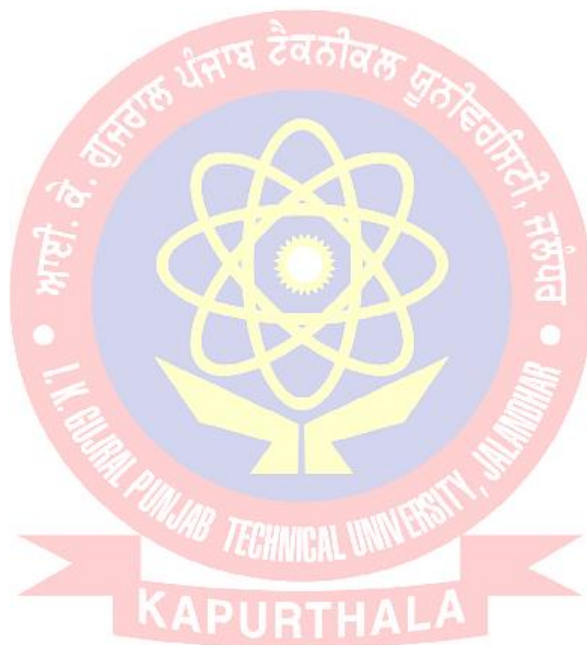


1.1.3 & 1.2.1

**Supporting Documents- Department of
Physical Sciences**

**MOMs Highlighting Employability
Courses_1.1.3**



IK Gujral Punjab Technical University, Kapurthala
Department of Physical Sciences

Ref No.: IKGPTU/PS/1981

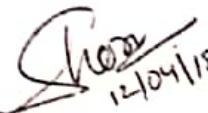
Date: 12.04.18

Subject: Proceedings of the Board of Studies (BoS), Physical Sciences (Material Science/Nano Science and Technology) meeting held on 27.03.2018.

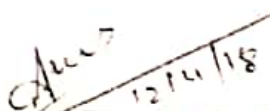
A meeting of members of Board of Studies (BoS), Physical Sciences (Material Science/Nano Science and Technology) was held on 27.03.2018 in the Department of Physical Sciences, I K Gujral Punjab Technical University, Kapurthala. The agenda of the meeting was discussed in detail and recommendations were made on point. The proceedings of the meetings were recorded in the minutes of the meeting as enclosed as an Annexure-A.

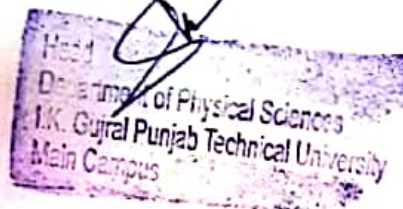
In the meeting, the syllabus of the Engineering Physics for B. Tech. 1st Year and M.Sc.(Physics) was approved for adoption from 2018-19 which is enclosed as an Annexure-B and Annexure-C.

Submitted for necessary action.


12/04/18
Convener- BoS
Dr. Hitesh Sharma


Convener- BoS
Dr. Neetika


12/04/18
Chairman, Board of Studies
Head, Physical Sciences.



I.K. Gujral Punjab Technical University, Kapurthala
Department of Physical Sciences

Minutes of Meeting

A meeting of members of Board of Studies (BoS), Physical Sciences (Material Science/Nano Science and Technology) was held on 27.03.2018 in the Department of Physical Sciences, I K Gujral Punjab Technical University, Kapurthala.

The following were present in the meeting:

1. Dr. Amit Sarin (Chairperson)
2. Dr. Ravi Kumar, Member
3. Dr Rakesh Dogra, Member
4. Dr. Arvind Kumar, Member
5. Dr. Ranjan Kumar, Member
6. Dr. Kanchan L. Singh, Member
7. Dr. Hitesh Sharma, Member
8. Dr. Maninder Kaur, Member
9. Dr. Y S Brar, Chairperson(EE) as Special invitee
10. Dr. Rajiv Chauhan, Chairperson (Civil Eng) as Special invitee
11. Dr. Vikas Chawla, Chairperson(ME) as Special invitee
12. Dr. A S Bhuttar, Chairperson(ECE) as Special invitee
13. Dr. Varinderjit Singh (Special invitee)
14. Dr. Neetika (Special invitee)
15. Ms.Jaskaranpreet M.Sc.(2nd Year)-Student representative
16. Mr.Nikhil M.Sc.(1st Year)-Student representative

The following members could not attend the meeting:

1. Dr. Davinder Mehta, Member
2. Dr. R. K. Bedi, Member
3. Dr. Harpreet Kaur Grewal, Member
4. Dr. B D Gupta, Member
5. Dr. Rajiv Malhotra, Member
6. Dr. P. Arumugam, Member
7. S. Navdeepak Sandhu, Member
8. Dr. Harkirat Singh, (Special invitee)
9. Dr. Monika Sachdeva , (Special invitee)

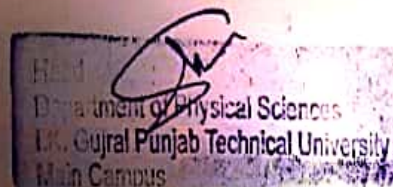
The Board of Studies discussed on all the agenda points and following recommendations were made:

Agenda item 1: To consider the revision of Engineering Physics course in B.Tech-1st Year (for all Engineering Branches) as per model syllabus of AICTE:

All BoS members discussed in detail the new model syllabi proposed for Engineering Physics by AICTE for adoption. All members agreed with the recommendations of AICTE which has proposed to offer branch specific Engineering Physics subjects to B.Tech-1st Year Students and decided to implement same in IKG Punjab Technical University. The Engineering branches for which AICTE has not proposed any theory and Lab subject, the new course subjects prepared by combining the different modules proposed by the AICTE, were approved. All engineering specializations which are being offered at present by the IKG Punjab Technical University have been categorized in seven (07) groups. Accordingly, seven (07) theory and seven (07) practical papers as mentioned below were recommended for adoption in IKGPTU from 2018-19.

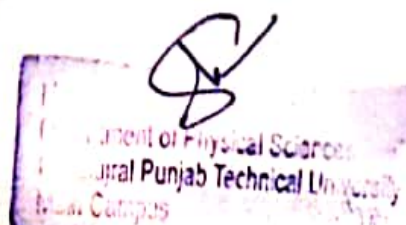
S.No.	Groups	Related Branches	Course codes	Course title	Credits
1	Civil Engineering	1. Civil Engineering	BTPH101	Mechanics of solids	4
		2. Construction Engineering &	BTPH111	Mechanics of solids	1.5

42
43



		Management		Lab	
2	Electrical Engineering	1. Electrical Engineering	BTPH102	Optics and Modern Physics	4
		2. Automation & Robotics	BTPH112	Optics and Modern Physics Lab	1.5
		3. Electrical & Electronics Engineering			
		4. Electronics & Electrical Engineering			
		5. Electrical Engineering & Industrial Control			
		6. Instrumentation & Control Engineering			
3	Mechanical Engineering	1. Mechanical Engineering	BTPH103	Electromagnetism	4
		2. Marine Engineering	BTPH113	Electromagnetism Lab	1.5
		3. Production Engineering			
		4. Industrial Engineering			
		5. Tool Engineering			
		6. Automobile Engineering			
		7. Aerospace Engineering			
		8. Aeronautical Engineering			
	B.Tech (Mechanical Engineering)-2nd Year	1. Mechanical Engineering	BTPH201	Optics and Waves	4
4	Computer Science Engineering	1. Computer Engineering	BTPH104	Semi-Conductor Physics	4
		2. Computer Science Engineering	BTPH114	Semi-Conductor Physics Lab	1.5
		3. Information technology			
		4. 3D Animation Engineering			
5	Electronics and communication Engineering	1. Electronics & Communication Engineering	BTPH105	Introduction to Semiconductor Physics	4
		2. Electronics & Computer Engineering	BTPH115	Semi-Conductor Physics Lab	1.5
		3. Electronics & Instrumentation Engineering			
		4. Electronics & Telecomm Engineering			
		5. Electronics Engineering			
6	Chemical Sciences	1. Chemical Engineering	BTPH106	Optics and Electromagnetism	4
		2. Petrochem & Petroleum Refinery Engineering	BTPH116	Optics and Electromagnetism Lab	1.5
		3. Textile Engineering			
		4. Food Technology			
7	Bio Technology	1. Bio-Technology	BTPH107	Introduction to Physics: Biotechnology	4
			BTPH117	Physics Lab	1.5

BOS members also approved one course on Optics and Waves for B.Tech-Mechanical Engineering (2nd Year) as recommended by AICTE. The copy of approved syllabus for different branches is attached as Annexure A.

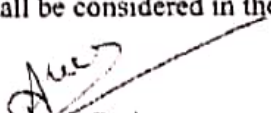


Agenda item 2: To consider the revision of Course outcomes of M.Sc. (Physics) as per NAAC requirements

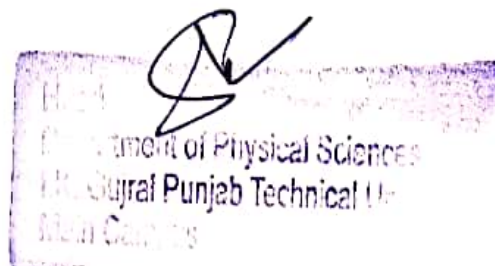
All BoS members discussed the educational objectives of the M.Sc.(Physics) course and with vision of the Department of Physical Sciences. After incorporating suggestions, BOS members approved the Vision, Mission, Program Educational objectives (PEO), Program outcome (PO), Program specific outcomes and Course outcomes(CO) of course subjects for M.Sc. (Physics) w.e.f. 2018-19. The copy of the revised scheme and syllabus with PO and COs is enclosed as Annexure B.

Agenda item 3: To consider the Revision in Course Scheme and Syllabus of M. Tech. (Nanotechnology)

The scheme and syllabus for M. Tech. (Nanotechnology) could not discussed in the meeting and shall be considered in the next BOS meeting.


Dr. Amit Sarin
Chairperson- BoS, Physical Sciences

Dean Academics



IK Gujral Punjab Technical University, Kapurthala
Department of Physical Sciences

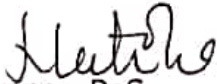
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Date: 15/04/2019.

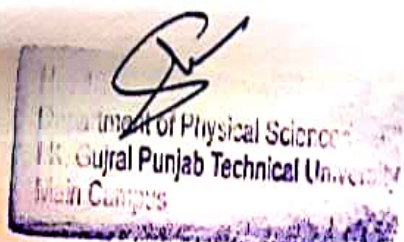
Subject: Proceedings of the Board of Studies (BoS), Physical Sciences (Material Science/Nano Science and Technology) meeting held on 29.03.2019.

A meeting of members of Board of Studies (BoS), Physical Sciences (Material Science/Nano Science and Technology) was held on 29.03.2019 in the Department of Physical Sciences, I K Gujral Punjab Technical University, Kapurthala. The agenda of the meeting was discussed in detail and recommendations were made on point. The proceedings of the meetings were recorded in the minutes of the meeting as enclosed as an Annexure -1.

Submitted for necessary action.


Convener- BoS
Dr. Neetika


Chairman, Board of Studies
Head, Physical Sciences.



I.K. Gujral Punjab Technical University, Kapurthala
Department of Physical Sciences

Ref No: IKGPTU/PS/1989

Minutes of Meeting

Date: 15/04/2019

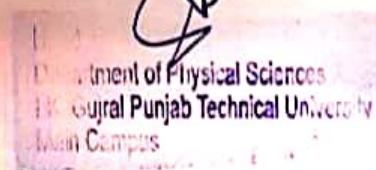
A meeting of members of Board of Studies (BoS), Physical Sciences (Material Science/Nano Science and Technology) was held on 29.03.2019 in the Department of Physical Sciences, I K Gujral Punjab Technical University, Kapurthala.

Following members of BOS and special invitees were present and actively participated in discussion:

1. Dr. Amit Sarin (Chairperson)
2. Dr. R. K. Bedi, Member
3. Dr Rakesh Dogra, Member
4. Dr. Hitesh Sharma, Member
5. Dr. Gaurav Bhargava, (Special invitee)
6. Dr. Maninder Kaur, Member
7. Dr. Jagmeet Bawa, (Special invitee)
8. Dr. Priyanka Mahajan, (Special invitee)
9. Dr. Sarabjit Singh Mann, (Special invitee)
10. Dr. Varinderjit Singh (Special invitee)
11. Dr. Neetika (Special invitee)
12. S. Navdeepak Sandhu, Member
13. Mr. Gurcharan Singh, M.Sc. (2nd Year)-Student representative
14. Mr. Nikhil M.Sc. (2nd Year)-Student representative

The following members could not attend the meeting:

1. Dr. Davinder Mehta, Member
2. Dr. Harpreet Kaur Grewal, Member
3. Dr. Kanchan L Singh, Member
4. Dr. B D Gupta, Member
5. Dr. Rajiv Malhotra, Member
6. Dr. P. Arumugam, Member
7. Dr. Ravi Kumar, Member
8. Dr. Arvind Kumar, Member
9. Dr. Ranjan Kumar, Member
10. Dr. Ashish Arora, (Special invitee)



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The Board of Studies discussed on all the agenda points and following recommendations were made:

Agenda item 1: To consider the revision of Program Educational objectives (PEO), Program outcomes (POs), Program specific outcomes (PSOs) and Course outcomes of M.Sc. (Physics) course

All BoS members discussed the Program Educational objectives (PEO), Program outcomes (POs), Program specific outcomes (PSOs) of the M.Sc. (Physics) course and with vision of the Department of Physical Sciences. After incorporating suggestions, BOS members recommended the Program Educational objectives (PEO), Program outcomes (POs), Program specific outcomes (PSOs) and Course outcomes (COs) of various subjects for M.Sc. (Physics) w.e.f. 2018-19. The copy of revised scheme and syllabus with revised PEOs, POs, PSOs, and COs is enclosed as Annexure A.

Agenda item 2: To consider the syllabus of inter disciplinary value-added course on Personality Development for Main Campus

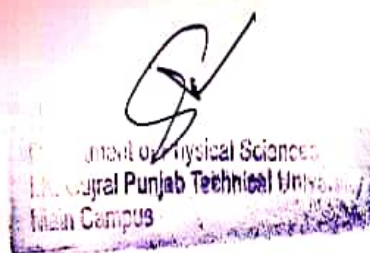
All BoS members discussed the syllabus of inter disciplinary value-added course on Personality Development for M.Sc. Physics students. The syllabus for audit course is designed by the Dr. Priyanka Mahajan. Board members agreed that more interdisciplinary course on Human values, Management, etc., may be added in near future. The copy of finalized syllabus of Personality Development is enclosed as Annexure-B.

Agenda item 3: To consider the study scheme and syllabus of B. Sc. (Hons) Physics for the first two semesters in the academic session 2019-2020

All BoS members discussed the study scheme of B Sc. (Hons) Physics and syllabus of 1st and 2nd semester starting from the academic session 2019-2020 in the IKGPTU Main Campus. Board members agreed that two physics core courses with their respective labs will be offered in first two semesters. Proposed study scheme and physics courses syllabus is attached here as Annexure-C. Further subject codes and open elective subjects will be discussed in the next BOS meeting.

Agenda item 4: To consider the courses on skill and employability enhancement related.

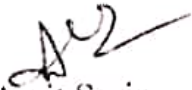
All BoS members discussed and recommended that theory and lab courses on Mathematical Physics, Electronics, Computational, Statistical, Nuclear, Condensed matter, Renewable energies, and Dissertation are essential for the employability enhancement of M.Sc. Physics students.



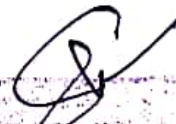
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Agenda item 5: To consider syllabus of new courses in PhD Course works

All BoS members discussed and recommended the syllabus of new courses on 1) Advanced Particle Physics and 2) Renewable Energy Resources in the Curriculum of Ph. D course work as per the specialization available in the Department of Physical Sciences. The copy of approved syllabus of Advance Particle Physics and Renewable Energy Resources is enclosed as Annexure-D.


Dr. Amit.Sarin
Chairperson- BoS. Physical Sciences

Dean Academics


Head
Department of Physical Sciences
J.K. Gujral Punjab Technical University
Main Campus