



# Sant Baba Bhag Singh UNIVERSITY

Village: Khiala: PO: Padhiana, Distt: Jalandhar 144030  
Website: www.sbbsuniversity.ac.in Phone: 0181-2711163 Fax: 0181-2711555

Ref. No: SBBSU/UIS/PS/2025/434(c)

Date: 20/5/25


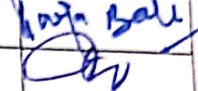
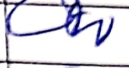

## Department of Physical Sciences

### Meeting Circular

It is my pleasure to inform you that you have been appointed as a member of Board of Studies (BOS) for the discipline of Physics for the approval of scheme & syllabus of BSc./BSc. (Hons.)/BSc.(Hons.) with research in Physics Batch 2025 and Physics courses syllabus in BSc. Physical Sciences/Discipline Specific (3/4 year) batch 2024 offered by Department of Physical Sciences on 28<sup>th</sup> May 2025 through online mode.

### List of the BOS members:

S.N o.	Name	Subject	Designation	Institute	Position	Signature
1	Dr. Vijay Dhir	CSE	Dean Academics	SBBSU	Chairperson	
2	Dr. Shweta Singh	Microbiology	Dean UIS	UIS	Member	
3	Dr. Nareshpal Singh Saini	Physics	(Retd.) Professor	Department of Physics, Guru Nanak Dev University, Amritsar, India  Email: <a href="mailto:nssaini@yahoo.com">nssaini@yahoo.com</a> , <a href="mailto:nssaini.phy@gndu.ac.in">nssaini.phy@gndu.ac.in</a> ; Mobile: +91-9417384692, Office: +91-183-2258802	External subject Expert (Physics)	Present online
	Dr. Nisha Sharma	Chemistry	Head, Physical Sciences, Professor (Chemistry)	UIS	Internal Member	
5	Dr. Honey Sharma	Physics	Coordinator Physical Sciences, Associate Professor (Physics)	UIS	Internal Member	
6	Dr. Satnam Singh	Physics	Assistant Professor	UIS	Internal Member	
7	Dr. Rampal	Physics	Assistant Professor	UIS	Internal Member	
8	Ms. Arwinder Kaur	Physics	Assistant Professor	UIS	Internal Member	
9	Dr Jagdeep Kaur (Dean UIET) / Her representative				Member	

10	Dr Aneet Kumar (Dean UIE) /His representative	Member	
11	Dr. Pooja Bali (Dy Dean UIL)/ Her representative	Member	
12	Dr. Ajay Pathania (Dy Dean UICM)/ His representative	Member	
13	Dr. Nirmal Kaur (Dy Dean UICAIS)/Her representative	Member	

You are requested to attend the BOS meeting on 28<sup>th</sup> May 2025 at 11:00 am onwards through online mode. All are requested to join online as per the link details provided through mail.

The detailed agenda of the meeting will be as follow

1. Discussed and approved one year (3<sup>rd</sup> & 4<sup>th</sup> semester) scheme, course code, credits & syllabus of physics for B.Sc. Physical Sciences/Discipline Specific (3/ 4 year) (UG045) and B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics as per New Education Policy 2020 for the admissions of session 2025-2026 onwards.
2. Discussed and approved major courses of physics for 3<sup>rd</sup> & 4<sup>th</sup> semester offered in B.Sc. Physical Sciences/Discipline Specific (3/4 year UG programme), 1<sup>st</sup> and 2<sup>nd</sup> semester in B.Sc./B.Sc. (Hons.)/ B.Sc. (Hons.) with research in Physics as per New Education Policy 2020 for the admissions of session 2025-2026 onwards.
3. Amendments in the course curriculum on the basis of suggestions by the experts regarding scheme and syllabus

  
Dr Honey Sharma

CoD (Physical Sciences)

  
Dr Nisha Sharma

HOD (Physical Sciences)

  
Dr. Shweta Singh

Dean (UIS)





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## Department of Physical Sciences

Ref. No. SBBSU/UIS/PS/2025/436(C)

Date: 30/5/25

### Proceedings of Meeting of Board of Studies (BoS) of Department of Physical Sciences

The meeting of Board of Studies (BOS) meetings for the approval of scheme & syllabus of B.Sc/B.Sc. (Hons.)/BSc.(Hons.) with research in Physics (as per NEP 2020) for batch 2025 onwards and Physics syllabus for BSc. Physical Sciences/Discipline Specific (3/4 year), batch 2024 offered by Department of Physical Sciences was held on 28<sup>th</sup> May 2025 from 11:00 AM onwards through online mode (Google Meet).

Following members were present in the meeting and approved the BOS agenda:

S.N o.	Name	Subject	Designation	Institute	Position	Signature
1	Dr Vijay Dhir	CSE	Dean Academics	SBBSU	Chairperson	
2	Dr Shweta Singh	Microbiology	Dean UIS	UIS	Member	
3	Dr. Nareshpal Singh Saini	Physics	(Retd.) Professor	Department of Physics, Guru Nanak Dev University, Amritsar, India  Email: <a href="mailto:nssaini@yahoo.com">nssaini@yahoo.com</a> , <a href="mailto:nssaini.phy@gndu.ac.in">nssaini.phy@gndu.ac.in</a> n : Mobile: +91-9417384692, Office: +91-183-2258802	External subject Expert (Physics)  Present online	
4	Dr. Nisha Sharma	Chemistry	Head, Physical Sciences, Professor (Chemistry)	UIS	Internal Member	
5	Dr. Honey Sharma	Physics	Coordinator Physical Sciences, Associate Professor (Physics)	UIS	Internal Member	
6	Dr. Satnam Singh	Physics	Assistant Professor	UIS	Internal Member	
7	Dr. Rampal	Physics	Assistant Professor	UIS	Internal Member	
8	Ms. Arwinder Kaur	Physics	Assistant Professor	UIS	Internal Member	
9	Dr. Jagdeep Kaur (Dean UIET) / Her representative				Member	
10	Dr. Aneet Kumar (Dean UIE) /His representative				Member	
11	Dr. Pooja Bali (Dean UIL)/ Her representative				Member	
12	Dr. Ajay Pathania (Dy Dean UICM)/ His representative				Member	
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Following agenda items were discussed and approved as follow:

1. Discussed and approved one year (3<sup>rd</sup> & 4<sup>th</sup> semester) scheme, course code, credits & syllabus of physics for B.Sc. Physical Sciences/Discipline Specific (3/ 4 year) (UG045) and B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics as per New Education Policy 2020 for the admissions of session 2025-2026 onwards.
2. Discussed and approved major courses of physics for 3<sup>rd</sup> & 4<sup>th</sup> semester offered in B.Sc. Physical Sciences/Discipline Specific (3/4 year UG programme), 1<sup>st</sup> and 2<sup>nd</sup> semester in B.Sc./B.Sc. (Hons.)/ B.Sc. (Hons.) with research in Physics as per New Education Policy 2020 for the admissions of session 2025-2026 onwards.
3. Amendments in the course curriculum on the basis of suggestions by the experts regarding scheme and syllabus.

## 1. Details of Proceedings of BoS Meeting & Changes approved as per the agenda are as follows:-

Approved one year (3<sup>rd</sup> & 4<sup>th</sup> semester) scheme, course code, credits & syllabus of physics for B.Sc. Physical Sciences/Discipline Specific (3/ 4 year) (UG045) and B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics as per New Education Policy 2020 for the admissions of session 2025-2026 onwards.

New Courses introduced & approved as per the agenda were as follows:

New Courses of Physics introduced in one year (3<sup>rd</sup> & 4<sup>th</sup> semester) for B.Sc. Physical Sciences/Discipline Specific (3/ 4 year) (UG045) and B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics as per New Education Policy 2020 for the admissions of session 2025-2026 onwards.

No.	Programme Name /Code	Course Code	Course/ Subject Name	Remarks / Observations by Experts/Stakeholders/BoS members)	Action Taken
1.	B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045)	PHY261	Statistical & Thermodynamics	New major courses of Statistical & Thermodynamics is introduced in 3 <sup>rd</sup> semester of B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045) as per NEP 2020	Incorporated in the curriculum. Implemented w.e.f Academic session 2025-2026
2.	B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045)	PHY273	Indian Knowledge System-II	New major courses of IKS-II having the content related to physics is introduced in 3 <sup>rd</sup> semester of B.Sc. Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045) as per NEP 2020	
3.	B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045)	PHY271	Analytical Method-2	New minor courses of Analytical Method-2 related to physics is introduced in 3 <sup>rd</sup> semester of B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (3 <sup>rd</sup> semester) (UG045) as per NEP 2020	
4.	B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045)	PHY263	Statistical & Thermodynamics (Practical)	New major courses of Statistical & Thermodynamics (Practical) is introduced in 3 <sup>rd</sup> semester of B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (3 <sup>rd</sup> semester)	





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				(UG045) as per NEP 2020	
5.	B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045)	PHY262	Wave & Optics	New major courses of Wave & Optics is introduced in 4 <sup>th</sup> semester of B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (4 <sup>th</sup> semester) (UG045) as per NEP 2020	
6.	B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045)	PHY264	Wave & Optics (Practical)	New major courses of Wave & Optics (Practical) is introduced in 4 <sup>th</sup> semester of B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045) as per NEP 2020	
7.	B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045)	PHY266	Analytical Method	New minor courses of Analytical Method related to physics is introduced in 4 <sup>th</sup> semester of B Sc Physical Sciences/Discipline Specific (3/ 4 year UG programme) (UG045) as per NEP 2020	
8.	B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	PHY 161	Indian Knowledge System in Physical Sciences	New major courses of Indian Knowledge System in Physical Sciences is introduced in 1 <sup>st</sup> sem of B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	
9.	B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	PHY 171	Mechanics	New major courses of Mechanics is introduced in 1 <sup>st</sup> sem of B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	Incorporated in the curriculum. Implemented w.e.f Academic session 2025-2026
10.	B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	PHY 163	Indian Knowledge System in Physical Sciences (Practical)	New major courses of Indian Knowledge System in Physical Sciences (Practical), introduced in 1 <sup>st</sup> sem of B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	
11.	B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	PHY162	Electricity & Magnetism	New major courses of Electricity & Magnetism, introduced in 2 <sup>nd</sup> sem of B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	
12	B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	PHY 164	Electricity & Magnetism (Practical)	New major courses of Electricity & Magnetism (Practical), introduced in 2 <sup>nd</sup> sem of B.Sc./B.Sc.(Hons.)/ B.Sc.(Hons.) with research in Physics	



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### 3. Other Suggestions of External Experts (Not covered above):

S. No.	Name of Expert	Designation/Address	Expert's suggestions	Action Taken
1	Dr. Nareshpal Singh Saini	(Retd.) Professor, Department of Physics, Guru Nanak Dev University, Amritsar, India Email: <a href="mailto:nssaini@yahoo.com">nssaini@yahoo.com</a> , <a href="mailto:nssaini.phy@gndu.ac.in">nssaini.phy@gndu.ac.in</a> Mobile: +91-9417384692, Office: +91-183-2258802	<ul style="list-style-type: none"> <li>Expert has appreciated the efforts of faculty and institute for well designing of syllabus of undergraduate programme as per NEP2020.</li> <li>Minor change in Statistical &amp; Thermodynamics in 3<sup>rd</sup> semester and Wave &amp; Optics in 4<sup>th</sup> semester.</li> <li>Minor change in Mechanics in 1<sup>st</sup> semester.</li> </ul>	Duly acknowledged. As per new Education policy 2020

As suggested by the experts, all amendments have been incorporated in scheme and syllabus.

Meeting ended with the thanks by Dean Academics.

Dr Honey Sharma (Associate Professor Physics)

Dr Rampal (Assistant Professor Physics)

Dr Satnam Singh (Assistant Professor Physics)  
Physics)

Ms. Arwinder Kaur (Assistant Professor

Dr Honey Sharma (Associate Professor Physics)  
Coordinator, Physical Sciences

Dr Nisha Sharma (Professor Chemistry)  
HOD, Physical Sciences

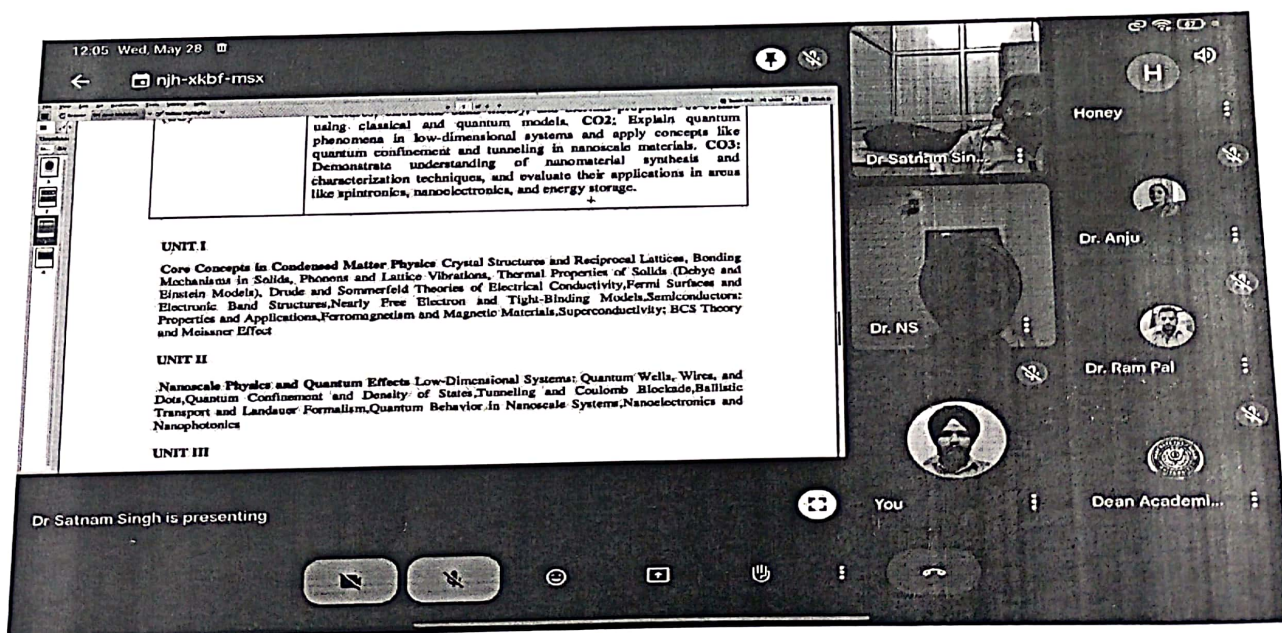
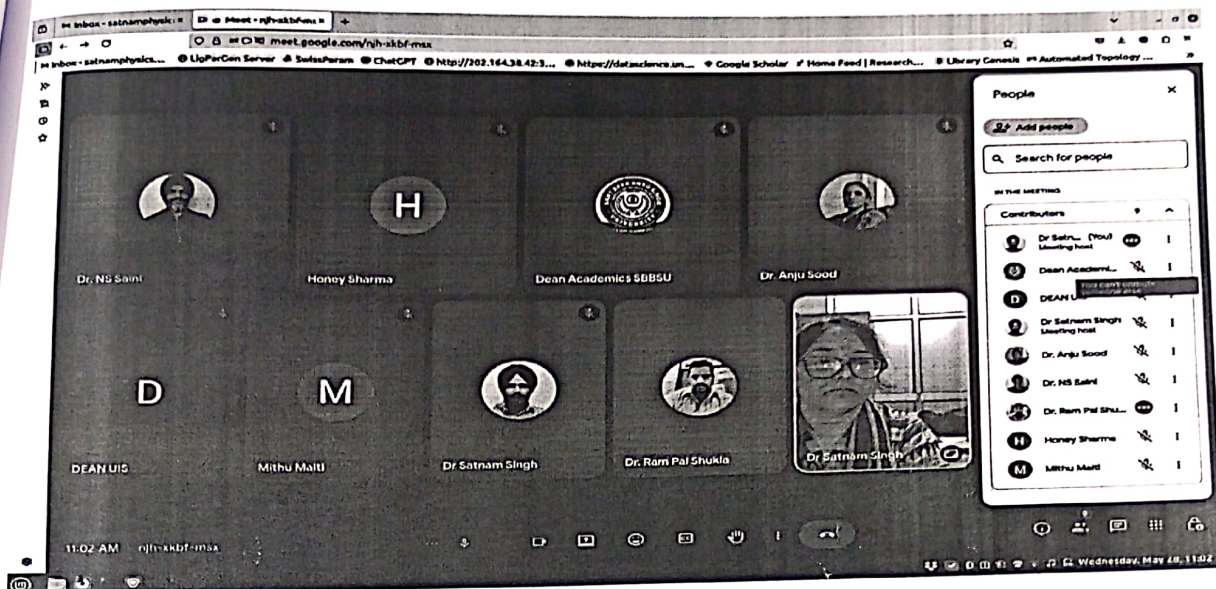
Dean Institute



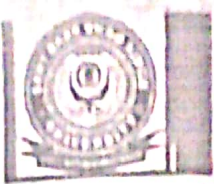


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# Sant Baba Bhag Singh University

(University Established under Punjab Act No. 0 of 2013)  
Vill. Khiala, P.O. Padhlana, Dist. Jalandhar, Punjab, INDIA

## External Expert Review Performa For Board of Studies

Name of External Expert : DR. NARESH PAL SINGH SAINI  
Discipline : PHYSICS  
Designation : PROFESSOR (Rtd)  
Organization (Name & Address) : P.F. Holy City Phase-I, Ajnala  
Road Bafra, Amritsar-143008  
Contact No. : 94173 84692  
E-Mail ID : N.S.SAINI@YAHOO.COM  
Date of Visit/Meeting : 28/05/2025

### Reviewer's Comments :-

There were some changes in the course  
scheme and content of syllabus. It was  
suggested in online that after making  
changes, revised syllabus should be prepared.  
Overall, schemes for both UG and PG classes  
were ~~are~~ good.

❖ Use extra sheet(s) if required.

Signature : DR. N. S. Saini  
Date : 03/05/2025

Handwritten signature of Coordinator/HOD's/Dean's

Coordinator/HOD's/Dean's

Dean Academics







# SANT BABA BHAG SINGH UNIVERSITY

VIII. Khiala, P.O. Padhiana, Distt. Jalandhar - 144 030 (PB.)

Recognized by UGC under Section 2(f) of UGC Act, 1956.

Ref. No. SBBSU/DA/25/116

Dated 24-5-2025

To


Dr. Nareshpal Singh Saini  
(Retd.) Professor, Department of Physics,  
Guru Nanak Dev University, Amritsar, India

**Subject: Invitation for Board of Studies meeting in the Department of Physical Sciences**

Respected Sir,

This is to bring to your kind notice that the meeting of Board of Studies (BOS) of Department of Physical Sciences, University Institute of Sciences, Sant Baba Bhag Singh University, Khiala, Jalandhar is going to be held on May 28<sup>th</sup> 2025 at 11:00 AM through online mode. You have been nominated as an expert for the BoS meeting by the competent authority. I feel honor to invite you as an expert for the approval of Course Scheme and Syllabus of Physics in B.Sc. Physical Sciences Batch 2024, B.Sc. /B.Sc. (Hons.)/B.Sc. (Hons.) with Research in Physics Batch 2025, M.Sc. (Hons.) Physics as per NEP 2020, Ph.D Physics coursework and interdisciplinary courses of Physics offered by Department of Physical Sciences. Your experience and expertise will be of great help to the Department and University. You are requested to kindly spare your valuable time to participate in the same on May 28<sup>th</sup> 2025 at 11:00 AM.

Regards

  
Dr. Vijay Dhir  
Dean Academics  
SBBS University



# Saint Baba Bhag Singh UNIVERSITY

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Website: www.abbauniversity.ac.in Phone: 0181-2711163 Fax: 0181-2711555

## Department of Physical Sciences

Ref. No: SBBSU/UIS/PS/2025/ 429

Date: 13/5/25

To

The Vice Chancellor

SBBS University,

Jalandhar

Subject: For the approval of the expert for BOS of Physical Sciences (Physics)

Respected Sir,

It is submitted that Department of Physical Sciences have to conduct BOS for the discipline of Physics for (B.Sc. Physical Sciences Batch 2024, BSc./ BSc. (Hons.) B.Sc.(Hons.with Research) in Physics 2025 onwards, M.Sc (Hons.) Physics and Ph.D Physics) and interdisciplinary courses of Physics offered by Physical Sciences as per NEP 2020 on 21<sup>st</sup> May 2025. Kindly approve the subject Expert from the following panel.

Physics			
S No.	Name	Designation	University/Institute
1	Dr. Nareshpal Singh Saini	(Retd.) Professor	Department of Physics, Guru Nanak Dev University, Amritsar, India Email: <a href="mailto:nssaini@yahoo.com">nssaini@yahoo.com</a> , <a href="mailto:nssaini.phy@gndu.ac.in">nssaini.phy@gndu.ac.in</a> Mobile: +91-9417384692, Office: +91-183-2258802
2	Dr. H.M Mittal	Professor	Department of Physics, Dr B.R Ambedkar National Institute of Technology, Jalandhar, Punjab-144011, Email ID: <a href="mailto:mittalhm@nitj.ac.in">mittalhm@nitj.ac.in</a> ; Mobile: 9417119665
3	Dr. Smriti Khosla	Associate Professor	Department of Physics, DAV University, Jalandhar, Email: <a href="mailto:samritis@yahoo.com">samritis@yahoo.com</a> , PH: 9815670705

Kindly approve Honorarium (Rs 2000/-) for the expert as well.

Thanking you in anticipation

Coordinator (Physical Sciences)

Recommended & forwarded  
to Dean Academics

13/5/25

Recommended

13/5/25

Head (Physical Sciences)

Serial No I  
Dr Nareshpal Singh  
Saini Prof. GNDU, ASR  
is approved.  
13/5/25







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Ref. No: SBBSU/UIS/PS/2025/434(a)

Date: 2.0.5.25

## Department of Physical Sciences

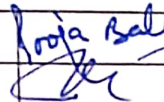
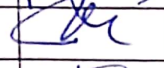
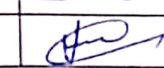
### Meeting Circular

It is my pleasure to inform you that you have been appointed as a member of Board of Studies (BOS) for the discipline of Physics for the approval of scheme & syllabus of MSc. (Hons.) Physics 2year programme (as per NEP 2020) offered by Department of Physical Sciences for batch 2025 onwards on 28<sup>th</sup> May 2025 through online mode.

### List of the BOS members:

S.N o.	Name	Subject	Designation	Institute	Position	Signature
1	Dr. Vijay Dhir	CSE	Dean Academics	SBBSU	Chairperson	
2	Dr. Shweta Singh	Microbiology	Dean UIS	UIS	Member	
3	Dr. Nareshpal Singh Saini	Physics	(Retd.) Professor	Department of Physics, Guru Nanak Dev University, Amritsar, India  Email: <a href="mailto:nssaini@yahoo.com">nssaini@yahoo.com</a> , <a href="mailto:nssaini.phy@gndu.ac.in">nssaini.phy@gndu.ac.in</a> ; Mobile: +91-9417384692, Office: +91-183-2258802	External subject Expert (Physics)	Present online
4	Dr. Nisha Sharma	Chemistry	Head, Physical Sciences, Professor (Chemistry)	UIS	Internal Member	
	Dr. Honey Sharma	Physics	Coordinator Physical Sciences, Associate Professor (Physics)	UIS	Internal Member	
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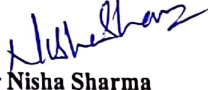
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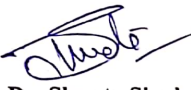
You are requested to attend the BOS meeting on 28<sup>th</sup> May 2025 at 11:00 am onwards through online mode. All are requested to join online as per the link details provided through mail.

The detailed agenda of the meeting will be as follow

1. Discussed and approved the scheme, credit and syllabus of MSc.(Hons.) Physics 2year (PG048) as per NEP 2020 for the admissions of session 2025-26 onwards.
2. Approved the incorporation of vision, mission, programme educational outcomes, programme outcome, programme specific outcomes & course outcomes in scheme and syllabus of MSc.(Hons.) Physics 2year (PG048) as per NEP 2020).
3. Discussed and approved the syllabus of major and discipline specific elective courses of MSc.(Hons.) Physics 2year (PG048) as per NEP 2020).
4. Discussed & approved various curriculum aspects on the basis of Feedback of stakeholders (Students/Alumni/Teachers/Employers) i.e. Incorporation of more elective/core courses on the basis of specialization oriented, technological advancements, practicability employable skills.
5. Amendments in the course curriculum on the basis of suggestions by the experts regarding scheme and syllabus.

  
Dr Honey Sharma  
CoD (Physical Sciences)

  
Dr Nisha Sharma  
HOD (Physical Sciences)

  
Dr. Shweta Singh  
Dean (UIS)





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## Department of Physical Sciences

Ref. No: S.BBSU/UIS/PS/2025/436(a)

Date: 30/5/25

### Proceedings of Meeting of Board of Studies (BoS) of Department of Physical Sciences

The Board of Studies (BOS) meetings for the approval of scheme & syllabus of MSc.(Hons.) Physics 2year programme (as per NEP 2020) offered by Department of Physical Sciences for batch 2025 onwards was held on 28<sup>th</sup> May 2025 from 11:00 AM onwards through online mode (Google Meet).

Following members were present in the meeting and approved the BOS agenda:

S.N o.	Name	Subject	Designation	Institute	Position	Signature
1	Dr. Vijay Dhir	CSE	Dean Academics	SBBSU	Chairperson	
2	Dr. Shweta Singh	Microbiology	Dean UIS	UIS	Member	
3	Dr. Nareshpal Singh Saini	Physics	(Retd.) Professor	Department of Physics, Guru Nanak Dev University, Amritsar, India Email: nssaini@yahoo.com, nssaini.phy@gndu.ac.in : Mobile: +91-9417384692, Office: +91-183-2258802	External subject Expert (Physics)	Present online
4	Dr. Nisha Sharma	Chemistry	Head, Physical Sciences, Professor (Chemistry)	UIS	Member	
5	Dr. Honey Sharma	Physics	Coordinator Physical Sciences, Associate Professor (Physics)	UIS	Member	
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12	Dr. Ajay Pathania (Dy Dean UICM)/ His representative				Member	
13	Dr. Nirmal Kaur (Dy Dean UICAIIS)/Her representative				Member	



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Following agenda items were discussed and approved as follow:

1. Discussed and approved the scheme, credit and syllabus of MSc.(Hons.) Physics 2year (PG048) as per NEP 2020 for the admissions of session 2025-26 onwards.
2. Approved the incorporation of vision, mission, programme educational outcomes, programme outcome, programme specific outcomes & course outcomes in scheme and syllabus of MSc.(Hons.) Physics 2year (PG048) as per NEP 2020).
3. Discussed and approved the syllabus of major and discipline specific elective courses of MSc.(Hons.) Physics 2year (PG048) as per NEP 2020).
4. Discussed & approved various curriculum aspects on the basis of Feedback of stakeholders (Students/Alumni/Teachers/Employers) i.e. Incorporation of more elective/core courses on the basis of specialization oriented, technological advancements, practicability employable skills.
5. Amendments in the course curriculum on the basis of suggestions by the experts regarding scheme and syllabus.

## 1. Details of Proceedings of BoS Meeting & Changes approved as per the agenda are as follows:-

1. Approved scheme and syllabus of new courses of physics introduced in MSc. (Hons.) Physics 2year (PG048) as per NEP 2020 for batch 2025 onwards.
2. Approved new course code for MSc.(Hons.) Physics 2year (PG048) as per NEP 2020.

New Courses introduced & approved as per the agenda were as follows:

New Courses of Physics introduced in MSc. (Hons.) Physics 2year (PG048) as per NEP 2020).

No.	Programme Name /Code	Course Code	Course/ Subject Name	Remarks / Observations by Experts/Stakeholders/BoS members)	Action Taken
1.	MSc. (Hons.) Physics 2year (PG048)	PHY551	Quantum Mechanics	As per NEP2020, In 2 year master programme, a major course on quantum mechanics with revised course content as per CSIR NET is introduced so that student acquire coherent knowledge of the subject.	Incorporated in the curriculum. Implemented w.e.f Academic session 2025-2026
2.	MSc.(Hons.) Physics 2year (PG048)	PHY552	Electrodynamics-I	As per NEP2020, In 2 year master programme, a major course on Electrodynamics-I with revised course content on various law of electrostatics & magnetostatics, electromagnetic waves as per CSIR NET is introduced so that student acquire coherent knowledge of the subject	
3	MSc.(Hons.) Physics 2year (PG048)	PHY554	Condensed Matter Physics-I	As per NEP2020, In 2 year master programme, a major course on Condensed Matter Physics -I with revised course content on magnetic materials, superconductivity, defects in solids & lattice vibrations as per CSIR NET is	





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				introduced so that student acquire coherent knowledge of the subject	
4	MSc.(Hons.) Physics 2year (PG048)	PHY651	Electrodynamics-II	As per NEP2020, In 2 year master programme, discipline specific elective course on Electrodynamics-II with revised course content on wave guides, relativistic formulation, moving charges as per CSIR NET is introduced so that student acquire coherent knowledge of the subject.	
5	MSc.(Hons.) Physics 2year (PG048)	PHY653	Radiation Physics	As per NEP 2020 In 2 year master programme, discipline specific elective course on Radiation physics has been introduced as per aspect of employability & industrial skill. Student can acquire coherent knowledge on radiation effects & its protective measures	Incorporated in the curriculum. Implemented w.e.f Academic session 2025-2026
6	MSc.(Hons.) Physics 2year (PG048)	PHY655	Plasma Physics	As per NEP 2020 In 2 year master programme, discipline specific elective course on Plasma physics has been introduced as per aspect of employability & industrial skill. Student can acquire coherent knowledge on electrostatics propagation of E.M waves in magnetised/Non magnetised plasma.	
7	MSc.(Hons.) Physics 2year (PG048)	PHY657	Non- Linear Dynamics	As per NEP 2020 In 2 year master programme, discipline specific elective course on Non linear dynamics has been introduced such that student can acquire coherent knowledge on linear stability analysis.	
8	MSc.(Hons.) Physics 2year (PG048)	PHY659	Condensed Matter Physics -II	As per NEP2020, In 2 year master programme, a discipline specific elective course on Condensed Matter Physics -II with revised course content on lattice specific heat, free electron theory, dielectrics as per CSIR NET is introduced so that student acquire coherent knowledge of the subject	
9	MSc.(Hons.) Physics 2year (PG048)	PHY661	Physics of Nanomaterial	As per NEP 2020 In 2 year master programme, discipline specific elective course on Physics of Nanomaterial has been introduced as per aspect of specialization, research, employability &	



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				industrial skill. Student can acquire coherent knowledge on different classes of nanomaterials & their industrial uses.
10	MSc.(Hons.) Physics 2year (PG048)	PHY663	Spintronics	As per NEP 2020 In 2 year master programme, discipline specific elective course on spintronics has been introduced as per aspect of specialization, research, employability & industrial skill. Student can acquire coherent knowledge on spin based devices, quantum dots.
11	MSc.(Hons.) Physics 2year (PG048)	PHY665	Polymers & Liquid Crystal	As per NEP 2020 In 2 year master programme, discipline specific elective course on polymers & liquid crystal has been introduced as per aspect of specialization, research, employability & industrial skill. Student can acquire coherent knowledge on different methods of preparing polymer & liquid crystal based materials
12	MSc.(Hons.) Physics 2year (PG048)	PHY652	Nanotechnology	As per NEP 2020 In 2 year master programme, discipline specific elective course on nanotechnology has been introduced as per aspect of specialization, research, employability & industrial skill. Student can acquire coherent knowledge of different techniques of synthesis & characterization of nanoparticles.
13	MSc.(Hons.) Physics 2year (PG048)	PHY654	Solar Cells and its Applications	As per NEP 2020 In 2 year master programme, discipline specific elective course on solar cells and its applications has been introduced as per aspect of specialization, research, employability & industrial skill. Student can acquire coherent knowledge of different types of solar cell and its industrial uses.
14	MSc.(Hons.) Physics 2year (PG048)	PHY656	Thin Film Technology	As per NEP 2020 In 2 year master programme, discipline specific elective course on Thin Film Technology has been introduced as per aspect of specialization, research, employability & industrial skill. Student can acquire coherent knowledge of different techniques of synthesis & characterization of thin films and their industrial uses.





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15	MSc.(Hons.) Physics 2year (PG048)	PHY658	Introduction to NMR Spectroscopy	As per NEP 2020 In 2 year master programme, discipline specific elective course on Introduction to NMR Spectroscopy has been introduced as per aspect of specialization, research, employability & industrial skill. Student can acquire coherent knowledge of different spectroscopic techniques of NMR, ESR and its applications.
16	MSc.(Hons.) Physics 2year (PG048)	PHY660	Physics of Low Dimensional Semiconductors	As per NEP 2020 In 2 year master programme, discipline specific elective course on Physics of Low Dimensional Semiconductors has been introduced as per aspect of specialization, research, employability & industrial skill. Student can acquire coherent knowledge of subject and acquire knowledge to work with quantum well and apply its applications in industry.
17	MSc.(Hons.) Physics 2year (PG048)	PHY662	Non-Linear Fibre Optics	As per NEP 2020 In 2 year master programme, discipline specific elective course Non-Linear Fibre Optics has been introduced as per aspect of specialization, research, employability & industrial skill. Student can acquire coherent knowledge of non linear fibre optics.
18	MSc.(Hons.) Physics 2year (PG048)	PHY664	Dissertation -II	As per NEP 2020 In 2 year master programme, major course on Dissertation - II has been introduced as per aspect of specialization, research, employability & industrial skill. Student can acquire coherent knowledge of hands on training, analysizing data, interpreting results.





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Other Suggestions of External Experts (Not covered above):

Name of Expert	Designation/Address	Expert's suggestions	Action Taken
Dr. Nareshpal Singh Saini	(Retd.) Professor, Department of Physics, Guru Nanak Dev University, Amritsar, India Email: <a href="mailto:nssaini@yahoo.com">nssaini@yahoo.com</a> , <a href="mailto:nssaini.phy@gndu.ac.in">nssaini.phy@gndu.ac.in</a> ; Mobile: +91-9417384692, Office: +91-183-2258802	To break the course content of Electrodynamics & condensed matter physics into two parts.	<ul style="list-style-type: none"> <li>Electrodynamics-I &amp; condensed matter physics-I is incorporated in second semester as the part of major courses.</li> <li>Electrodynamics-II &amp; condensed matter physics-II is incorporated in third semester as the part of discipline specific elective courses.</li> </ul>

As suggested by the experts, all amendments have been incorporated in scheme and syllabus.


Meeting ended with the thanks by Dean Academics.


  
Dr Honey Sharma (Associate Professor Physics)

  
Dr Rampal (Assistant Professor Physics)

  
Dr Satnam Singh (Assistant Professor Physics)

  
Ms. Arwinder Kaur (Assistant Professor Physics)

  
Dr Honey Sharma (Associate Professor Physics)  
Coordinator, Physical Sciences

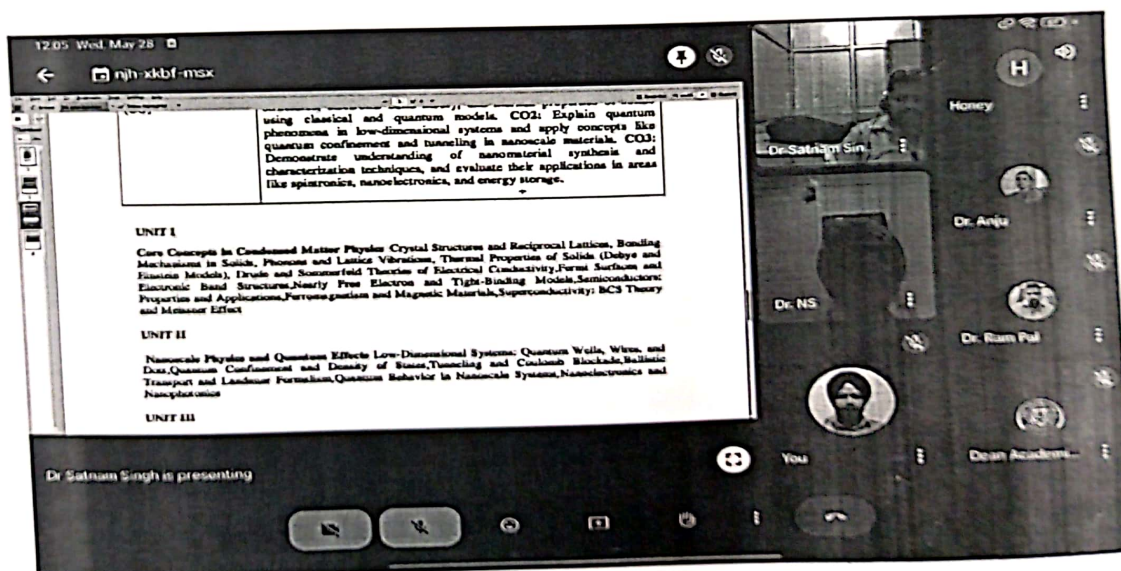
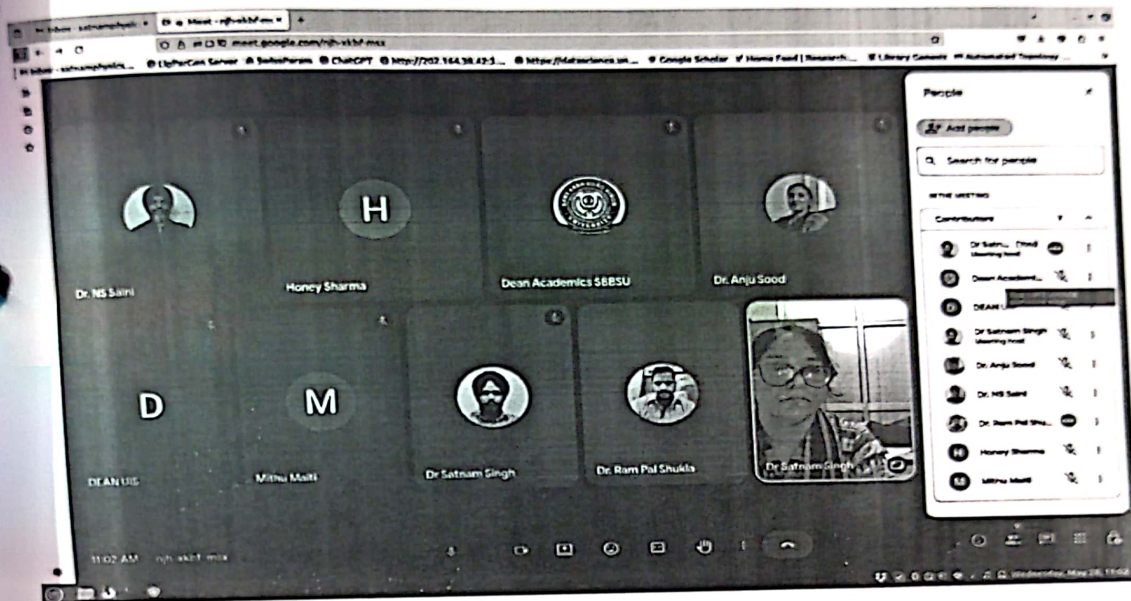
  
Dr Nisha Sharma (Professor Chemistry)  
HOD, Physical Sciences

  
Dean of Institute



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12:03 Wed, May 28  
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Course Title	Scientific and Technical Writing (Professional Communication Skills)
Type of course	Minor
L T P	0 0 4
Credits	2
Course prerequisite	B.Sc. with physics as one of major subjects
Course Objective	This course will help you write well-researched, organized, and correctly documented research papers.
Course Outcomes (CO)	Students will be able to: CO1: To find research resources, such as online resources (research databases, reference lists), and campus resources (writing centers, research librarian help) CO2: To evaluate the credibility of research sources, especially the online resources. CO3: To find reference articles including scholarly articles from journals and news articles from foreign and domestic news sources CO4: To learn strategies to avoid plagiarism and academic dishonesty such as using APA/MLA citation styles preparing a bibliography (reference list), etc.

UNIT-I  
Introduction to Technical Writing: what is research?, how do you structure a research paper?  
Basic Principles in Technical Writing: (Audience, Purpose, Organization, Flow, Style, Presentation)  
UNIT-II

Dr Satnam Singh is presenting

Dr Satnam Singh...  
Honey  
Dr. Anju  
Dr. NS  
Dr. Ram Pal  
Dean Academi...  
You

12:05 Wed, May 28  
← njh-xkbf.msx

Course Title	Scientific and Technical Writing (Professional Communication Skills)
Type of course	Minor
L T P	0 0 4
Credits	2
Course prerequisite	B.Sc. with physics as one of major subjects
Course Objective	This course will help you write well-researched, organized, and correctly documented research papers.
Course Outcomes (CO)	Students will be able to: CO1: To find research resources, such as online resources (research databases, reference lists), and campus resources (writing centers, research librarian help) CO2: To evaluate the credibility of research sources, especially the online resources. CO3: To find reference articles including scholarly articles from journals and news articles from foreign and domestic news sources CO4: To learn strategies to avoid plagiarism and academic dishonesty such as using APA/MLA citation styles preparing a bibliography (reference list), etc.

UNIT I  
Core Concepts in Condensed Matter Physics Crystal Structures and Reciprocal Lattices, Bonding Mechanisms in Solids, Phonons and Lattice Vibrations, Thermal Properties of Solids (Debye and Einstein Models), Drude and Sommerfeld Theories of Electrical Conductivity, Fermi Surfaces and Electronic Band Structures, Nearly Free Electron and Tight-Binding Models, Semiconductors: Properties and Applications, Ferromagnetism and Magnetic Materials, Superconductivity: BCS Theory and Meissner Effect

UNIT II  
Nanoscale Physics and Quantum Effects Low-Dimensional Systems: Quantum Wells, Wires, and Dots, Quantum Confinement and Density of States, Tunneling and Coulomb Blockade, Hall Effect Transport and Landauer Formalism, Quantum Behavior in Nanoscale Systems, Nanoelectronics and Nanophotonics

UNIT III

Dr Satnam Singh is presenting

Dr Satnam Singh...  
Honey  
Dr. Anju  
Dr. NS  
Dr. Ram Pal  
Dean Academi...  
You





# Sant Baba Bhag Singh University

(University Established under Punjab Act No. 0 of 2013)  
Vill. Khiala, P.O. Padhlana, Dist. Jalandhar, Punjab, INDIA

## External Expert Review Performa For Board of Studies

Name of External Expert : Dr. NARESH PAL SINGH SAINI  
Discipline : PHYSICS  
Designation : PROFESSOR (RD)  
Organization (Name & Address) : P.F. Holy City Phase-1, Afzalpur  
Road Bypass, Amritsar-143008  
Contact No. : 94173 84692  
E-Mail ID : N.S.SAINI@YAHOO.COM  
Date of Visit/Meeting : 28/05/2025

### Reviewer's Comments :-

There were some changes in the Course  
Scheme and Contents of Syllabus. It was  
suggested in online chat after making  
changes, revised syllabus should be prepared.  
Overall, Schemes for both UG and PG classes  
were good.

❖ Use extra sheet(s) if required.

Signature  
Dr. N. S. Saini  
Date: 28/05/2025

Coordinator/HOD's/Dean's

Dean Academics



Open with



# SANT BABA BHAG SINGH UNIVERSITY

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Recognized by UGC under Section 2(f) of UGC Act, 1956.

Ref. No. SBBSU/DA/25/116

Dated 24-5-2023

To


Dr. Nareshpal Singh Saini  
(Retd.) Professor, Department of Physics,  
Guru Nanak Dev University, Amritsar, India

Subject: Invitation for Board of Studies meeting in the Department of Physical Sciences

Respected Sir,

This is to bring to your kind notice that the meeting of Board of Studies (BOS) of Department of Physical Sciences, University Institute of Sciences, Sant Baba Bhag Singh University, Khiala, Jalandhar is going to be held on May 28<sup>th</sup> 2025 at 11:00 AM through online mode. You have been nominated as an expert for the BoS meeting by the competent authority. I feel honor to invite you as an expert for the approval of Course Scheme and Syllabus of Physics in B.Sc. Physical Sciences Batch 2024, B.Sc. /B.Sc. (Hons.)/B.Sc. (Hons.) with Research in Physics Batch 2025, M.Sc. (Hons.) Physics as per NEP 2020, Ph.D Physics coursework and interdisciplinary courses of Physics offered by Department of Physical Sciences. Your experience and expertise will be of great help to the Department and University. You are requested to kindly spare your valuable time to participate in the same on May 28<sup>th</sup> 2025 at 11:00 AM.

Regards

  
Dr. Vijay Dhir  
Dean Academics  
SBBS University

Call : 0181-2711163 / Fax : 0181-2711611



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## Department of Physical Sciences

Ref. No: SBBSU/UIS/PS/2025/ 429

Date: 13/5/25

To  
The Vice Chancellor  
SBBS University,

Jalandhar

Subject: For the approval of the expert for BOS of Physical Sciences (Physics)

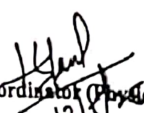
Respected Sir,


It is submitted that Department of Physical Sciences have to conduct BOS for the discipline of Physics for (B.Sc. Physical Sciences Batch 2024, BSc/ BSc. (Hons.)/ B.Sc.(Hons.with Research) in Physics 2025 onwards, M.Sc (Hons.) Physics and Ph.D Physics) and interdisciplinary courses of Physics offered by Physical Sciences as per NEP 2020 on 21<sup>st</sup> May 2025. Kindly approve the subject Expert from the following panel.


Physics			
S No.	Name	Designation	University/Institute
1	Dr. Nareshpal Singh Saini	(Retd.) Professor	Department of Physics, Guru Nanak Dev University, Amritsar, India Email: <a href="mailto:nssaini@yahoo.com">nssaini@yahoo.com</a> , <a href="mailto:nssaini.phy@gndu.ac.in">nssaini.phy@gndu.ac.in</a> Mobile: +91-9417384692, Office: +91-183-2258802
2	Dr. H.M Mittal	Professor	Department of Physics, Dr B.R Ambedkar National Institute of Technology, Jalandhar, Punjab-144011, Email ID: <a href="mailto:mittalhm@nitj.ac.in">mittalhm@nitj.ac.in</a> ; Mobile: 9417119665
3	Dr. Smriti Khosla	Associate Professor	Department of Physics, DAV University, Jalandhar, Email: <a href="mailto:samritis@yahoo.com">samritis@yahoo.com</a> , PH: 9815670705

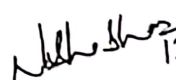
Kindly approve Honorium (Rs 2000/-) for the expert as well.



Thanking you in anticipation

  
Coordinator (Physical Sciences)  
13/5/25

Recommended & forwarded  
to Dean Academics  
  
13/5/25

Recommended  
  
13/5/25

  
Head (Physical Sciences)  
13/5/25

  
Serial No I  
Dr Nareshpal Singh  
Saini  
of GNDU, ASR  
is approved.  
  
13/5/25

