यशवंतराव चव्हाण महाराष्ट्र मुक्त विद्यापीठ, नाशिक
नॅक मानांकित 'अ' श्रेणी
ज्ञानगंगोत्री, गंगापूर धरणाजवळ, गोवर्धन
नाशिक – ४२२ २२२ (महाराष्ट्र) भारत

ज्ञानगंगा घरोघरी

Yashwantrao Chavan Maharashtra Open University, Nashik
NAAC Accredited 'A' Grade
Dnyangangotri, Near Gangapur Dam, Govardhan
Nashik - 422 222 (Maharashtra) India

संकेतस्थळ Website : •www.ycmou.ac.in •https://ycmou.digitaluniversity.ac
ई-मेल E-mail : director.ast@ycmou.ac.in दूरध्वनी Telephone : (0253) 2231473

विज्ञान विद्याशाखा / School of Sciences

4Year B.Sc. (Honours) (Major in Physics) {2025 Pattern}

Minutes of the PAC Meeting held on 09.12.2024

Meeting No.: 03 **Date: 9th Dec, 2024** **Time: 03.20 pm to 05.30 pm**

The PAC Meeting for 4 Year B.Sc. (Honours) (Major in Physics) {2025 Pattern} programme as per NEP 2020 of **School of Sciences** was held online on **Monday, 09-12-2024 at 03:20 PM,** school meeting hall. Following members and invitees were present,

SN	Name of PAC Members	Designation
1.	Dr. Chetana Kamlaskar	**(Chairperson) and Member**
2.	Dr. Sanjay J. Dhoble	Member
3.	Dr. Pallavi Chetan Dixit	Member
4.	Dr. Sanjay Subhash Latthe	Member
5.	Mr. Manish Shingare	Ex. Academic Coordinator (Physics Programme) and Invitee
6.	Ms. Tejaswi Kadam	Invitee
7.	Dr. Jagruti Chavan	Invitee
8.	Dr. Dnyaneshwar Bhusanur	Invitee
9.	Mr. Ravindra Bharsat	Invitee
10.	Ms. Minakshi Kadel	Invitee
11.	Dr. Bharat More	Invitee

Following member could not attend the meeting due to her other engagements.

Dr. Sunanda More	Member

Dr. Chetana Kamlaskar, Director of the School of Sciences and Chairperson of the PAC, first welcomed the PAC members and introduced the purpose of the meeting. During the meeting, the following items were discussed for the collective decision on the proposed content of each course in the 4 Year B.Sc. (Honours) (Major in Physics) {2025 Pattern} programme.

<table>
<tr><th>SN</th><th>Details of Items</th><th>Resolution</th></tr>
<tr><td>1</td><td>Agenda Item 1: To finalize and approve the credit distribution and detailed syllabus for the proposed Minor courses and VSC courses in the Physics discipline at semester 01 to 06, as per NEP2020 guidelines and their evaluation pattern.</td><td>The PAC members unanimously finalized and approved the credit distribution and proposed detailed syllabus with evaluation pattern for,
1) All Minor courses at semester 02 to 06 in the Physics discipline, for the learners other than Physics Major, in accordance with NEP2020 guidelines. A few suggestions regarding course sequence and content were also provided as follows:
<table>
<tr><th>Sem</th><th>As per Suggestion by PAC</th></tr>
<tr><td>II</td><td>PHY10M1: Basics of Electricity & Magnetism
Interchange the following two units for better logical flow of the content
<table>
<tr><td>Electromagnetic Induction</td><td>Unit 02-04 to Unit 02-03</td></tr>
<tr><td>Applications of Magnetic Field</td><td>Unit 02-03 to Unit 02-04</td></tr>
</table></td></tr>
<tr><td>III</td><td>PHY20M1: Thermal Physics
In Unit 01-04: Theory of Radiation, add ‘Electromagnetic Radiation & IR Radiation’ content.</td></tr>
<tr><td>IV</td><td>PHY20M3: Oscillations & Optics
Unit 02-03: Physics of LASER
Also Cover ‘construction and working of He-Ne LASER’
Unit 02-04: Fiber Optics
Rearrange the sequence of the content for maintaining logical flow</td></tr>
<tr><td>V</td><td>PHY30M1: Computational Physics
Since this minor course is offered for learners other than Physics Major, it is suggested that the following content be removed:
<table>
<tr><th>Units</th><th>Contents to be removed</th></tr>
<tr><td>01-04</td><td>LU decomposition and matrix inversion, Applications: quantum mechanical systems</td></tr>
<tr><td>02-01</td><td>fitting functions in thermodynamics</td></tr>
<tr><td>02-02</td><td>equations of motion in mechanics</td></tr>
<tr><td>02-04</td><td>Applications - Quantum mechanics (Schrödinger equation), vibrational analysis of molecules.</td></tr>
</table></td></tr>
</table></td></tr>
</table>

		2) VSC courses at semester 03 and 05 related to Major in Physics
	Action Taken: The credit distribution and syllabus of Minor courses and VSC courses has been updated following the discussion in the PAC meeting. Refer **Appendix I & II** for updated syllabus.	
2	**Agenda Item 4:** Identification of Writers/ Editors for SLM development task	The PAC members unanimously gave their consent for the writing/editing of the Self Learning Material (SLM) development for the proposed courses. They also agreed to recommend experts for the new courses, in due course of time. It was also resolved to authorize the Director of this School to enrich and update the list of writers/editors for the Self Learning Material (SLM) development task from time to time as per the University Policy decisions/norms.

Meeting ends with vote of thanks by **Dr. Chetana Kamlaskar.**

Thanks…

(**Dr. Chetana Kamlaskar)**

Chairperson, PAC B.Sc. (Physics)

Appendix I- Programme Structure and Credit Distribution of B.Sc.(Physics): Major, Minor, OE, VSC, SEC, VEC, CC and IKS Courses

Level	Sem	Major				Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem
		Mandatory		Electives												
4.5	I	**PHY101:** Mechanics **(T)**	4	-		-		**OE101 :** Physics of Daily Life **(T)**	2	**VSC101:** Introduction to GeoGebra **(TW)**	2	**AEC101:** English Communication-I **(T)**	2	**CC101:** Photography Techniques & Bird Watching **(TW)**	2	22
		PHY102: Lab Activities on PHY101 **(P)**	2					**OE102:** Materials in Daily Life **(T)**	2	**SEC101:** Basic Instrumentation Skills **(TW)**	2	**VEC101:** Environmental Education-I **(T)**	2			
												IKS101: Generic IKS **(T)**	2			
	II	**PHY103:** Electricity & Magnetism **(T)**	4	-		**PHY10M1:** Basics of Electricity & Magnetism **(T)**	2	**OE103:** Renewable Energy for Daily life **(T)**	2	**VSC102:** Solar Panel System **(TW)**	2	**AEC102:** English Communication-II **(T)**	2	**CC102:** Yoga **(TW)**	2	22
		PHY104: Lab Activities on PHY103 **(P)**	2					**OE104:** Energy Audit **(T)**	2	**SEC102:** MS–Excel with AI **(TW)**	2	**VEC102:** Environmental Education-II **(T)**	2			
Cum. Cr.		**12**		**00**		**02**		**08**		**08**		**10**		**04**		**44**
5.0	III	**PHY201:** Thermodynamics & Statistical Mechanics **(T)**	4	-		**PHY20M1:** Thermal Physics **(T)**	2	**OE201:** Physics of Sound & Music **(T)**	2	**VSC201:** Electrical Circuit and Network Skills **(P)**	2	**AEC201:** Modern Indian Language- I **(T)**	2	**PHY204:** Field Project **(TW)**	2	22
		PHY202: Ancient Indian Physics **(T)** (IKS)	2			**PHY20M2:** Lab Activities on PHY20M1 **(P)**	2									
		PHY203: Lab Activities on PHY201 **(P)**	2											**CC201:** Applied Arts **(TW)**	2	
	IV	**PHY205:** Wave Motion & Optics **(T)**	4	-		**PHY20M3:** Oscillations & Optics **(T)**	2	**OE202:** Physics in Sports **(T)**	2	**SEC201:** Intellectual Property Rights (IPR) **(T)**	2	**AEC202:**Modern Indian Language- II **(T)**	2	**PHY208 (CEP201):** Bee Keeping **(TW)**	2	22
		PHY206: Mathematical Methods in Physics **(T)**	2			**PHY20M4:** Lab Activities on PHY20M3 **(P)**	2							**CC202:** Astronomy for Beginners **(TW)**	2	
		PHY207: Lab Activities on PHY205 **(P)**	2													
Cum. Cr.		**28**		**00**		**10**		**12**		**12**		**14**		**12**		**88**

Level	Sem	Major				Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP, CC, RP		Cum. Cr. / Sem
		Mandatory		Electives												
5.5	V	**PHY301:** Classical & Quantum Mechanics **(T)**	4	**PHY304:** Fundamentals of Astronomy & Astrophysics **(T)** **OR** **PHY305:** Semiconductor Technology **(T)** **OR** **PHY306:** Electronics **(T)**	4	**PHY30M1:** Computational Physics **(T)**	2	-	-	**VSC301:** Lab Activities on Basic Electronics Devices **(P)**	2	-	-	**PHY307:** Field Project / **PHY308 (CEP301):** Awareness of Sustainable Development Goals **(TW)**	2	22
		PHY302: Solid State Physics **(T)**	2			**PHY30M2:** Lab Activities on PHY30M1 **(P)**	2									
		PHY303: Lab Activities on PHY301 & PHY302 **(P)**	4													
	VI	**PHY309:** Nuclear Physics & Radiation Safety **(T)**	4	**PHY312:** Instrumentation **(T)** **OR** **PHY313:** Energy Storage Devices **(T)** **OR** **PHY314:** Embedded System **(T)**	4	**PHY30M3:** Basics of Instrumentation **(T)**	2	-	-	-		-	-	**PHY315:** On Job Training **(TW)**	4	22
		PHY310: Electromagnetic Theory **(T)**	2			**PHY30M4**: Lab Activities on PHY30M3 **(P)**	2									
		PHY 311: Lab Activities on PHY309 & PHY310 **(P)**	4													
Cum. Cr.		**48**		**08**		**18**		**12**		**14**		**14**		**18**		**132**

Level	Sem	Major				Minor		OE		VSC, SEC (VSEC)		AEC, VEC, IKS		OJT, FP, CEP,CC, RP		Cum. Cr. / Sem
		Mandatory		Electives												
6.0	VII	**PHY401:** Classical Mechanics **(T)**	4	**PHY406:** Experimental Techniques in Physics **(T)** **OR** **PHY407:** Physics of LASERs **(T)**	4	**RES405:** Research Methodology **(T)**	4	-		-		-S		-	2	22
		PHY402: Electronic Devices **(T)**	4													
		PHY403: Mathematical Methods in Physics **(T)**	2													
		PHY404: Physics - I **(P)**	4													
	VIII	**PHY409:** Atomic & Molecular Physics **(T)**	4	**PHY415:** Fundamental of Material Science **(T)** **OR** **PHY416:** Medical Physics **(T)**	4	-								**PHY413:** On Job Training **(TW)**	4	22
		PHY410: Electrodynamics **(T)**	4													
		PHY411: Quantum Mechanics- I **(T)**	2													
		PHY412: Physics II- Practical (Computational Methods using 'C') **(P)**	4													
Cum. Cr.		**76**		**16**		**22**		**12**		**14**		**14**		**22**		**176**

Abbreviations: Yr.: Year; Sem.: Semester; Cumulative Credits: Cum. Cr. ; T- Theory Course; P- Practical course; TW-Term Work; PW- Project Work

APPENDIX II:

SYLLABUS OF MINOR AND VSC COURSES FROM PHYSICS

Refer the syllabus file attached with this mail separately