

Institute of Applied Sciences and Humanities

Department of Physics

09th December, 2017

Minutes of the 7th Meeting of BOS

The 7th meeting of BOS was held on 9thDecember, 2017 at 11:00 AM in the Department of Physics to discuss and approve the revision of Engineering Physics (AHP-1101) in accordance with Choice Based Credit System (CBCS) and other newcourses developed for Post-Graduate programs. The following members were present in the meeting:

1.	Prof. B.R.K. Gupta, Head, Physics	-Chairman	
2.	Dr. Raj Pal Singh, Professor, Physics	-Member	
3.	Dr. Anuj Vijay, Professor, Physics	-Member	
4.	Dr. Monika Goyal, Assoc. Professor, Physics	-Member	

- 5. Dr. Benoy Kumar Singh, Assoc. Professor, Physics Member
- 6. Prof. Anil Yadav, United College of Engineering and Research, Noida-U.P. Member (External)
- 7. Prof. H.M. Agrawal, G.B. Pant University of Ag. & Technology, Pant Nagar (Uttarakhand)Member (External)

The members of committee discussed the following agenda items:-

Agenda 1	:	Confirmation of Minutes of 6 th BOS held on 3 rd Aug, 2017.
		Minutes of 6 th Meeting of BOS were approved.
Agenda 2	:	To discuss and approve the revised version of the syllabus of Engineering Physics to be implemented for B.Tech I Year students w.e.f. session 2018-19 in view of CBCS.
		The contents of the revised version of the syllabus of Engineering Physics werediscussed thoroughly by the committee in accordance with CBCS and approved.(Annexure I).
Agenda 3	:	To discuss and approve a newly structured Open Elective Course to be offered to B.Tech III Year students from the session 2018-19.
		The committee discussed the syllabus of open elective course at length. The committee was of opinion that this course would provide not only the knowledge in the field of Opto-electronics but also give them an opportunity to work in R&D sector(Annexure II).

Agenda 4 :	A new course of Advanced Cosmology for Ph.D students to be discussed and approved.
	After having discussed in detail, the new course of Advance Cosmology is approved by the BOS committee to promote the research in the field of cosmology(Annexure III).
Agenda 5 :	To discuss and approve the course structure and syllabus of M.Sc. (Physics) students under Master's Program likely to start from the next session 2018-19.
	The course structure and syllabus of M.Sc (Physics) was discussed in detail by the committee. The department proposes the specialization in Electronics with two additional elective courses offered by the parental department. As per the suggestions of theexperts dissertation/projectwork has been included in the course structure of master's program so that the M.Sc. degree holders may clear the GATE/NET examinations comfortably.After rigorous discussion the course structure and syllabus of master's program is approved by the committee(Annexure IV).
Agenda 6 :	To consider and approve of the courses imparting employability/entrepreneurship/skill development in the Ph.D program.
	Members discussedin detail and approvedAdvanced Cosmology course imparting employability/entrepreneurship /skill development in the Ph.D program (Annexure V).

Agenda 7 : No other items.

The committee discussed the course structure and syllabus of the cited courses thoroughly in detail and recommends for the approval of Academic council.

The meeting ended with thanks to chair.

(B.R.K. Gupta) HoD, Physics

Professor & Head Department of Physics LA University, Mathura

Encl.:

- Annexure I: Old and modified syllabus of B.Tech. 1st year Engineering Physics course.
 Annexure II: Open elective syllabus for B. Tech 3rd year.
- 3. Annexure III: New course introduced for Ph.D Program.
- 4. Annexure IV: Course structure of Master Program.
- 5. AnnexureV: List of course having focus on employability/skill development.

Annexure - III

Annexure - III

List of new courses introduced		
S.No.	Name of the Course	
1	Advanced Cosmology	

Professor & Head Department of Physics GLA University

Advanced Cosmology

Subject code: PAP 1009	L	Т	Р
	3	1	0

Unit I: Introduction:

Dynamics of expanding Universe and its matter/energy content; Robertson-Walker metric; Co-moving co-ordinates; Spatial geodesics; Number conservation; Energy & momentum conservation; Cold matter, hot matter and vacuum energy; The Thermal History of the Universe (Hot Big Bang model); Introduction to Inflationary Theory.

Unit II: Homogeneous and isotropic universe models

The Cosmological Principles; Friedmann-Robertson-Walker Model; Dynamics of Homogeneous and Isotropic Universe; Cosmological redshift and the Hubble law; Radiation dominated universe model; Matter dominated universe model; The gravitational lens effect; Redshift-luminosity relation; Cosmological Horizon.

Unit III: Anisotropic and Inhomogeneous universe models

The Bianchi type I universe model; The Kasner solutions; The energy-momentum conservation law in anisotropic universe; Models with perfect fluid; Inflation through bulk viscosity; Universe with dissipative fluid; The Lamaitre-Tolman-Bondi universe models

References Books:

 Weinberg, S., Gravitation and Cosmology: Principles and Applications of the General Theory of Relativity, 1972, John Wiley & Sons
 Weinberg, S., Cosmology, Oxford University Press
 Oyvind Gron & S. Hervik: Einstein's General Theory of Relativity: With Modern Application in Cosmology, Springer