS101 (DUC) (AC+SN) (CR-7)			
	B.Sc. III	PAS201 (TR) (BS+8) (CR-7)	PAS200 (DK) (CR-7)	PAS204 (FR) (CR-7)	Lunch		PAS417A (BCC) (CR-11)			
	B.Sc. V				PAS107 (DK) (CR-7)	PAS352 (PR+OSNS) (Lab-1)		PAS352 (PR+OSNS) (Lab-1)		PAS201 (RNS) (CR-11)
	M.Sc. III				PAS426 (BCC) (CR-8)	PAS108A (MS) (CR-8)	Lunch	PAS303 (SM) (Lab-1)		PAS408A (MS) (CR-8)
Wednesday	B.Sc. I	EE110 (CR-8)	EN121 (CR-8)	OS101 (SC) (CR-8)	Lunch					
	M.Sc. I		PAS413 (AC+SV) (Lab-2)		PAS101A (SV) (CR-11)	Lunch	PAS204 (TR) (PR+SM) (CR-11)		PAS101 (AC+SN) (Lab-3)	
	B.Sc. III	PAS204 (FR) (CR-7)	PAS200 (DK) (CR-7)	PAS201 (RKS) (CR-7)	Lunch		PAS101A (BCC) (CR-11)		PAS417A (BCC) (CR-11)	
	B.Sc. V				PAS107 (DK) (CR-7)	PAS316 (MS) (CR-7)		PAS352 (PR+OSNS) (Lab-1)		PAS352 (PR+OSNS) (Lab-1)
	M.Sc. III							PAS126 (BCC) (Lab-2)		PAS109 (SV) (CR-8)
Thursday	B.Sc. I	PAS101 (AC) (CR-8)	PAS102 (SV) (CR-8)	OS101L (Tur) (SC) (CR-8)	Lunch					
	M.Sc. I		PAS104A (FB) (CR-11)	PAS403A (AC) (CR-11)	PAS101A (SV) (CR-11)	Lunch	PAS316 (MS) (CR-7)		PAS102L (SV+PR) (Lab-1)	
	B.Sc. III	PAS203 (DK) (CR-7)	PAS204 (PR) (CR-7)	PAS201 (RKS) (CR-7)	Lunch					
	B.Sc. V				PAS107 (DK) (CR-8)	PAS316 (MS) (CR-8)		PAS102L (SV+PR) (Lab-2)		PAS109 (SV) (CR-8)
	M.Sc. III				PAS126 (BCC) (CR-7)	PAS304 (PR+SM) (CR-7)	Lunch	PAS108A (MS) (CR-11)		PAS111A (SN) (CR-8)
Friday	B.Sc. I	PAS101 (AC) (CR-8)	PAS102 (SV) (CR-8)	OS101 (SC) (CR-8)	Lunch					
	M.Sc. I		PAS404A (FB) (CR-11)	PAS403A (AC) (CR-11)		Lunch				
	B.Sc. III	SKT201 (CR-7)	SKT201 (CR-7)	PAS201 (RKS) (CR-7)						
	B.Sc. V				PAS107 (DK) (CR-8)	PAS316 (MS) (CR-8)		PAS102L (SV+PR) (Lab-1)		PAS109 (SV) (CR-8)
	M.Sc. III				PAS126 (BCC) (CR-7)	PAS304 (PR+SM) (CR-7)	Lunch	PAS108A (MS) (CR-11)		PAS111A (SN) (CR-8)

ICC: Dr. B.C. Chauhan, OSKS: Dr. OSKS Sastri, AC: Dr. Ayan Chatterjee, SV: Dr. Surender Verma, DSV: Dr. D. S. Verma, JK: Dr. Jagdish Kumar, PR: Dr. Padannath Rai, RKS: Dr. R. K. Singh, JB: Dr. Jyoti Haridwaj, SM: Dr. Sagnan Mankotia, MS: Dr. Manjula Sharma, SK: Dr. Sonu Kumar

**Time table committee**  
 1. Dr. Dalip Singh Verma      2. Dr. Jagdish Kumar

**HOD**  
 Department of Physics and Astronomical Science

August - 2017 - December 2017

# Central University of Himachal Pradesh

## Department of Physics & Astronomical Science

भौतिक एवं खगोल विज्ञान विभाग की दसवीं बोर्ड ऑफ स्टडीज (BOS) बैठक के मिनट

बैठक का तरीका : Online Circulation (ई-मेल के माध्यम से)

बोर्ड ऑफ स्टडीज के सदस्यों ने एजेंडा मदे पर विचार-विमर्श किया और निम्नलिखित निर्णय लिए गए:

**मद PAS-BOS-10.1:** भौतिक एवं खगोल विज्ञान विभाग के शोध छात्र श्री० तपेंदर के सह-पर्यवेक्षक प्रो० ओ० एस० के० एस० शास्त्री के स्थान पर प्रो० भाग चन्द चौहान को रखने के प्रस्ताव को अनुमोदित किया गया (अनुलग्नक - 1) ।

**मद PAS-BOS-10.2.:** भौतिक एवं खगोल विज्ञान विभाग के एम० एस० सी० में पढाये जाने वाले NPTEL पाठ्यक्रमों की सूची में नये पाठ्यक्रमों (Core Open) को अनुमोदित किया गया ।

NPTEL			
क्र सं	कोर्स कोड	कोर्स नाम	क्रेडिट
1.	PAS 436	Fundamentals of Electronic Materials & Devices	2

बैठक चेर के लिए धन्यवाद के साथ समाप्त हुई ।

हस्ताक्षर:

- 1. Prof. B. C. Chauhan**  
Chairman and Convener, BOS  
Dean and Head  
Department of Physics and Astronomical Science, CUHP
- 2. Prof. Raja Ram Yadav**  
External Member  
Vice Chancellor  
Veer Bahadur Singh Purvanchal University, Jaunpur
- 3. Prof. Nagesh Thakur**  
Expert Member  
Department of Physics  
H. P. University, Shimla
- 4. Prof. O. S. K. S. Sastri**  
Member  
Department of Physics and Astronomical Science, CUHP

5. **Prof. RoshanLal Sharma**  
Dean  
School of Humanities and Languages, CUHP
  
6. **Dr. Bhagwan Singh**  
Head  
Department of Marketing and Supply Chain Management, CUHP
  
7. **Dr. Surender Verma**  
Member  
Department of Physics and Astronomical Science, CUHP



भौतिक एवं खगोल विज्ञान विभाग कि दसवीं बोर्ड ऑफ स्टडीज (BoS) बैठक के मिनट

दिनांक 15/05/2024

बोर्ड ऑफ स्टडीज के सदस्यों को एलिस भवन पर गिन्यास/विद्यार्थी किया और निम्नलिखित निर्णय लिए गए

मद PAS-BOS-10.1 : भौतिक एवं खगोल विज्ञान विभाग के शोध छात्र श्री. तर्पटर के सह-पर्यवेक्षक प्रो. ओ. एस. के. एस. शास्त्री के स्थान पर प्रो. भाग चंद चौहान को रखने के प्रस्ताव को अनुमोदित किया गया।

मद PAS-BOS-10.2 : भौतिक एवं खगोल विज्ञान विभाग के एम. एस. सी. में पढाये जाने वाले NPTEL पाठ्यक्रमों की सूची में नये पाठ्यक्रमों (Core Open) को अनुमोदित किया गया।

NPTEL			
क्र.सं.	कोर्स कोड	कोर्स नाम	क्रेडिट
1.	PAS 436	Fundamentals of Electronic Materials & Devices	2

विमर्श अध्यक्ष महोदय द्वारा सभी सदस्यों को धन्यवाद के साथ पूरा हुआ।

*Prakash*

To

The Head of Department

Physics and Astronomical Science

Subject: Application for the change of Co-Supervisor

Respected Sir,

I am the Research Scholar of department of Physics and Astronomical Science. I have given my pre-submission seminar on 22<sup>nd</sup> Nov, 2018 and title of presentation is: "Simulation Study of Ballistic Electronic Transport and Light Emission by CNT Field Effect Transistor using Non-Equilibrium Green's Function Method". I have already written my Thesis and submitted to my supervisor for the scientific and technical corrections. Due to some communication reasons, I am not able to continue the work under guidance of my co-supervisor Prof. O.S.K.S. Sastri. Recommendation of my supervisor Dr. Padmnabh Rai (e-mail) is attached along with this application.

It's my humble request to change my co-supervisor, and please assign Prof. B.C. Chauhan as my new co-supervisor for the administrative work. I will be very thankful to you for this act of kindness.

Thanking You,

Tapender Singh  
Tapender Singh

Guhp14rdphy06

Prof. O.S.K.S. Sastri

Please give your comments  
on the issue.

Padmnabh Rai  
7/6/2019

Prof. O.S.K.S. Sastri

Please forward and do the needful as per the rules.  
I have already sent you all the email communications  
from my side.

Bhassan  
10/06/19

Adarsh

Gmail

Tapender Singh <tpndrsingh@gmail.com>

Regarding progress of Tapender's thesis

Padmnabh Rai <padmnabhrai@gmail.com>

To: Sastri Osks <sastri.osks@gmail.com>

Cc: Tapender Singh <tpndrsingh@gmail.com>, "B. C. Chauhan" <bcavake@gmail.com>

Tue, Jun 4, 2013 at 11:16 AM

Dear Sir,

Thanks for your email.

Currently, I am travelling for some departmental and my personal issues. Therefore, I was unable to respond you promptly.

I am always open for comments/suggestions by you/others.

I am sincerely thankful to you for your valuable time and comments on the thesis of Mr. Tapender Singh.

At present, it seems difficult to continue our collaboration. Therefore, I request to Paan and Head of Physics to take this thesis submission in his co-supervision as an admit responsibility. Mr. Tapender has already given his consent for the same.

Kindly let me know if you require any further clarification from my side.

With Regards,  
P. Rai

Sent from my iPhone  
[Quoted text hidden]

To: Deepika Karki <deepikakarkicuhp@gmail.com>

Prof (Dr.) B. C. CHAUHAN

DEAN

School of Physical & Material Sciences

School of Mathematics, Computer & Information Sciences

&

HEAD

Department of Physics & Astronomical Science

Department of Mathematics

Department of Computer Science & Informatics

Department of Library & Information Science

Central University of Himachal Pradesh (CUHP)

Dharamshala, Distt. Kangra

Himachal Pradesh (INDIA)-176215

Ph.: +919418472694 (m), +911892 237285 (o)

Provost, CUHP

Hony. Director, Community Development Coll

Hony. Director, Computer Centre

Nodal Officer, Swachh Bharat Abhiyan

Nodal Officer, Ek Bharat Shreshth Bharat

Nodal Officer, Int. Yoga Day Celebration

Project Investigator, UBA

Planning & Development Officer

Chairman, Yogdhara Club

Visiting Associate, IUCAA, Pune

----- Forwarded message -----

From: Padmnabh Rai <padmnabhrail@gmail.com>

Date: Tue, Jun 4, 2019 at 11:19 AM

Subject: Re: Regarding progress of Tapender's thesis

To: Sastri Osks <sastri.osks@gmail.com>

Cc: Tapender Singh <tpndrsingh@gmail.com>, B. C. Chauhan <bcawake@gmail.com>

Dear Sir,

Thanks for your email.

Currently, I am travelling for some departmental and my personal issues. Therefore, I was unable to respond you promptly.

I am always open for comments/suggestions by you/others.

I am sincerely thankful to you for your valuable time and comments on the thesis of Mr. Tapender Singh.

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Kindly let me know if you require any further clarification from my side.

With Regards,

P. Rai



Chairman, IUCAA Prastant, CUHP  
Chairman, Physics Society, CUHP  
Founder Dean (Former), School of Physical and Material Sciences  
Founder Head (Former), Department of Physics and Astronomical Sciences,  
Central University of Himachal Pradesh  
TAB, Shahpur,  
Kangra, H.P. - 176208  
Phone no: 9418030901

Bhag Chauhan <bcawake@gmail.com>  
To: Deepika Karki <deepikakarkicuhp@gmail.com>

Thu, Oct 3, 2019 at 2:23 PM

Prof (Dr.) B. C. CHAUHAN  
DEAN  
School of Physical & Material Sciences  
School of Mathematics, Computer & Information Sciences  
&  
HEAD  
Department of Physics & Astronomical Science  
Department of Mathematics  
Department of Computer Science & Informatics  
Department of Library & Information Science  
Central University of Himachal Pradesh (CUHP)  
Dharamshala, Distt. Kangra  
Himachal Pradesh (INDIA)-176215  
Ph.: +919418472694 (m), +911892 237285 (o)  
Provost, CUHP  
Hony. Director, Community Development Cell  
Hony. Director, Computer Centre  
Nodal Officer, Swachh Bharat Abhiyan  
Nodal Officer, Ek Bharat Shreshth Bharat  
Nodal Officer, Int. Yoga Day Celebration  
Project Investigator, UBA  
Planning & Development Officer  
Chairman, Yogdhara Club  
  
Visiting Associate, IUCAA, Pune

[Quoted text hidden]

Thu, Oct 3, 2019 at 2:23 PM

Bhag Chauhan <bcawake@gmail.com>  
To: Deepika Karki <deepikakarkicuhp@gmail.com>

Prof (Dr.) B. C. CHAUHAN  
DEAN  
School of Physical & Material Sciences  
School of Mathematics, Computer & Information Sciences  
&  
HEAD  
Department of Physics & Astronomical Science  
Department of Mathematics  
Department of Computer Science & Informatics  
Department of Library & Information Science  
Central University of Himachal Pradesh (CUHP)  
Dharamshala, Distt. Kangra  
Himachal Pradesh (INDIA)-176215  
Ph.: +919418472694 (m), +911892 237285 (o)

I wish to make myself clear. I have given in writing that I would act as cosupervisor to complete the administrative work and help in thesis. I never claimed for authorship in publications or wanted to take any credit for the work done under your guidance. You insisted on having my name as part of authorship.

I only asked for the code to get better clarity to help you write the thesis and papers. I am surprised that you are not willing to share the code with me. He could have simply said that you were keen on patenting and that is fine with me. When I was not keen to have my name on any publication without my contribution, why would I need a patent.

I have written strongly since he didn't see me for a month and I have applied for sabbatical leave and I wanted to create some pressure to complete the thesis before I go, to avoid delays.

I tried calling you but you didn't respond. I thought you were busy and would call me back.

Came to know through HoD you have some reservations.

Please let me know.

I always thought I was very helpful and supportive of both of you and am surprised at this reaction.

Hope to hear from you

Thanks

With love

Sastri

On Fri, May 31, 2019, 8:16 AM Sastri Oskas <sastri.oskas@gmail.com> wrote:

Dear Dr Padmnabh

i was very happy when you said you wanted to visit us to speed up the completion of Tapender's thesis by spending about 10-15 days in CUHP. i would like to bring to your notice that Tapender did not meet me for the whole of this month for any discussions.

I had been giving top priority to his thesis and paper submission and spent lots of my time to get his introductory chapters ready on which he could have easily built the rest of the thesis and also in training how to bring clarity and correctness to the paper we have been working on, but unfortunately i do not see similar enthusiastic response from his end.

I have requested him to share the code written for simulation of CNTFET so that i could better understand the process and he just disappeared by saying that his system has crashed and did not see me till date.

i have come to know through you, during your discussion in the recent visit, that code could be patented. i do not know if this is the reason for not sharing the code with me.

But yet it is required that one should constantly be reporting to the co-supervisor in the absence of the supervisor, which is not happening. I shall not like to take responsibility with this kind of attitude and behaviour.

It is nearly six months and the thesis is no where near completion.

Overall, the lax attitude is responsible for the unsatisfactory progress.

I shall be very busy in June due to my prior commitments and later i might be going on sabbatical leave once it is cleared in the EC.

Hope you understand and try to speed up the completion of the work from your end.

with love

sastri sir

basil al

Nodal Officer, Swachh Bharat Mission  
Nodal Officer, Ek Bharat Shreshth Bharat  
Nodal Officer, Int. Yoga Day Celebration  
Project Investigator, UBA  
Planning & Development Officer  
Chairman, Yogdhara Club

Visiting Associate, IUGAA, Pune

----- Forwarded message -----

From: Sastri Oska <sastri.oska@gmail.com>  
Date: Sun, Jun 9, 2019 at 7:31 AM  
Subject: Fwd: Regarding progress of Tapender's thesis  
To: B. C. Chauhan <bcawake@gmail.com>

Dear Sir

This email is in response to my letter seeking clarification regarding any reservations they have, and not any formal letter to the Head with proper reasoning. I have not mentioned anywhere that I am not going to continue as Co-supervisor and both neither Dr Padmnabh nor Tapender have discussed the issue with me as I have mentioned in my two previous communications. This is for your information please.

with love  
sastri sir

[Quoted text hidden]  
[Quoted text hidden]  
[Quoted text hidden]

[Quoted text hidden]  
[Quoted text hidden]

[Quoted text hidden]

Nodal Officer, Int. Yoga Day Celebration  
Project Investigator, UBA  
Planning & Development Officer  
Chairman, Yogdhara Club

Visiting Associate, IUGAA, Puno

----- Forwarded message -----  
From: Sastri Osks <sastri.osks@gmail.com>  
Date: Sun, Jun 9, 2019 at 7:31 AM  
Subject: Fwd: Regarding progress of Tapender's thesis  
To: B. C. Chauhan <bcawake@gmail.com>

Dear Sir

This email is in response to my letter seeking clarification regarding any reservations you have, and not any formal letter to the Head with proper reasoning. I have not mentioned anywhere that I am not going to continue as Co-supervisor and both neither Dr. Padmnabh nor Tapender have discussed the issue with me as I have mentioned in my two previous communications. This is for your information please.

with love  
sastri sir

[Quoted text hidden]  
[Quoted text hidden]  
[Quoted text hidden]

[Quoted text hidden]  
[Quoted text hidden]

[Quoted text hidden]

*BC Chauhan*



Dear Dr. Padmnabh

I wish to make myself clear, I have given in writing that I would act as cosupervisor to complete the administrative work and help in thesis. I never claimed for authorship in publications or wanted to take any credit for the work done under your guidance. You insisted on having my name as part of authorship.

I only asked for the code to get better clarity to help you write the thesis and papers. I am surprised that you are not willing to share the code with me. He could have simply said that you were keen on patenting and that is fine with me. When I was not keen to have my name on any publication without my contribution, why would I need a patent.

I have written strongly since he didn't see me for a month and I have applied for sabbatical leave and I wanted to create some pressure to complete the thesis before I go, to avoid delays.

I tried calling you but you didn't respond. I thought you were busy and would call me back. Came to know through HoD you have some reservations.

Please let me know.

I always thought I was very helpful and supportive of both of you and am surprised at this reaction.

Hope to hear from you

Thanks

With love

Sastri

On Fri, May 31, 2019, 8:16 AM Sastri Osks <sastri.osks@gmail.com> wrote:

Dear Dr Padmnabh

i was very happy when you said you wanted to visit us to speed up the completion of Tapender's thesis by spending about 10-15 days in CUHP. i would like to bring to your notice that Tapender did not meet me for the whole of this month for any discussions.

I had been giving top priority to his thesis and paper submission and spent lots of my time to get his introductory chapters ready on which he could have easily built the rest of the thesis and also in training how to bring clarity and correctness to the paper we have been working on, but unfortunately i do not see similar enthusiastic response from his end.

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Hope you understand and try to speed up the completion of the work from your end

with love

sastri sir

30  
Visiting Associate, Inter University Accelerator Centre  
Member, Executive Council of CUHP  
Chairman, MOOCs Prakasht, CUHP  
Chairman, Physics Society, CUHP  
Founder Dean (Former), School of Physical and Material Sciences  
Founder Head (Former), Department of Physics and Astronomical Sciences,  
Central University of Himachal Pradesh  
TAB, Shahpur,  
Kangra, H.P. - 176206  
Phone no: 9418030901

Thu, Oct 3, 2019 at 2:23 PM

Bhag Chauhan <bcawake@gmail.com>  
To: Deepika Karki <deepikakarkicuhp@gmail.com>

Prof (Dr.) B. C. CHAUHAN  
DEAN  
School of Physical & Material Sciences  
School of Mathematics, Computer & Information Sciences  
&  
HEAD  
Department of Physics & Astronomical Science  
Department of Mathematics  
Department of Computer Science & Informatics  
Department of Library & Information Science  
Central University of Himachal Pradesh (CUHP)  
Dharamshala, Distt. Kangra  
Himachal Pradesh (INDIA)-176215  
Ph.: +919418472694 (m), +911892 237285 (o)  
Provost, CUHP  
Hony. Director, Community Development Cell  
Hony. Director, Computer Centre  
Nodal Officer, Swachh Bharat Abhiyan  
Nodal Officer, Ek Bharat Shreshth Bharat  
Nodal Officer, Int. Yoga Day Celebration  
Project Investigator, UBA  
Planning & Development Officer  
Chairman, Yogdhara Club  
Visiting Associate, IUCAA, Pune

[Quoted text hidden]

Thu, Oct 3, 2019 at 2:23 PM

Bhag Chauhan <bcawake@gmail.com>  
To: Deepika Karki <deepikakarkicuhp@gmail.com>

Prof (Dr.) B. C. CHAUHAN  
DEAN  
School of Physical & Material Sciences  
School of Mathematics, Computer & Information Sciences  
&  
HEAD  
Department of Physics & Astronomical Science  
Department of Mathematics  
Department of Computer Science & Informatics  
Department of Library & Information Science  
Central University of Himachal Pradesh (CUHP)  
Dharamshala, Distt. Kangra  
Himachal Pradesh (INDIA)-176215  
Ph.: +919418472694 (m), +911892 237285 (o)

Fwd: Regarding progress of Tapender's thesis

3 messages

From: Bhag Chauhan <bcawake@gmail.com>  
To: Deepika Karki <deepikakarkicuhp@gmail.com>

Thu, Oct 3, 2019 at 2:20 PM

**Prof (Dr.) B. C. CHAUHAN**  
DEAN  
School of Physical & Material Sciences  
School of Mathematics, Computer & Information Sciences  
&  
HEAD  
Department of Physics & Astronomical Science  
Department of Mathematics  
Department of Computer Science & Informatics  
Department of Library & Information Science  
Central University of Himachal Pradesh (CUHP)  
Dharamshala, Distt. Kangra  
Himachal Pradesh (INDIA)-176215  
Ph.: +919418472694 (m), +911892 237285 (o)  
Provost, CUHP  
Hony. Director, Community Development Cell  
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Nodal Officer, Int. Yoga Day Celebration  
Project Investigator, UBA  
Planning & Development Officer  
Chairman, Yogdhara Club  
  
Visiting Associate, IUCAA, Pune

----- Forwarded message -----

From: Padmnabh Rai <padmnabhr@gmail.com>  
Date: Tue, Jun 4, 2019 at 11:19 AM  
Subject: Re: Regarding progress of Tapender's thesis  
To: Sastri Osks <sastri.osks@gmail.com>  
Cc: Tapender Singh <tpndrsingh@gmail.com>, B. C. Chauhan <bcawake@gmail.com>

Dear Sir,

Thanks for your email.

Currently, I am travelling for some departmental and my personal issues. Therefore, I was unable to respond you promptly.

I am always open for comments/suggestions by you/others.

I am sincerely thankful to you for your valuable time and comments on the thesis of Mr. Tapender Singh.

At present, it seems difficult to continue our collaboration. Therefore, I request to Dean and Head of Physics to take this thesis submission in his co-supervision as an admin responsibility. Mr. Tapender has already given his consent for the same.

Kindly let me know if you require any further clarification from my side.

# Central University of Himachal Pradesh

Department of Physics & Astronomical Science

03 दिसम्बर 2020 को आयोजित होने वाले भौतिक एवं खगोल विज्ञान विभाग की ग्यारहवीं बोर्ड ऑफ स्टडीज (BOS) बैठक

## कार्यसूची (AGENDA)

स्थान: ऑनलाइन परिसंचरण

समय: 11:00 am – 1:00 pm

मद PAS-BOS-11.1: भौतिक एवं खगोल विज्ञान विभाग के निम्नलिखित शोध छात्रों की Synopsis को अनुमोदित करने हेतु।

अनुक्रमांक सं०	नाम	पर्यवेक्षक/(सह-पर्यवेक्षक)	विषय
CUHP14RDPHY04	कुशमाक्षी	डॉ. दलीप सिंह वर्मा	Dynamics of Fragments and Related Phenomena in Heavy-ion Reactions.
CUHP15RDPHY01	नीतिका देवी	डॉ. राजेश कुमार सिंह	Development of new electrolytes for proton conducting electrolyte fuel cells in 100-400°C range
CUHP17RDPHY04	हिमानी ठाकुर	डॉ. राजेश कुमार सिंह	Study of the structural, Optical and magnetic properties of the Rare Earth doped luminescent nanomaterials
CUHP17RDPHY02	अनिल खाची	प्रो.ओ.एस.के.एस.शास्त्री	Numerical of Nuclear Reaction Scattering CrossSections Using Phase Function Method
CUHP17RDPHY03	अंकुश	प्रो. भाग चन्द चौहान	Implementation of Sterile Neutrino studies, Leptogenesis and Neutrinoless Double Beta Decay
CUHP17RDPHY06	मोनाल काशव	डॉ. सुरेन्द्र वर्मा	SOME ASPECTS OF NEUTRINO MASS MODELS AND ASSOCIATED PHENOMENOLOGY
CUHP17RDPHY09	रिशु वर्मा	प्रो. भाग चन्द चौहान	INVESTIGATING NEUTRINO MIXING,STERILE NEUTRINO AND DARK MATTER
CUHP17RDPHY07	नेहा कटोच	डॉ. जगदीश कुमार	Novel Two Dimensional Structures beyond Graphene : A First Principle Study

*M. Sharma*

मद PAS-BOS-11.2: भौतिक एवं खगोल विज्ञान विभाग के वर्ष 2020-21 सत्र के लिए प्रवेश हुए शोध छात्रों के लिए अनुसंधान सलाहकार समिति (RAC) गठित करने हेतु :

क्र.सं.	नाम	क्रमांक सं.	अनुसंधान सलाहकार समिति (RAC)
1	लाभ सिंह	CUHP20RDPHY01	Head, DPAS – Prof. Hum Chand Supervisor of the concerned students – Dr. Surender Verma Subject Expert (s) - Prof. B.C. Chauhan
2	तलित कुमार	CUHP20RDPHY02	Head, DPAS – Prof. Hum Chand Supervisor of the concerned students – Prof. O.S.K.S. Sastry Subject Expert (s) - Dr. S. K. Soni
3	राहुल	CUHP20RDPHY03	Head, DPAS – Prof. Hum Chand Supervisor of the concerned students – Dr. Noorjahan Subject Expert (s) -Dr. Rajesh Kumar Singh
4	रितिश कुमार	CUHP20RDPHY04	Head, DPAS – Prof. Hum Chand Supervisor of the concerned students – Prof. Hum Chand Subject Expert (s) - Prof B. C. Chouhan
5	सन्दीप कुमार	CUHP20RDPHY05	Head, DPAS – Prof. Hum Chand Supervisor of the concerned students – Dr. Surender Pratap Subject Expert (s) -Dr. Jagdish Kumar
6	सिमरन अरोरा	CUHP20RDPHY06	Head, DPAS – Prof. Hum Chand Supervisor of the concerned students – Prof. B.C. Chauhan Subject Expert (s) -Dr. Surender Verma

मद PAS-BOS-11.3: भौतिक एवं खगोल विज्ञान विभाग के शोध छात्रों अनिल खाची और शिखा अवस्थी के लिए पर्यवेक्षक बदलने हेतु अनुलग्नक संलग्न हैं (अनुलग्नक - I) ।

मद PAS-BOS-11.4: भौतिक एवं खगोल विज्ञान विभाग के PG / UG के प्रैक्टिकल और प्रोजेक्ट / मौखिक परीक्षाओं के लिए परीक्षकों की सूची में विशेषज्ञों के नाम जोड़ने हेतु अनुलग्नक संलग्न हैं (अनुलग्नक-II Serial no 53-56) ।

मद PAS-BOS-11.5: भौतिक एवं खगोल विज्ञान विभाग के एम० एस० सी० में पढ़ाये जाने वाले नये पाठ्यक्रमों को अनुमोदित करने हेतु प्रस्ताव प्रस्तुत हैं ।

NPTEL			
क्र सं	कोर्स कोड	कोर्स नाम (type)	क्रेडिट
1.	PAS 581	Astronomy (Elective Specialization)	
2.	PAS 581L	Astronomy Lab (elective/Open)	04
3.	PAS 582	General Theory of Relativity and Cosmology (Elective Specialization)	02
4.	RPE	Research and Publication Ethics (core)	04

मद PAS-BOS-11.6.: कोई अन्य मामले जो कि आध्यापक की अनुमति से विचार- विमर्श किए जाएंगे ।

*Handwritten signature*

Central University of Himachal Pradesh  
Department of Physics & Astronomical Science

03 दिसम्बर 2020 को आयोजित भौतिक एवं खगोल विज्ञान विभाग की ग्यारहवीं बोर्ड  
ऑफ स्टडीज (BOS) बैठक के मिनट

बैठक का तरीका : Online Circulation (ई-मेल के माध्यम से) and online Googlemeet

बैठक में निम्नलिखित सदस्यों से भाग लिया :

1. Prof. Hum Chand  
Chairman and Convener, BOS  
Head  
Department of Physics and Astronomical Science, CUHP
2. Prof. O. S. K. S. Sastri  
Member  
Department of Physics and Astronomical Science, CUHP
3. Prof. B. C. Chauhan  
Member  
Department of Physics and Astronomical Science, CUHP
4. Prof. Raman Sharma,  
Expert Member  
Department of Physics,  
Himachal Pradesh University,  
Shimla(H.P)
5. Dr. Vimal Sharma  
Expert Member  
Department of Physics  
NIT Hamirpur (H.P)
6. Dr. Dalip Singh Verma  
Member  
Department of Physics and Astronomical Science, CUHP
7. Dr. Rajender Kumar  
Member  
Department of Chemistry & Chemical Science, CUHP
8. Dr. Pankaj Thakur  
Member  
Department of Environmental Sciences, CUHP

मद PAS-BOS-11.1: भौतिक एवं खगोल विज्ञान विभाग के निम्नलिखित शोध छात्रों की Synopsis को  
अनुमोदित किया गया (अनुलग्नक - 1) :

H. Chandra

अनुक्रमांक/सं.	नाम	पर्यवेक्षक/(सह-पर्यवेक्षक)	विषय
CUHP14RDPHY04	*कुशमाक्षी	डॉ. दलीप सिंह वर्मा	Dynamics of Fragments and Related Phenomena in Heavy-ion Reactions.
CUHP15RDPHY01	*नीतिका देवी	डॉ. राजेश कुमार सिंह (पर्यवेक्षक) डॉ. भूपेन्द्र सिंह, Dept. of Ceramic Engineering, IIT(DHU) (सह-पर्यवेक्षक)	Development of new electrolytes for proton conducting electrolyte fuel cells in 100-400°C range
CUHP17RDPHY04	हिमानी ठाकुर	डॉ. राजेश कुमार सिंह	Study of the structural, Optical and magnetic properties of the Rare Earth doped luminescent nanomaterials
CUHP17RDPHY02	अनिल खाची	प्रो.ओ.एस.के.एस.शास्त्री	Numerical Simulations of Nuclear Reaction Scattering Cross-sections Using Phase Function Method
CUHP17RDPHY03	अंकुश	प्रो. भाग चन्द चौहान	Implementation of Sterile Neutrino studies, Leptogenesis and Neutrinoless Double Beta Decay
CUHP17RDPHY06	मौनाल काशव	डॉ. सुरेन्द्र वर्मा	SOME ASPECTS OF NEUTRINO MASS MODELS AND ASSOCIATED PHENOMENOLOGY
CUHP17RDPHY09	रिशु वर्मा	प्रो. भाग चन्द चौहान	INVESTIGATING NEUTRINO MIXING, STERILE NEUTRINO AND DARK MATTER
CUHP17RDPHY07	नेहा कटोच	डॉ. जगदीश कुमार	Novel Two Dimensional Structures beyond Graphene : A First Principle Study

\*छात्रा कुशमाक्षी की synopsis में देरी मातृत्व अवकाश और Zero सेमस्टर के कारण हुई, जिसके लिए माननीय कुलपति महोदय द्वारा विशेष अनुमोदन लिया गया (अनुलग्नक - II) था ।

\*छात्रा नीतिका देवी की synopsis के शीर्षक का परिवर्तन किया गया (अनुलग्नक - III) ।

*H. Chandra*

मद PAS-BOS-11.2: भौतिक एवं खगोल विज्ञान विभाग के वर्ष 2020-21 सत्र के लिए प्रवेश हुए निम्नलिखित शोध छात्रों के लिए अनुसंधान सहायक समिति (IRAC) को अनुमोदित किया जाता है :

क्र.सं.	नाम	प्रक्रमांक सं.	अनुसंधान सहायक समिति (IRAC)
1	लाभ सिंह	CUHP20RDPHY01	Head, DPAS - Prof. Hum Chand Supervisor of the concerned students - Dr. Surender Verma Subject Expert (s) - Prof. B.C. Chauhan
2	रश्मि कुमार	CUHP20RDPHY02	Head, DPAS - Prof. Hum Chand Supervisor of the concerned students - Prof. O.S.K.S. Saxena Subject Expert (s) - Dr. S.K. Sonu
3	राहुल	CUHP20RDPHY03	Head, DPAS - Prof. Hum Chand Supervisor of the concerned students - Dr. Noorjahan *Co-guide: Dr. Vinod Kumar Subject Expert (s) - Dr. Rajesh Kumar Singh
4	रितीश कुमार	CUHP20RDPHY04	Head, DPAS - Prof. Hum Chand Supervisor of the concerned students - Prof. Hum Chand Subject Expert (s) - Prof. B. C. Chauhan
5	सन्दीप कुमार	CUHP20RDPHY05	Head, DPAS - Prof. Hum Chand Supervisor of the concerned students - Dr. Surender Pratao Subject Expert (s) - Dr. Jagdish Kumar
6	सिमरन अरोरा	CUHP20RDPHY06	Head, DPAS - Prof. Hum Chand Supervisor of the concerned students - Prof. B.C. Chauhan Subject Expert (s) - Dr. Surender Verma

\*वर्ष 2020-21 में प्रवेश हुए शोध छात्र राहुल के लिए छात्र के पर्यवेक्षक डॉ. नूरजहाँ ने सह-पर्यवेक्षक के रूप में कार्य करने के लिए डॉ. विनोद कुमार, सहायक प्रोफेसर, विज्ञान विभाग, दीनबंधु छोट्टा रान विज्ञान और पौद्गोिकी विश्वविद्यालय, मुखल, सोनीपत, हरियाणा, भारत-101039 के नाम का प्रस्ताव BOS बैठक में रखा (डॉ. विनोद कुमार, CV अनुलग्नक - IV) तथा शिवानी कालिया के पर्यवेक्षक डॉ. राजेश कुमार सिंह ने सह-पर्यवेक्षक के रूप में कार्य करने के लिए डॉ. रजनीश धीमान, सहायक प्रोफेसर, MNIT जयपुर के नाम का प्रस्ताव BOS बैठक में रखा (डॉ. रजनीश धीमान, CV अनुलग्नक - V), जिसको बैठक के सदस्यों द्वारा अनुमोदित किया जाता है।

मद PAS-BOS-11.3: भौतिक एवं खगोल विज्ञान विभाग के शोध छात्रों अनिल खाची और शिखा अवस्थी के लिए पर्यवेक्षक बदलने के प्रस्ताव को अनुमोदित किया जाता है।

अनुक्रमांक सं.	नाम	पर्यवेक्षक/(सह-पर्यवेक्षक)
CUHP17RDPHY02	अनिल खाची	प्रो.ओ.एस.के.एस.शास्त्री
CUHP18RDPHY02	शिखा अवस्थी	प्रो.ओ.एस.के.एस.शास्त्री

*h-chauhan*



मद PAS-BOS-11.4: भौतिक एवं खगोल विज्ञान विभाग के PG / UG के प्रैक्टिकल और प्रोजेक्ट / मौखिक परीक्षाओं के लिए परीक्षाओं की सूची में विशेषज्ञों के नाम जोड़ने हेतु संलग्न (अनुलग्नक-II, Serial no 53-57) को अनुमोदित किया जाता है (अनुलग्नक - VI ) है ।

मद PAS-BOS-11.5: भौतिक एवं खगोल विज्ञान विभाग के एम० एस० सी० में पढ़ाये जाने के लिए निम्नलिखित नये पाठ्यक्रमों को अनुमोदित किया जाता है ।

NPTEL			क्रेडिट
क्र सं	कोर्स कोड	कोर्स नाम (type)	04
1.	PAS 581	Astronomy and Astrophysics (Elective Specialization)	02
2.	PAS 581L	Astronomy and Astrophysics Lab (elective/Open)	04
3.	PAS 582	General Theory of Relativity and Cosmology (Elective Specialization)	02
4.	RPE	Research and Publication Ethics (core)	

अतिरिक्त मद: भौतिक एवं खगोल विज्ञान विभाग के बोर्ड ऑफ स्टडीज (BOS) बैठक में शोध छात्रों के पर्यवेक्षक बदलने सम्बन्धी नियमों के बदलावों पर भी चर्चा की गई 1 किन्तु इस विषय पर सर्वसम्मति से कोई सहमति नहीं बन पाई 1 इस बिंदु पर डायरेक्टर रिसर्च से भी परामर्श की आवश्यकता महसूस की गई, अतः इसे BoS की अगली मीटिंग में चर्चा के लिए स्वीकार किया गया ।

-----

सभापति द्वारा बोर्ड के सभी सदस्यों के धन्यवाद के साथ बैठक समाप्त हुई ।

बैठक के सदस्यों द्वारा मिनट्स का अनुमोदन हस्ताक्षर या Online Circulation (ई-मेल के माध्यम से) से प्राप्त किया गया ( ई-मेल संलग्न ) ।

1. Prof. Hum Chand  
Chairman and Convener, BOS  
Head  
Department of Physics and Astronomical Science, CUHP
2. Prof. O. S. K. S. Sastry  
Member  
Department of Physics and Astronomical Science, CUHP
3. Prof. B. C. Chauhan  
Member  
Department of Physics and Astronomical Science, CUHP
4. Prof. Raman Sharma,  
Expert Member  
Department of Physics,  
Himachal Pradesh University,  
Shimla(H.P)
5. Dr. Vimal Sharma  
Expert Member  
Department of Physics  
NIT Hamirpur (H.P)

*H. Chand*

6. Dr. Dalip Singh Verma  
Member  
Department of Physics and Astronomical Science, CUHP
7. Dr. Rajender Kumar  
Member  
Department of Chemistry & Chemical Science, CUHP
8. Dr. Pankaj Thakur  
Member  
Department of Environmental Sciences, CUHP

*Dalip Singh Verma*

*Rajender Kumar*  
3.12.2020

*Arjun*

**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

Hum Chand &lt;humchand@hpcu.ac.in&gt;

Wed, Dec 2, 2020 at 12:36 PM

To: bramans70@yahoo.co.in, vmlsharma@nith.ac.in, Sastri Osks <sastri.osks@gmail.com>, bcawake@hpcu.ac.in, dalip Verma <dalipverma2003@yahoo.co.in>, dalipverma2003@gmail.com, rajender.cuhp@gmail.com, chempank@gmail.com  
Bcc: sam Pathania <shineness@hpcu.ac.in>

Honorable Members;

I am pleased to inform you that after consulting most of the honorable members and with the approval of the Honorable Vice-Chancellor the 11th Board of Studies (BoS) Meeting has been decided to conduct through the Online circulation process due to the ongoing COVID-19 epidemic, with details as below:

Date: December 3, 2020, Thursday  
Time: 11:00am – 1:00pm

Mode: Online, with google meet link as:

[meet.google.com/eag-xjkk-amm](https://meet.google.com/eag-xjkk-amm)

Please find enclosed the AGENDA points with necessary Documents for your kind perusal.

Thanking you,

With best regards  
Hum Chand

--  
Hum Chand  
Dean, School of Physical and Material Sciences  
Head, Professor, Department of Physics and Astronomical Sciences,

Central University of Himachal Pradesh (CUHP),  
Temporary Academic Block, Shahpur,  
Kangra, Himachal Pradesh, India. Pin-176206.  
Mobile: 6396937743 / 9760154111  
email: humchand@hpcu.ac.in & humchand@gmail.com  
webpage: <http://www.aries.res.in/~hum/> or at this  
skype: hum\_aries


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**3 attachments**

 **Agenda 11th BoS meeting.pdf**  
276K

 **Annexure -II.pdf**  
611K

 **Annexure-I.pdf**  
6554K



**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

Wed, Dec 2, 2020 at 3:41 PM

Sam Pathania <shineness@hpcu.ac.in>

To: Hum Chand <humchand@hpcu.ac.in>

Cc: bramans70@yahoo.co.in, vmlsharma@nith.ac.in, Sastri Osks <sastri.osks@gmail.com>, bcawake@hpcu.ac.in, dalip Verma <dalipverma2003@yahoo.co.in>, dalipverma2003@gmail.com, Prof Rajender Kumar Chemistry Cuhp <rajender.cuhp@gmail.com>, chempank <chempank@gmail.com>

Honorable BOS members,

As directed by HOD, Department of Physics, please find the attached soft copies of all Synopsis as per Agenda No.PAS-BOS-11.1.

Also as an addendum to agenda point PAS-BOS-11.3 an agenda item regarding, the addition of Co-Supervisor for Ph.D. student Mr. Rahul Singh (CUHP20RDPHY03), Supervisor of Dr. Noor Jahan, of Dr. Vinod Kumar, Assistant Professor, Dept. of Physics, Deenbandhu Chhotu Ram University of Sci. & Tech., Haryana. is attached herewith.

--  
सादर / Regards,

• शैलजा पठानिया / Shailja Pathania\*

डटा एंट्री ऑपरेटर / Data Entry Operator

भौतिक एव पदार्थ विज्ञान स्कूल / School of Physical & Material Sciences


भौतिकी एवं खगोल विज्ञान विभाग / Department of Physics & Astronomical Science

हिमाचल प्रदेश केन्द्रीय विश्वविद्यालय / Central University of Himachal Pradesh

अस्थाई शैक्षणिक खण्ड, शाहपुर, 176206 / Temporary Academic Block Shahpur, District Kangra, (HP)-176206

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2 attachments

 PAS-BOS-11.1 Synopsis.pdf  
5840K

 Co-Supervisor Request.pdf  
1374K





Hum Chand <humchand@hpcu.ac.in>

**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

Hum Chand <humchand@hpcu.ac.in>

Thu, Dec 3, 2020 at 10:12 AM

To: bramans70@yahoo.co.in, vmlsharma@nith.ac.in, Sastri Osks <sastri.osks@gmail.com>, bcawake@hpcu.ac.in, dalip Verma <dalipverma2003@yahoo.co.in>, dalipverma2003@gmail.com, rajender.cuhp@gmail.com, chempank@gmail.com, Hum Chand <humchand@hpcu.ac.in>, Hum Chand <humchand@gmail.com>

Honorable BOS members,  
This is just a kind reminder, please.

See you soon.  
With warm regards  
Hum Chand

On Wed, Dec 2, 2020 at 12:36 PM Hum Chand <humchand@hpcu.ac.in> wrote:  
[Quoted text hidden]  
[Quoted text hidden]

**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

Hum Chand &lt;humchand@hpcu.ac.in&gt;

Thu, Dec 10, 2020 at 6:01 PM

To: bramans70@yahoo.co.in, vmlsharma@nlth.ac.in, Sastri Osks <sastri.osks@gmail.com>, bcawake@hpcu.ac.in, dalip Verma <dalipverma2003@yahoo.co.in>, dalipverma2003@gmail.com, rajender.cuhp@gmail.com, chempank@gmail.com, Hum Chand <humchand@hpcu.ac.in>

Dear Honorable Member of BoS,

Many-2 thanks for your active participation in the online 11th BoS meeting of DPAS.

Please find attached here the minutes of the meeting (Minutes\_11th\_BoS\_03Dec20.pdf), for your kind approval. May I request you to kindly approve the minutes at the earliest possible by 13 December 2020.

PS: Regarding the discussion, held in BoS meeting dated 03 December 2020, about the allotment of Ph.D students to the newly appointed assistant professor: In this regard, as pointed out during the discussion that this matter has already been raised in the 5th School of Board (SoB) meeting. I went through the minutes of the 5th SoB, and noted that "...The matter to be further referred to the Director Research for further consideration" (ref: ITEM SBPMS 5.1.3), but no response has been received yet. Therefore I followed up the matter with Director Research and we have been directed by Director Research to follow the UGC Ph.D regulation 2016 along with CUHP ordinance-42 (amended on March 2020) in letter and spirit (please refer to clause 6-page number 215 of the attached copy of Ordinance 42). Given these, I hope we do not have now anything relevant here to add regarding its discussion to the minutes.

-----

Thanking you

With warm regards

Hum Chand

(Convener and Chair, 11th BoS DPAS)

On Wed, Dec 2, 2020 at 12:36 PM Hum Chand <humchand@hpcu.ac.in> wrote:  
Honorable Members;

I am pleased to inform you that after consulting most of the honorable members and with the approval of the Honorable Vice-Chancellor the 11th Board of Studies (BoS) Meeting has been decided to conduct through the Online circulation process due to the ongoing COVID-19 epidemic, with details as below:

Date: December 3, 2020, Thursday  
Time: 11:00am – 1:00pm

Mode: Online, with google meet link as:

[meet.google.com/eag-xjkk-amm](https://meet.google.com/eag-xjkk-amm)

Annexure-VI






[Quoted text hidden]

[Quoted text hidden]


[Quoted text hidden]

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**8 attachments**

-  **Annexure-VI (List of Examiners).pdf**  
630K
-  **Annexure-V (CV\_Rajnish Dhlman).pdf**  
432K
-  **Annexure-II (Approval Scan Copy).pdf**  
611K
-  **Annexure-IV (CV\_Vinod Kumar 2020).pdf**  
344K
-  **Annexure-III (Change of title of Ph.D Thesis).pdf**  
61K



 Annexure-I (Synopsis).pdf  
5840K

 Ordinance\_42\_update\_upto\_11.06.2020.pdf  
423K

 Minutes\_11th\_BoS\_03Dec20.pdf  
411K

**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

Rajender Kumar <rajender.cuhp@gmail.com>

Fri, Dec 11, 2020 at 11:06 A

To: Hum Chand <humchand@hpcu.ac.in>

Cc: bramans70@yahoo.co.in, vmlsharma@nith.ac.in, Sastri Osks <sastri.osks@gmail.com>, bcawake@hpcu.ac.in, dalip Verma <dalipverma2003@yahoo.co.in>, dalipverma2003@gmail.com, chempank@gmail.com

Dear Sir

I approve the Minutes of BoS meeting dated 03 December 2020 in present form as attached with your email dated 10th December 2020.

Thank you  
with regards

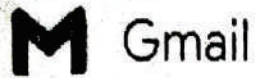
[Quoted text hidden]

--

**Dr.Rajender Kumar**  
**Associate Professor & Head**  
**Department of Chemistry and Chemical Sciences**  
**School of Physical and Material Sciences**  
**Central University of Himachal Pradesh ,**  
**District Kangra, Himachal Pradesh 176206**  
**Email; rajender@cuhimachal.ac.in, rajender.cuhp@gmail.com**  
**Mob:+917018623845**







Hum Chand <humchand@hpcu.ac.in>

## Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)

Dr. Dalip S. Verma <dalipverma2003@yahoo.co.in>

Fri, Dec 11, 2020 at 11:13 AM

Reply-To: dalipverma2003@yahoo.co.in

To: bramans70@yahoo.co.in, vmlsharma@nlth.ac.in, Sastri Osks <sastri.osks@gmail.com>, bcawake@hpcu.ac.in, dalipverma2003@gmail.com, rajender.cuhp@gmail.com, chempank@gmail.com, Hum Chand <humchand@hpcu.ac.in>

Dear Sir,  
Greetings!  
Approved..  
Warm Regards

Dr. D. S. Verma  
Assistant Professor,  
Department of Physics and Astronomical Science,  
Central University of Himachal Pradesh,  
Temporary Academic Block, Shahpur, District Kangra (H.P.)- 176206-India  
Mob:+91-94591-35080, 7018178160 Fax 01892237286  
dsverma.cuhl@nic.in, dsverma@cuhimachal.ac.in  
website:<https://sites.google.com/view/dalipverma/home>

[Quoted text hidden]

**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

Hum Chand <humchand@hpcu.ac.in>  
To: bramans70@yahoo.co.in  
Cc: Hum Chand <humchand@hpcu.ac.in>  
Bcc: sam Pathania <shineness@hpcu.ac.in>

Fri, Dec 11, 2020 at 12:02 PM

Dear Sir,

Many-2 thanks for the email and approval of the minutes.

Will correct the typo of your name in the minutes.

With warm regards  
Hum Chand

[Quoted text hidden]

A handwritten signature in black ink, appearing to read 'H. C. Chand', with a horizontal line underneath it.



Hum Chand <humchand@hpcu>

## Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)

yahool@update. <bramans70@yahoo.co.in>  
Reply-To: bramans70@yahoo.co.in  
To: Hum Chand <humchand@hpcu.ac.in>

Fri, Dec 11, 2020 at 11:45 AM

Dear Dr. Hum Chand

Since all the agenda items were debated and deliberated threadbare in the meeting on 03-12-2020. So i hereby approve the minutes of the meeting.

Hum chand ji kindly correct my name My name is Dr. Raman Sharma only, Kumar word is not associated with my name.

Best Wishes

Dr. Raman Sharma  
Professor of Physics  
Physics Department  
Himachal Pradesh University  
Shimla-5  
INDIA

e-mail: sramanb70@gmail.com  
raman.sharma@hpuniv.ac.in

Ph. 0177-2830950 (O)  
0177-2633972(R)  
2833733(Room)

[Quoted text hidden]

@hpcu.a

12



Hum Chand <humchand@hpcu.ac.in>

**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

Hum Chand <humchand@hpcu.ac.in>  
To: Sastri Osks <sastri.osks@gmail.com>

Fri, Dec 11, 2020 at 1:51 PM

Dear Shatri Sir,

In the case of Nikita Devi, it was the title modification of the synopsis, as mentioned in its footnote. Rajesh had made request for the same in November 2019, but due to no BoS till now it got delayed. I had enquired about the Rannish Dhiman document. It seems to me that they were missing due to some communication gap between Rajesh and Shaileza. Rajesh showed the documents of March 2020 (as attached). Please accept it as an error due to our clerical staff.

Thanks for your co-operation and support.

rest later on phone  
with warm regards  
hum

[Quoted text hidden]



Hum Chand <humchand@hpcu.ac.in>

## Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)

Fri, Dec 11, 2020 at 1:02 PM

Hum Chand <humchand@hpcu.ac.in>  
To: Sastri Osks <sastri.osks@gmail.com>

Dear Sastri Sir,

Thanks for the email.

Apology for the typo by Shaileza in the Anil synopsis and forgetting the aspect of seniority in name list. These has been corrected and also I will instruct Shaileza not to repeat it in future.

The title of synopsis now appear as:

" Numerical Simulations of Nuclear Reaction Scattering Cross-sections Using Phase Function Method"  
Hope this is fine (else corrected me). Rest I will discuss with you first over phone in a slot free from classes etc..

Thanks again for your kind understanding and co-operation.

with best regards  
hum

On Thu, Dec 10, 2020 at 6:38 PM Sastri Osks <sastri.osks@gmail.com> wrote:  
[Quoted text hidden]  
[Quoted text hidden]

**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

VIMAL SHARMA <vmisharma@nith.ac.in>  
To: Hum Chand <humchand@hpcu.ac.in>

Fri, Dec 11, 2020 at 2:29 PM

Sir,

I have seen the minutes and find it appropriate and have my consent to submit it for approval of competent authority .

Regards  
Vimal Sharma  
NIT Hamirpur  
[Quoted text hidden]

*Hum Chand*



Hum Chand <humchand@hpcu.ac>

**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

Hum Chand <humchand@hpcu.ac.in>  
To: VIMAL SHARMA <vmlsharma@nith.ac.in>

Fri, Dec 11, 2020 at 2:33 PM

Dear Vimal Sir,

Many-2 thanks for your approval of the minutes over email.

With warm regards  
Hum Chand

[Quoted text hidden]

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**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

---

Sastri Osks <sastri.osks@gmail.com>  
To: Hum Chand <humchand@hpcu.ac.in>

Sun, Dec 13, 2020 at 6:40 PM

Dear Prof Hum Chand  
As per the discussion we had,  
**I approve the minutes,**  
except for this point which could be taken up later.  
Thank you  
with love  
sastri sir

[Quoted text hidden]

*H. Chand*



**M** Gmail

Hum Chand <humchand@hpcu.ac.in>

**Agenda 11th Board of Studies meetings (03 Dec 2020 11hr-13hr)**

Hum Chand <humchand@hpcu.ac.in>

To: Sastri Osks <sastri.osks@gmail.com>

Cc: bramans70@yahoo.co.in, VIMAL SHARMA <vmlsharma@nith.ac.in>, bcawake@hpcu.ac.in, dalip Verma <dalipverma2003@yahoo.co.in>, dalipverma2003@gmail.com, rajender.cuhp@gmail.com, chempank@gmail.com, Hum Chand <humchand@hpcu.ac.in>

Sun, Dec 13, 2020 at 9:07 PM

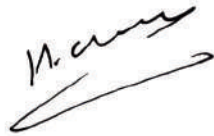
Dear Prof Shastri Sir,

Thanks for approving the remaining minutes. The point you have raised has been noted and will now be listed for the required discussion in the next BoS meeting.

With best regards

HumChand

[Quoted text hidden]





# Department of Physics and Astronomical Science

## Time-Table for ONLINE classes during Monsoon Semester, 2020

PAS 401A - 47  
 PAS 102 - 60  
 PAS 102L - 28  
 PAS 413 - 30

Day	Semester	9:30-10:30AM	10:45-11:45AM	12:00-1:00PM	2:00-3:00PM	3:15-4:15PM	4:30-5:30PM
Monday	B.Sc. I	PAS102(SV)	PAS101(AC)	CCS101(TBA)	EEL110(TBA)	CCS101L(TBA)	
	M.Sc. I	PAS403A(SP)		PAS401A(SV)	PAS404A(AC)	PAS413(AC+SV)	
	B.Sc. III	PAS201(RKS)	PAS202(NJ)	PAS203(JK)	MTH101(TBA)	PAS203L(JK+)	
	B.Sc. V	PAS355(GSS)	PAS318(DSV)	PAS302(SP)	PAS355L(SP+GSS)	PAS356(NJ)	
	M.Sc. III	PAS545(BCC)	PAS409A(OSKS)	PAS426A/581(BCC/HCI)	PAS411A(DSV)	PAS423(DSV+RKS)	
Tuesday	B.Sc. I	PAS102(SV)	PAS101(AC)	CCS101(TBA)	EEL110(TBA)	CCS101L(TBA)	
	M.Sc. I	PAS403A(SP)		PAS401A(SV)	PAS404A(AC)	PAS417A(BCC)	
	B.Sc. III	PAS201(RKS)	PAS202(NJ)	PAS203(JK)	MTH101(TBA)	PAS203L(JK+)	
	B.Sc. V	PAS355(GSS)	PAS318(DSV)	PAS302(SP)	PAS355L(SP+GSS)	PAS356(NJ)	
	M.Sc. III	PAS408A(JK)	PAS409A(OSKS)	PAS426A/581(BCC/HCI)	PAS411A(DSV)	PAS423(DSV+RKS)	
Wednesday	B.Sc. I	PAS102(SV)	PAS101(AC)	CCS101(TBA)	ENV121(TBA)	PAS101L(AC+JK)	
	M.Sc. I	PAS403A(SP)		PAS401A(SV)	PAS404A(AC)	PAS417A(BCC)	
	B.Sc. III	PAS201(RKS)	PAS202(NJ)	PAS203(JK)	MTH101(TBA)	PAS202L(NJ+GSS)	
	B.Sc. V	PAS355(GSS)	PAS318(DSV)	PAS302(SP)	PAS356(NJ)	PAS302L(SP+)	
	M.Sc. III	PAS408A(JK)	PAS409A(OSKS)	PAS426A/581(BCC/HCI)	PAS411A(DSV)	WEEKLY SEMINAR	
Thursday	B.Sc. I	PAS102L(SV+SP)		PAS101L(AC+JK)	ENV121(TBA)	ENV121(TBA)	
	M.Sc. I	PAS556(BCC)		PAS401A(SV)	PAS402(GSS)	PAS403A(SP)	
	B.Sc. III	PAS201(RKS)	PAS202(NJ)	PAS201L(RKS+)	PAS201L(RKS+)	PAS202L(NJ+GSS)	
	B.Sc. V	PAS355(GSS)	PAS318(DSV)	PAS302L(SP+)	PAS302L(SP+)	PAS318L(DSV+BCC)	
	M.Sc. III	PAS408A(JK)	PAS409A(OSKS)	PAS426A/581(BCC/HCI)	PAS411A(DSV)		
Friday	B.Sc. I	PAS102(SV)	PAS101(AC)	PAS102L(SV+SP)	CCS101(TBA)	CCS101(TBA)	
	M.Sc. I	PAS556(BCC)		PAS402(GSS)	PAS404A(AC)	PAS413(AC+SV)	
	B.Sc. III	PAS203(JK)	MTH101(TBA)	MTH101(TBA)	MTH101(TBA)	PAS201L(RKS+)	
	B.Sc. V	PAS302(SP)	PAS356(NJ)	PAS318L(DSV+BCC)	PAS318L(DSV+BCC)	PAS356L(NJ+)	
	M.Sc. III	PAS581L(HCI)			PAS408A(JK)	PAS545/581L(BCC/HCI)	

OSKS: Dr. OSK Sasri, BCC: Dr. B.C. Chauhan, HC: Prof. Hum Chand, AC: Dr. Ayan Chatterjee, SV: Dr. Surender Verma, DSV: Dr. D. S. Verma, JK: Dr. Jagdish Kumar, RKS: Dr. R. K. Singh, SP: Dr. Surender Pratap, GSS: Dr. Gourishanker Sahoo, NJ: Dr. Noorjahan, TBA: To be announced.

NOTE: Lunch break from 1:00-2:00 PM everyday.

Time-Table for (B.Sc., M.Sc.) Spring Semester, 2020 (w.e.f. 15/01/2020) Department of Physics and Astronomical Science (CUHP)

Day	Semester	8:30-9:25	9:30-10:25	10:30-11:25	11:30-12:25	12:30-1:25	1:30-2:25	2:30-3:25	3:30-4:25	4:30-5:25
M	E.Sc. II	PAS103L (SM+NJULab1)	PAS106(A/SV) CR-7	PAS124(SM) Lab	Lunch	PAS104 (JK) CR-7	CCS102 (CHEM) CR-7			
	M.Sc. II	PAS407A (AC) CR-7	PAS106(A/SV) CR-7	PAS124(SM) Lab	Lunch	PAS104 (JK) CR-7	PAS 414 (OSKSS-SM) computer lab			
B.Sc. IV	B.Sc. IV	MTH103 Tut (GS) CR-8	PAS212 (AC) CR-8	PAS205 (SV) CR-8	Lunch	PAS206(RKS) CR-8	PAS212L(AC+HQ) Lab			
	B.Sc. IV				Lunch	PAS 356(NJ) CR-7	PAS303(NJ) CR-8	PAS315 (SP) CR-8		
B.Sc. II	B.Sc. II		PAS103(SP) CR-11	PAS549 (BCC) CR11	Lunch	PAS527 CR11	PAS527 CR11			
	M.Sc. II	PAS407A(AC) CR-7	PAS106(A/SV) CR-7	PAS405(DSV) CR-11	Lunch	PAS104 (JK) CR-7	CCS102(CHEM) CR-7	CCS102 (CHEM) CR-7		
B.Sc. IV	B.Sc. IV	MTH103 (GS) CR-8	PAS212 (AC) CR-8	PAS206(RKS) CR-8	Lunch	PAS205(SV) CR-8	PAS417A (BCC) CR-11			
	B.Sc. IV				Lunch	PAS205(SV) CR-8	PAS212L(AC+HQ) C Lab			
B.Sc. VI	B.Sc. VI			PAS356(NJ) CR-7	Lunch	PAS316(SP) CR-7	PAS327 (DSV) CR11			
	M.Sc. IV				Lunch	PAS549 (BCC) CR11	PAS527 (DSV) CR11			
B.Sc. II	B.Sc. II	PAS104L (JK-SPLab)	PAS103 (SP) CR-11	PAS103 (SP) CR-11	Lunch	PAS104 (JK) Lab2	PAS104 (JK) Lab2			
	M.Sc. II	PAS407A (AC) CR-7	PAS406(A/SV) CR-7	PAS528(DSV) CR-11	Lunch	IDG CR-8	PAS417A (BCC) CR-11	CCS102L (CHEM) Lab		
B.Sc. IV	B.Sc. IV	MTH103 (GS) CR-8	PAS212 (AC) CR-8	PAS206(RKS) CR-8	Lunch	PAS205 (SV) CR-8	Lunch			
	B.Sc. IV				Lunch	PAS316 (SP) CR-7	Lunch			
B.Sc. VI	B.Sc. VI			PAS356(NJ) CR-7	Lunch	PAS316 (SP) CR-7	PAS316 (SP) CR-7			
	M.Sc. IV				Lunch	PAS549(BCC) CR-11	PAS527(DSV) CR-11			
B.Sc. II	B.Sc. II	PAS104L (JK-SPLab)	PAS103 (SP) CR-11	PAS103 (SP) CR-11	Lunch	PAS104 (JK) CR-7	PAS104 (JK) CR-7			
	M.Sc. II	PAS407A (AC) CR-7	PAS406(A/SV) CR-7	PAS528(DSV) CR-11	Lunch	IDG CR-8	PAS417A (BCC) CR-11	PAS205L(SV-SF) Lab		
B.Sc. IV	B.Sc. IV	MTH103 (GS) CR-8	PAS212 (AC) CR-8	PAS206(RKS) CR-8	Lunch	PAS205 (SV) CR-8	Lunch			
	B.Sc. IV				Lunch	PAS316 (SP) CR-7	Lunch			
B.Sc. VI	B.Sc. VI			PAS356(NJ) CR-7	Lunch	PAS316 (SP) CR-7	PAS316 (SP) CR-7			
	M.Sc. IV				Lunch	PAS549(BCC) CR-11	PAS527(DSV) CR-11			
B.Sc. II	B.Sc. II	PAS104L (JK-SPLab)	PAS103 (SP) CR-11	PAS103 (SP) CR-11	Lunch	PAS104 (JK) CR-7	PAS104 (JK) CR-7			
	M.Sc. II	PAS407A (AC) CR-7	PAS406(A/SV) CR-7	PAS528(DSV) CR-11	Lunch	IDG CR-8	PAS417A (BCC) CR-11	PAS205L(SV-SF) Lab		
B.Sc. IV	B.Sc. IV	MTH103 (GS) CR-8	PAS212 (AC) CR-8	PAS206(RKS) CR-8	Lunch	PAS205 (SV) CR-8	Lunch			
	B.Sc. IV				Lunch	PAS316 (SP) CR-7	Lunch			
B.Sc. VI	B.Sc. VI			PAS356(NJ) CR-7	Lunch	PAS316 (SP) CR-7	PAS316 (SP) CR-7			
	M.Sc. IV				Lunch	PAS549(BCC) CR-11	PAS527(DSV) CR-11			
B.Sc. II	B.Sc. II	PAS104L (JK-SPLab)	PAS103 (SP) CR-11	PAS103 (SP) CR-11	Lunch	PAS104 (JK) CR-7	PAS104 (JK) CR-7			
	M.Sc. II	PAS407A (AC) CR-7	PAS406(A/SV) CR-7	PAS528(DSV) CR-11	Lunch	IDG CR-8	PAS417A (BCC) CR-11	PAS205L(SV-SF) Lab		
B.Sc. IV	B.Sc. IV	MTH103 (GS) CR-8	PAS212 (AC) CR-8	PAS206(RKS) CR-8	Lunch	PAS205 (SV) CR-8	Lunch			
	B.Sc. IV				Lunch	PAS316 (SP) CR-7	Lunch			
B.Sc. VI	B.Sc. VI			PAS356(NJ) CR-7	Lunch	PAS316 (SP) CR-7	PAS316 (SP) CR-7			
	M.Sc. IV				Lunch	PAS549(BCC) CR-11	PAS527(DSV) CR-11			
B.Sc. II	B.Sc. II	PAS104L (JK-SPLab)	PAS103 (SP) CR-11	PAS103 (SP) CR-11	Lunch	PAS104 (JK) CR-7	PAS104 (JK) CR-7			
	M.Sc. II	PAS407A (AC) CR-7	PAS406(A/SV) CR-7	PAS528(DSV) CR-11	Lunch	IDG CR-8	PAS417A (BCC) CR-11	PAS205L(SV-SF) Lab		
B.Sc. IV	B.Sc. IV	MTH103 (GS) CR-8	PAS212 (AC) CR-8	PAS206(RKS) CR-8	Lunch	PAS205 (SV) CR-8	Lunch			
	B.Sc. IV				Lunch	PAS316 (SP) CR-7	Lunch			
B.Sc. VI	B.Sc. VI			PAS356(NJ) CR-7	Lunch	PAS316 (SP) CR-7	PAS316 (SP) CR-7			
	M.Sc. IV				Lunch	PAS549(BCC) CR-11	PAS527(DSV) CR-11			
B.Sc. II	B.Sc. II	PAS104L (JK-SPLab)	PAS103 (SP) CR-11	PAS103 (SP) CR-11	Lunch	PAS104 (JK) CR-7	PAS104 (JK) CR-7			
	M.Sc. II	PAS407A (AC) CR-7	PAS406(A/SV) CR-7	PAS528(DSV) CR-11	Lunch	IDG CR-8	PAS417A (BCC) CR-11	PAS205L(SV-SF) Lab		
B.Sc. IV	B.Sc. IV	MTH103 (GS) CR-8	PAS212 (AC) CR-8	PAS206(RKS) CR-8	Lunch	PAS205 (SV) CR-8	Lunch			
	B.Sc. IV				Lunch	PAS316 (SP) CR-7	Lunch			
B.Sc. VI	B.Sc. VI			PAS356(NJ) CR-7	Lunch	PAS316 (SP) CR-7	PAS316 (SP) CR-7			
	M.Sc. IV				Lunch	PAS549(BCC) CR-11	PAS527(DSV) CR-11			
B.Sc. II	B.Sc. II	PAS104L (JK-SPLab)	PAS103 (SP) CR-11	PAS103 (SP) CR-11	Lunch	PAS104 (JK) CR-7	PAS104 (JK) CR-7			
	M.Sc. II	PAS407A (AC) CR-7	PAS406(A/SV) CR-7	PAS528(DSV) CR-11	Lunch	IDG CR-8	PAS417A (BCC) CR-11	PAS205L(SV-SF) Lab		
B.Sc. IV	B.Sc. IV	MTH103 (GS) CR-8	PAS212 (AC) CR-8	PAS206(RKS) CR-8	Lunch	PAS205 (SV) CR-8	Lunch			
	B.Sc. IV				Lunch	PAS316 (SP) CR-7	Lunch			
B.Sc. VI	B.Sc. VI			PAS356(NJ) CR-7	Lunch	PAS316 (SP) CR-7	PAS316 (SP) CR-7			
	M.Sc. IV				Lunch	PAS549(BCC) CR-11	PAS527(DSV) CR-11			
B.Sc. II	B.Sc. II	PAS104L (JK-SPLab)	PAS103 (SP) CR-11	PAS103 (SP) CR-11	Lunch	PAS104 (JK) CR-7	PAS104 (JK) CR-7			
	M.Sc. II	PAS407A (AC) CR-7	PAS406(A/SV) CR-7	PAS528(DSV) CR-11	Lunch	IDG CR-8	PAS417A (BCC) CR-11	PAS205L(SV-SF) Lab		
B.Sc. IV	B.Sc. IV	MTH103 (GS) CR-8	PAS212 (AC) CR-8	PAS206(RKS) CR-8	Lunch	PAS205 (SV) CR-8	Lunch			
	B.Sc. IV				Lunch	PAS316 (SP) CR-7	Lunch			
B.Sc. VI	B.Sc. VI			PAS356(NJ) CR-7	Lunch	PAS316 (SP) CR-7	PAS316 (SP) CR-7			
	M.Sc. IV				Lunch	PAS549(BCC) CR-11	PAS527(DSV) CR-11			

Dr. Prof. B. C. Chaubey, OSKS; Prof. OSKS Sastri, HC; Prof. Hun Chand, SV; Dr. S. Verma, AC; Dr. A. Chatterjee, DSV; Dr. D.S. Verma, JK; Dr. J. Kumar, RKS; Dr. R.K. Singh, NJ; Dr. Noorjahan SP; Dr. Surender Pratap, GS; Dr. Gourishankar Sahoo  
 Dr. Sagun Manjori BA; To Be Announced separately (by email) for Research & development talks or NET/GATE/JEST Exams (informal talks)

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Department of Physics and Astronomical Science, Shahpur Campus  
Time-Table Monsoon 2021 w.e.f. 01-10-2021

Day/Time	Class	8:30-9:25	9:30-10:25	10:30-11:25	11:30-12:25	12:30-1:25	1:30-2:25	2:30-3:25	3:30-4:25	4:30-5:25
	B.Sc. I		PAS5101(SV)(11)	PAS5102(AQ)(11)	LUNCH	LUNCH	PAS5103(SB)(11)			
	M.Sc. I	PAS8104(AQ)(8)	PAS8102(SP)(8)	PAS8101(SV)(8)	LUNCH	PAS8107(IKS)(BCC)(8)	PAS8103(GSS)(8)			
	B.Sc. III	MTH101(TBA)(7)	PAS203(JK)(7)	PAS201(RKS)(7)	LUNCH	PAS203L(JK+RP)(Lab1)		MTH101(TBA)(11)		
Mon	B.Sc.V		PAS355L(GSS+RP)(Lab2)	PAS318(DSV)(Lab2)	PAS355(GSS)(8)	LUNCH	PAS356(NJ)(8)	PAS302(SP)(8)	PAS356L(NJ+GSS)(Lab2)	
	M.Sc. III				PAS408A(7)		PAS81(HC)(7)	PAS409A(OSKS)(7)	PAS423(SP+DSV)(Lab1)	
	B.Sc. I		PAS5101(SV)(11)	PAS5102(AQ)(11)	LUNCH	PAS5106(IKS)(BCC)(11)	LUNCH	PAS5103(MK)(11)		
Tue	M.Sc. I	PAS8104(AQ)(8)	PAS8102(SP)(8)	PAS8101(SV)(8)	LUNCH	PAS8105L(Lab2)(AC+RP)				
	B.Sc. III	MTH101(TBA)(7)	PAS203(JK)(7)	PAS201(RKS)(7)	LUNCH	PAS203L(JK+RP)(Lab1)		PAS202(NJ)(7)		
	B.Sc.V			PAS318(DSV)(Lab2)	PAS356(NJ)(8)	PAS355(GSS)(8)	LUNCH	PAS302(SP)(8)	PAS302L(SP+JK)(Lab2)	
	M.Sc. III				PAS408A(7)	PAS411A(DSV)(7)	LUNCH	PAS409A(OSKS)(Lab1)	PAS381(HC)(7)	
	B.Sc. I		PAS5101(SV)(11)	PAS5102(AQ)(11)	LUNCH	LUNCH	PAS5104L(Chem Lab)(PK+RK)		PAS5106(IKS)(BCC)(11)	
	M.Sc. I	PAS8104(AQ)(8)	PAS8102(SP)(8)	PAS8101(SV)(8)	LUNCH	PAS8105L(Lab2)(AC+RP)				
Wed	E.Sc. III	MTH101(TBA)(7)	PAS203(JK)(7)	PAS201(RKS)(7)	LUNCH	PAS202L(NJ+BCC)(Lab1)		PAS202(NJ)(7)		
	B.Sc.V			PAS318(DSV)(Lab2)	PAS356(NJ)(8)	PAS355(GSS)(8)	LUNCH	PAS302(SP)(8)	PAS302L(SP+JK)(Lab2)	
	M.Sc. III				PAS408A(7)	PAS411A(DSV)(7)	LUNCH	PAS409A(OSKS)(7)	PAS581L(HC+RKS)(Lab1)	
	B.Sc. I		PAS5101(SV)(11)	PAS5102(AQ)(11)	LUNCH	PAS5106(IKS)(BCC)(11)	LUNCH	PAS5105L(Lab1)(SV+AC)		
	M.Sc. I	PAS8104(AQ)(8)	PAS8102(SP)(8)	PAS8101(SV)(8)	LUNCH	PAS8106L(Lab2)(RP+RP)				
	B.Sc. III	MTH101(TBA)(7)	PAS203(JK)(7)	PAS201(RKS)(7)	LUNCH	PAS201L(RKS+HC)(Lab1)		PAS202(NJ)(7)		
Thu	B.Sc.V			PAS318(DSV)(Lab2)	PAS356(NJ)(8)	PAS355(GSS)(8)	LUNCH	PAS302(SP)(8)	PAS356L(NJ+GSS)(Lab2)	
	M.Sc. III				PAS408A(7)	PAS411A(DSV)(7)	LUNCH	PAS581(HC)(7)	PAS423(SP+DSV)(Lab1)	
	B.Sc. I		PAS5106(IKS)(BCC)(11)	PAS5105L(Lab1)(SV+AC)	LUNCH		LUNCH	PAS5104L(Chem Lab)(PK+RK)		
Fri	M.Sc. I				LUNCH		PAS8103(GSS)(8)	PAS8107(IKS)(BCC)(8)		
	B.Sc. III	MTH101(TBA)(7)	PAS201L(RKS+HC)(Lab1)		LUNCH	PAS202L(NJ+BCC)(Lab1)		PAS202(NJ)(7)		
	B.Sc.V			PAS318(DSV)(11)	PAS318L(DSV+SV)(Lab2)		LUNCH	PAS355L(GSS+RP)(Lab2)	PAS356(NJ)(8)	
	M.Sc. III				PAS409A(OSKS)(11)	PAS581(HC)(11)	LUNCH	PAS411A(DSV)(11)	PAS581L(HC+RKS)(Lab1)	

SV-Dr. Surender Verma; DSV-Dr. Dalip Singh Verma; SP-Dr. Surender Verma; JK-Dr. Jagdish Kumar; AC-Dr. Ayan Chatterjee; BCC-Prof. B. C. Chauhan; OSKS-Prof. OSKS  
Gastri; GSS-Dr. Gouri Shanker Sahoo; RKS-Dr. Rajesh Kumar Singh; NJ-Dr. Noor Jahan; HC-Prof. Hum Chand(HOD).

Department of Physics and Astronomical Science: Time-Table for classes during Spring Semester, 2021

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Day	Semester	8:30-9:30AM	9:30-10:30AM	10:30-11:30PM	11:30-12:30PM	12:30-1:30PM	1:30-2:30PM	2:30-3:30PM	3:30-4:30PM	4:30-5:30PM
Mon	B.Sc. II	PAS407A(A/C)(CR7)	PAS103(SP)(CR11)	PAS104(J/K)(CR11)	SKT 201(VS)(CR11)	Lunch	CCS102(NG)(CR11)	CCS102(M)(CR11)		
	M.Sc. II			PAS 405 (DSV)(CR7)	PAS406A(SV)(CR7)	Lunch	PAS 415 (PKS + DSV)			
	B.Sc. IV		PAS212 (A/C)(CR9)	PAS206 (PKS)(CR8)	PTH103T (GSS)(CR-8)	Lunch	PAS316(SP+GSS)(Lab 1 and 2)		PAS303 (NU)(CR11)	PAS206L(PKS+)(Lab1)
	B.Sc. VI		PAS303L(NU+GSS)(Lab 1 and 2)	PAS319 (H/C)(CR8)	Lunch	PAS27(DSV)(CR11)	Lunch			PAS548/520(ALL)
Tue	M.Sc. IV			PAS49(BCC)(Lab2)	PAS27(DSV)(CR11)	Lunch	CCS102(NG)(CR11)	CCS102(M)(CR11)		
	B.Sc. II		PAS103(SP)(CR11)	PAS104(J/K)(CR11)	SKT 201(VS)(CR11)	Lunch	PAS417A(BCC)(CR7)			
	M.Sc. II			PAS 405 (DSV)(CR7)	PAS406A(SV)(CR7)	Lunch	PAS417A(BCC)(CR7)	Lunch		
	B.Sc. IV		PAS212(LA/C-)(Lab1 and 2)	PAS206(RKS)(CR7)	PAS206(RKS)(CR7)	Lunch	PTH103(GSS)(CR8)	PAS205(SV)(CR8)		
Wed	B.Sc. VI		PAS319(H/C)(CR8)	PAS316(SP)(CR8)	PAS316(SP)(CR8)	Lunch	PAS303(NU)(CR11)	PAS304(J/K)(Lab1)	PAS316(SP+GSS)(Lab 1 and 2)	
	B.Sc. IV		PAS304(L/K+)(Lab 1 and 2)	PAS316(SP)(CR8)	PAS303(NU)(Lab1)	Lunch	Lunch	PAS428A(OSKS)(Lab2)	PAS316(NU)(CR11)	PAS548/520(ALL)
	M.Sc. IV			PAS549(BCC)(Lab2)	PAS27(DSV)(Lab2)	Lunch	Lunch	PAS124(DSV)(CR11)	PAS104(L/K)(Comp Lab)	
	B.Sc. II			PAS104(L/K)(Comp Lab)	Lunch	Lunch	CCS102(LR)(K)(Chem Lab)			
Thur	M.Sc. II			PAS406A(SV)(CR7)	Lunch	Lunch	PAS556(BCC)(CR7)	PAS 528(GSS)(CR-7)		
	B.Sc. IV		PAS212 (A/C)(CR11)	PAS206(RKS)(CR11)	PAS206(RKS)(CR11)	Lunch	PAS212(LA/C+)(Lab 1 and 2)		PAS205(SV)(CR11)	PTH103(GSS)(CR11)
	B.Sc. VI			PAS303(NU)(CR8)	PAS319(H/C)(CR8)	Lunch	Lunch	PAS304(J/K)(CR8)	PAS304(L/K)(Lab 1 and 2)	
	M.Sc. IV			PAS549(BCC)(CR11)	PAS549(BCC)(CR11)	Lunch	Lunch	PAS428A(OSKS)(CR11)	PAS427(OSKS)(Comp Lab)	
Fri	B.Sc. II		PAS103(SP)(CR11)	PAS104(J/K)(CR11)	Lunch	Lunch	CCS102(LR)(K)(Chem Lab)		PAS103(L/NU)(Lab 1 and 2)	
	M.Sc. II			PAS407A(A/C)(CR7)	Lunch	Lunch	PAS556(BCC)(CR7)		PAS415(RKS DSV)(Lab 1 and 2)	
	B.Sc. IV		PAS 212(A/C)(CR-11)	PAS206L(PKS+)(Lab 1 and 2)	PAS319(H/C)(CR8)	Lunch	PAS205L(SV+)(Lab 1 and 2)	PAS 303(NU)(CR-11)	PTH103(GSS)(CR7)	PTH103T(GSS)(CR7)
	M.Sc. IV			PAS427(OSKS)(Comp Lab)	PAS427(OSKS)(Comp Lab)	Lunch	Lunch	PAS428A(OSKS)(CR11)	PAS316(SV)(CR8)	PAS548/520(ALL)

PAS406A - 520  
 PAS205 - 66  
 PAS205L - 24  
 PAS548 - 67

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# Central University of Himachal Pradesh

[Established under Central Universities Act, 2009]



## Minutes OF

**12th BOARD OF STUDIES MEETING OF THE School of Physical &  
Material Science, Department of Physics & Astronomical Science  
HELD ON 24th OF September, 2021 AT 3:00PM**

**VENUE:** Seminar hall, Central University of Himachal Pradesh, Campus  
Shahpur, District - Kangra, Himachal Pradesh - 176206 (Online Mode)

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**CENTRAL UNIVERSITY OF HIMACHAL PRADESH, CAMPUS  
SHAHPUR, DISTRICT KANGRA, HIMACHAL PRADESH**

Website: [www.cuhimachal.ac.in](http://www.cuhimachal.ac.in)

Central University of Himachal Pradesh  
School of Physical and Material Science, Department of Physics and  
Astronomical Science, Campus, Shahpur, District - Kangra, Himachal  
Pradesh-176206

**12th BOARD OF STUDIES MEETING OF THE School of Physical &  
Material Science, Department of Physics & Astronomical Science  
HELD ON 24TH OF September, 2021 AT 3:00PM**

**VENUE:** Seminar hall, Central University of Himachal Pradesh, Campus  
Shahpur, District - Kangra, Himachal Pradesh - 176206 **(Online Mode)**

**MINUTES**

The following members were present:-

- |    |                                   |                |
|----|-----------------------------------|----------------|
| 1. | Prof Hum Chand<br>Dean/Head SoPMS | Chairman       |
| 2. | Prof. Raman Sharma                | Subject Expert |
| 3. | Prof. Vimal Sharma                | Subject Expert |
| 4. | Prof. O.S.K.S. Sastri             | Member         |
| 5. | Prof. Bhag Chand Chauhan          | Member         |



6. Dr. Rajender Kumar  
7. Dr. Dalip Singh Verma

VC- Nominee  
Member

Dr. Mahesh Kulharia (VC Nominee) could not attend the meeting due to another assignment.

**MINUTES OF BOARD OF STUDIES**

Minutes for the 12th Meeting of Board of Studies (BoS) of the Department of Physics and Astronomical Sciences, (DPAS) held on 24th September 2021 at Shahpur campus through Online Mode. The decisions taken in various items of the agenda and record of discussions held are as under:

ITEM.	Description	Annexure
Item No. PAS-BOS-12/ 21-1	To confirm the minutes of the Eleventh Board of Studies Meeting held on 03rd December 2020. at 3.00 P.M. at Shahpur Campus.	Annexure-I
<b>Decision:</b>	All BoS members unanimously confirmed "The minutes of the Eleventh Board of studies Meeting held on 03rd December 2020. at 3.00 P.M. at Shahpur Campus" .	
PAS-BOS-12/ 21-2	To deliberate on the "In-principle approval of modification/change/addition etc of BSc (3+1) yr and MSc (1+1) yr syllabus from the Academic year 2021-22) as required in National Educational Policy-2020." Various changes/revisions in the syllabus from time to time will be required in the ensuing BoS Meetings.	
<b>Decision:</b>	All BoS members agreed that various changes/revisions in the syllabus from time to time will be required, so the department should be allowed to make changes in the planned pattern as and when required in future as per University and NEP-2020 provisions, and put them for approval in subsequent BoS. Also, the department can take time to prepare the detailed syllabus as per the new course structure and put it up for approval in the next BoS.	

*ms*  
*DL*      *JK*



PAS-BOS-12/ 21-3	Scheme of Syllabus for B.Sc. Physics Honours (3+1) yr as Per National Education Policy (NEP) and Guidelines provided by Central University of Himachal Pradesh.	
<b>Decision:</b>	BoS members have given detailed input about the structure of courses. All the changes have been incorporated within the NEP-2020 guidelines given by the University. The detailed course structure is given in the (Annexure-II). BoS members feel that the courses for 4th year need some more discussion. As a result, for the 4th year, only the course structure has been finalised and the details about the exact course name along with a detailed syllabus department should be put up for approval in the next BoS.	Annexure II
PAS-BOS-12/ 21-4	Scheme of Syllabus for B.Sc. Physics Research (3+1)yr as per National Education Policy (NEP) and Guidelines provided by University Level committee Central University of Himachal Pradesh.	
<b>Decision:</b>	BoS members have given detailed input about the structure of courses. All the changes have been incorporated within the NEP-2020 guidelines given by the University. The details about the agreed course structure are given in Annexure-III. BoS members feel that the courses for the 4th year need some more discussion. As a result, for 4th year, only the course structure has been finalised and the details about the exact course name along with the detailed syllabus department should be put up for approval in the next BoS	Annexure-III
PAS-BOS-12/ 21-5	Scheme of Syllabus for M.Sc. Physics (2) year as Per National Education Policy (NEP) and Guidelines provided by University Level committee Central University of Himachal Pradesh.	
<b>Decision:</b>	BoS members have given detailed input about the structure of courses. All the changes have been incorporated within the NEP-2020 guidelines given by the University. The details about the agreed course is given in the Annexure-IV.	Annexure-IV
PAS-BOS-12/ 21-6	Scheme of Syllabus for Ph.D. course work as Per National Education Policy (NEP) and Guidelines provided by Central University of Himachal Pradesh University Level committee.	
<b>Decision:</b>	BoS members have given detailed input about the structure of courses. All the changes have been incorporated within the NEP-2020 guidelines given by the University. The details about	Annexure-V

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	the agreed courses are given in the Annexure-V.	
PAS-BOS-12/ 21-7	Detailed Syllabus of B.Sc. Physics Honours/Research (3+1) yr courses.	
<b>Decision:</b>	The BoS members have given the suggestion regarding the course structure. Given the fact that the entire structure has been changed as per NEP-2020, so BoS members agreed that the department can take time and put up the detailed syllabus as per the approved course structure (agenda point 3 and 4 above ) for approval in the next BoS.	
PAS-BOS-12/ 21-8	Detailed Syllabus of M.Sc. Physics 2 yrs courses.	
<b>Decision:</b>	The BoS members have given the suggestion regarding the course structure (e.g see agenda point 5). Given the fact that the entire structure has been changed as per NEP, so BoS members agreed that the department can take time and put up the syllabus as per the approved course structure (agenda point 5 ) for approval in the next BoS meeting, along with the detailed syllabus Ph.D. course work as well (as per course structure in agenda point 5).	
PAS-BOS-12/ 21-9	Exit/Entry Option for B.Sc Physics and MSc Physics Students after Completion of Even Semester of course.	As Per NEP Guidelines Annexure-VI
<b>Decision:</b>	All members of BoS agreed on the Exit/Entry Option for B.Sc Physics and MSc Physics As Per the NEP-2020 Guidelines.	
PAS-BOS-12/ 21-10	Adoption of NEP Guidelines as Proposed by the Committee constituted by Central University of Himachal Pradesh for Implementation of National Education Policy 2020 from Academic Session 2021-22.	
<b>Decision:</b>	All members of BoS have agreed on the Adoption of NEP Guidelines as Proposed by the Committee constituted by Central University of Himachal Pradesh for Implementation of National Education Policy-2020 from Academic Session 2021-22.	
PAS-BOS-12/	Approval of the synopsis of Ms. Shikha Awasthi :	Annexure

*Handwritten signatures and initials in blue ink.*

21-11	<b>Title:</b> Numerical Simulation of Light Nuclei <b>Supervisor:</b> Prof. (Dr.) O.S.K.S. Sastri.	VII
<b>Decision:</b>	The BoS members have approved the above synopsis of Ms. Shikha Awasthi.	
PAS-BOS-12/ 21-12	The item from Chair: Any other items.	
(i)	For the information of BoS, Prof. Hum Chand has reported that his 4 students (Mr. Parveen Kumar, Mr. Vineet Ojha, and Mr. Sunil Malik, and Ms. Sapna Mishra) which was registered with him at ARIES before joining CUHP in 2019, have defended their thesis in the past year and one student (Ms. Priyanka Jalan) has submitted the thesis. Now only two ARIES students (Mr. Vibhor Nagi and Mr. Vivek Jha) are registered with him whose thesis is yet to be submitted. Prof. Hum Chand has requested that he should be allowed to continue to guide these students so that they can smoothly finish their thesis work soon. This is just for the information of BoS and for the record of the Department of Physics and Astronomical Sciences.	
<b>Decision</b>	The point was noted, and BoS members agreed that Prof. Hum Chand can continue to guide the remaining two ARIES students whose thesis is yet to be submitted so that they can smoothly finish their thesis work soon.	
(ii)	HoD Physics also informed the BoS members that our department has signed an MoU with ARIES on 28th June 2021. Also, a detailed proposal MoU has been prepared between CUHP and ISRO, which has been approved by the Academic council of CUHP and ISRO Head-Quater Directorate of Space Situational Awareness and Management (DSSAM). This MoU will be signed soon and it will help to set up a 1m-class telescope at CUHP to foster the research facility requirement of the astronomy group of the department.	
<b>Decision</b>	All the BoS members appreciated such initiative and put emphasis on the development of research infrastructure and facilities at high priority.	

*Approved over email*  
Prof. Raman Sharma

Professor, HPU

(Subject Expert-External)

*(Approved over email)*

Prof. Vimal Sharma

Associate Professor, NIIT

(Subject Expert-External)

*Blessar*

Prof. O.S.K.S. Sastri

(Member)

*Approved by email*  
Dr. Rajender Kumar *asallan*

(VC Nominee)

*[Signature]*

Prof. Bhag Chand Chauhan

(Member)

*[Signature]*  
Dr. Dalip Singh Verma

(Member)

*[Signature]*  
Prof. Hum Chand *24.09.2021*  
Head DPAS & Dean SoPMS





Hum Chand <humchand@hpcu.ac.in>

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**Minuets of the 12th DPAS BoS Meeting held on 24 September 2021 (3:00pm)**

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**Mahesh Kulharia** <kulharia@hpcu.ac.in>

Sun, Sep 26, 2021 at 5:26 PM

To: HOD Physics & Astronomical Science <hod\_phy@hpcu.ac.in>

Approved in toto.  
regards  
[Quoted text hidden]





Hum Chand <humchand@hpcu.ac.in>

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## Minuets of the 12th DPAS BoS Meeting held on 24 September 2021 (3:00pm)

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Rajender Kumar <rajender.cuhp@gmail.com>

Sun, Sep 26, 2021 at 6:04 PM

To: HOD Physics & Astronomical Science <hod\_phy@hpcu.ac.in>

Cc: "bramans70@yahoo.co.in" <bramans70@yahoo.co.in>, VIMAL SHARMA <vmisharma@nith.ac.in>, "Prof. B. C. Chauhan" <bcawake@hpcu.ac.in>, SastriOsks Osks <sastri.osks@hpcu.ac.in>, dalip Verma <dalipverma2003@yahoo.co.in>, Rohit Dhiman <rohitdhiman422@hpcu.ac.in>, "kulharia@hpcu.ac.in" <kulharia@hpcu.ac.in>, Dean Physical & Material Science <dean\_spms@hpcu.ac.in>, Hum Chand <humchand@hpcu.ac.in>

Dear Sir  
Approved from my side.  
Thanks  
Rajender  
[Quoted text hidden]

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**Dr.Rajender Kumar**  
**Associate Professor & Head**  
**Department of Chemistry and Chemical Sciences**  
**School of Physical and Material Sciences**  
**Central University of Himachal Pradesh ,**  
**District Kangra, Himachal Pradesh 176206**  
**Email; rajender@cuhimachal.ac.in, rajender.cuhp@gmail.com,rajender.cuhp@hpcu.ac.in**  
**Mob:+917018623845**



