

SRI KALISWARI COLLEGE (AUTONOMOUS), SIVAKASI
(Affiliated to Madurai Kamaraj University, Re-accredited with A Grade (CGPA 3.11) by NAAC)
Minutes of the Board of Studies Meeting

Name of the Department : Physics
Date : 22.07.2021
Course : B.Sc Physics

Members Present

S.No.	Board Members	Name and Designation
1.	Chairman of the Board	Dr. C.R. Kumaran Head & Assistant Professor of Physics Sri Kaliswari College (Autonomous), Sivakasi.
2.	University Nominee	Dr. Sujin P. Jose Assistant Professor Department of Computational Physics Madurai Kamaraj University, Madurai -625 021
3.	Academic Expert 1.	Dr. N. Prithivikumaran, Head & Associate Professor, Department of Physics, V.H.N. Senthikumara Nadar College (Autonomous), Virudhunagar-626 001.
4.	Academic Expert 2.	Dr. M. Sivakumar, Associate Professor, Department of Physics, Alagappa University, Karaikudi - 630 003.
5.	Industrialist	Mr. J. Senthil Ananda Prakash B.E. (ECE) Prakash Motors, 1582, PKN road, Sivakasi.
6.	Alumna	Dr. A. Mathivathani Assistant Professor of Physics, V.H.N. Senthikumara Nadar College (Autonomous),

		Virudhunagar – 626 001.
Members		
7.	Mrs. R. Chitra	Assistant Professor of Physics
8.	Mrs. R. Bapitha	Assistant Professor of Physics
9.	Dr. S. Karthickprabhu	Assistant Professor of Physics
10.	Dr. S. Abarna	Assistant Professor of Physics

The Board of Studies Meeting was held on 22nd July, 2021 through Virtual Mode. On the basis of the feedback received from stakeholders, the revised syllabi under OBE for B.Sc. (Physics) and Certificate Courses were presented before the Board of Studies Meeting.

The following recommendations were incorporated in the syllabi in accordance with the suggestions given by the members of the board. The Board recommended

1. To reduce the content of the each course, unit wise to match with the number of lecture hours.
2. To give Text Books for each unit for all courses specifically.
3. To add two more numbers of experiments in the list of experiments for Practical Courses.
4. To re-write the name of the list of experiments
5. To change Internal Mark Distribution for Practical Courses and give more importance to observation note book work.
6. To reframe the NME-II - Physics in Everyday Life – 21UPHN41.
7. To shift the Major Elective Course "Microprocessor Fundamentals – 21UPHO56" in the V Semester to VI Semester.

S.No	Semester	2018-2021		2021-2024		Content/ Unit	Retained/ Shifted Changed/ Introduced	Justification
		COURSE CODE	COURSE NAME	COURSE CODE	COURSE NAME			
1.	I	18UPHC11	Core Course-I: Foundation Course- Basic Physics				Removed	To avoid the repetition of topics studied in the recently Revised Higher Secondary Syllabus.
2.	I	18UPHC12	Core Course-II: Properties of Matter	21UPHC11	Core Course-I: Properties of Matter and Mechanics	Unit I to III Unit IV & V Unit I to V	Revised and Updated Introduced	Based on the Feedback received from the staff and students, Gravitation and dynamics of rigid body are included. Based on the Board recommendations, Contents of each unit are reduced.
3.	I			21UPHC1P	Core Course-II: Practical- Properties of Matter and Mechanics	10 (any 8) Experiments 12 (any 8) Experiments	Introduced	Based on the Feedback from Stakeholders Semester Pattern Practical is introduced to make students more Exams friendly. Few new experiments are included for the better understanding of the concepts of Properties of Matter and Mechanics. Based on the Board recommendations, two experiments were added.
4.	I	18UPHN11	Non Major Elective				Shifted to	

			Course-I: Physics in Everyday Life-I				semester III - 21UPHN31	
5.	I			21UPHS1P	Skill Enhancement Course I: Practical- Introduction to Office Suite and Web Search		Introduced	To acquire practical skill to learn the basics of computers, MS office and search engines.
6.	I	18UPHE11	Enrichment Course-I: Introduction to PC Software				Removed	As per student feedback, this theory paper is changed as a practical paper (21UPHS1P).
7.	II	18UPHC21	Core Course-III: Mechanics and Sound				Removed	Mechanics concepts are included in 21UPHC11 and Sound concepts are included in skill enhancement course 21UPHS21.
8.	II			21UPHC21	Core Course-III: Heat and Thermodynamics		Introduced	Based on the Feedback received from the staff, it is made core course. Based on the Board recommendations, Contents were reduced Unit IV divided into Two units and Liquefaction of Gases is removed.
								Unit I to III Unit IV & V
9.	II	18UPHC22	Core Course-IV: Gravitation and Relativity				Removed	Contents in Unit I, II & III are compressed and given as a single unit in 21UPHC11. Contents in Unit IV & V are compressed and given as a single unit in 21UPHC53.

10.	II	18UPHC2P	Core Course-V: Major Physics Practical-I				Removed	Based on the Feedback from Stakeholders, Semester Pattern Practical is introduced to make students more Exams friendly. Few experiments are included in 21UPHC1P and 21UPHC2P.
11.	II			21UPHC2P	Core Course-IV: Practical-Thermal Physics	10 (any 8) Experiments	Introduced	Based on the Feedback from Stakeholders Semester Pattern Practical is introduced to make students more Exams friendly. Few new experiments are included for the better understanding of the concepts of Thermal Physics. Based on the Board recommendations, two experiments were added.
12.	II	18UPHN21	Non Major Elective Course-II: Physics in Everyday Life-II				Shifted to Semester IV - 21UPHN41	
13.	II	18UPHE21	Enrichment Course- II: Photography				Removed	To give more importance to core courses.
14.	II			21UPHS21	Skill Enhancement Course II: Sound and Ultrasonics	Unit III	Introduced Nomenclature changed as "Basic Acoustics of Building"	To give broad insight into the concepts of sound and ultrasonics as a modern day technologies and enhance job opportunities. Based on the Board recommendations

15.	III	18UPHC31	Core Course-VI: Optics				Shifted to Semester IV - 21UPHC41	
16.	III	18UPHC32	Core Course-VII: Electricity and Electromagnetism	21UPHC31	Core Course-V: Electricity and Electromagnetism	Unit I to V Unit I to IV Unit V	Revised and Updated	Based on the Feedback received from the staff, the period of the course is extended. Based on the Board recommendations, Contents of each unit reduced. Maxwell's Equations concepts are removed.
17.	III			21UPHC3P	Core Course-VI: Practical-Electricity and Electromagnetism	10 (any 8) Experiments 12 (any 8) Experiments	Introduced	Based on the Feedback from Stakeholders Semester Pattern Practical is introduced to make students more Exams friendly. Few new experiments are included for the better understanding of the concepts of Electricity and Electromagnetism. Based on the Board recommendations, two experiments were added.
18.	III			21UPHN31	Non Major Elective Course-I: Physics of Home Appliances	Unit I to V	Nomenclature changed. Revised and Updated	Based on the staff feedback, Home appliances and optoelectronics topics are included. Based on the Board recommendations

						Unit III & IV		Unit III - Home Appliances is divided into two Units based on electricity and heating effect respectively as Unit III - Home Appliances -I & Unit IV - Home Appliances -II. Optoelectronic Devices removed.
19.	III	18UPHS31	Skill Based Course-I: Thermal Physics				Shifted to Semester II as a Core Course - 21UPHC21	
20.	III			21UPHS31	Skill Enhancement Course-III: Electrical Wiring and Home Appliances		Introduced	To provide theoretical knowledge and hands-on training to the students in electrical wiring and enhance the job opportunities. Based on the Board recommendations, in hands on training, Tunnel wiring & wiring the tube light is removed.
21.	III	18UPHV31	Value Based Course-I: Physics of Household Appliances-I				Removed	Home electrical appliances topics are included in the 21UPHS31.
22.	IV	18UPHC41	Core Course-VIII: Mathematical Physics				Shifted to 5 th Semester - 21UPH054	
23.	IV			21UPHC41	Core Course-VII: Optics and Spectroscopy	Unit I -IV Unit V	Nomenclature changed Revised and Updated Concepts of	Based on the Feedback from Stakeholders, a unit exclusive for the concepts of spectroscopy is included.

							Spectroscopy is included	Based on the Board recommendations, contents of each unit are reduced.
						Unit I - V		
24.	IV	18UPHC41	Core Course-IX: Spectroscopy and Laser Physics				Removed	Contents in Unit I, II & III are compressed and given as a single unit in 21UPHC41. Contents in Unit IV & V are compressed and given as a single unit in 21UPHC53.
25.	IV	18UPHC4P	Core Course-X: Major Practical-II				Removed	Based on the Feedback from Stakeholders, Semester Pattern Practical is introduced to make students more Exams friendly. Few experiments are included in 21UPHC3P and 21UPHC4P.
26.	IV			21UPHC4P	Core Course-VIII: Practical- Optics	10 (any 8) Experiments	Introduced	Based on the Feedback from Stakeholders Semester Pattern Practical is introduced to make students more Exams friendly. Few new experiments are included for better understanding of the concepts of Optics.
						12 (any 8) Experiments		Based on the Board recommendations, two experiments were added.
27.	IV	18UPHO41	Optional/Elective Course-I: Programming in C				Shifted to 5 th Semester - 21UPHO53	

28.	IV	18UPHO42	Optional/Elective Course-I: Consumer Affairs				Removed	Based on feedback given by teachers, this course has been removed.
29.	IV	18UPHO43	Optional/Elective Course-II: Statistical Mechanics				Removed	Statistical concepts are included in 21UPHO51.
30.	IV			21UPHN41	Non Major Elective Course-II: Physics in Everyday Life		Nomenclature Changed Reframed as “Non-Conventional Energy Resources”	Recent topics Ultrasonics, Fiber Optics, Laser, GPS and GIS are included. Based on the Board recommendations, course is reframed which will be suitable for all streams of students.
31.	IV			21UPHS41	Skill Enhancement Course-IV: Instrumentation Skill		Introduced	To give broad insight into the concepts of physics involved in the basic electrical and electronic instruments used in laboratories and enhance relevant skills.
32.	IV			21UPHM41	Self-paced Learning (Swayam Course): Nature and Properties of Materials		Introduced	To mobilize credit transfer through self-directed learning.
33.	IV			21UPHM42	Self-paced Learning(Swayam Course): Soft Skill development		Introduced	To mobilize credit transfer through self-directed learning.
34.	V	18UPHC51	Core Course-XI: Atomic Physics and	21UPHC51	Core Course-IX: Atomic Physics	Unit I,II and III	Revised and Updated	Concepts of Laser and Quantum theory of Hydrogen atoms (Unit IV &

			Quantum Mechanics			Unit IV and V	Introduced	V) are included to acquire broad knowledge of atomic Physics. Based on the Feedback received from the staff and TANSCHER recommendations, Quantum mechanics is made as core course 21UPHC53.
						Unit I Unit II, III Unit IV Unit V	Introduced	Based on the Board recommendations, Electrons concepts introduced Contents of each units were reduced Positive Rays concepts are removed and shifted to Unit I Quantum theory of Hydrogen atoms is removed and Atomic Spectra is Unit V.
35.	V	18UPHC52	Core Course-XII: Analog Electronics	21UPHC52	Core Course-X: Analog Electronics	Unit I - IV Unit V Unit I Unit II to IV Unit V	Revised and updated Changed	One unit is dedicated for the special semiconductor devices to give broad knowledge on semiconductor devices. Based on the Board recommendations, Concepts of Liner Circuits and h Parameters are removed. Contents of each units were reduced LED and Photodiode concepts are removed.

36.	V	18UPHC53	Core Course-XIII: Classical Mechanics				Removed	Unit I, II and III are included in 21UPH051
37.	V			21UPHC53	Core Course-XI: Relativity & Quantum Mechanics		Introduced	Based on the Feedback received from the staff and TANSICHE recommendations, It has been introduced. Based on the Board recommendations, entire course syllabus is reframed based on UG Level Text Book.
						Unit I - V		
38.	V			21UPHC5P	Core Course-XII: Practical-Non Electronics	20 (any 16) Experiments	Introduced	Based on the Feedback from Stakeholders Semester Pattern Practical is introduced to make students more Exams friendly. Few new experiments are included for the better understanding of the concepts of optics, electricity and electromagnetism, and modern physics. Based on the Board recommendations
							Nomenclature changed as "General Physics"	
39.	V	18UPH051	Optional/Elective Course-II: Optoelectronics				Removed	To accommodate Classical and Statistical Mechanics 21UPH051.
40.	V			21UPH051	Major Elective Course-I: Classical and Statistical		Introduced	Based on the feedback from staff, it has been introduced.

					Mechanics			
41.	V	18UPH052	Major Elective Course II: Astrophysics	21UPH052	Major Elective Course-I: Astrophysics	Unit I to V	Revised and Updated	
42.	V	18UPH053	Major Elective Course II: Programming in C++				Removed	To accommodate Basis of data communication and Programming in C - 21UPH053.
43.	V			21UPH053	Major Elective Course-I: Basis of data communication and Programming in C	Unit I to III Unit IV and V	Introduced Retained from 18UPH041 (Unit I and II)	To meet out the recent trends.
44.	V			21UPH054	Major Elective Course-II: Mathematical Physics	Unit II Unit I, III, IV and V Unit I - V	Retained (Unit II & III) from 18UPHC41 Changed	More importance is given to the Applications of Mathematical Physics. Based on the Board recommendations, Contents of each unit were reduced.
45.	V			21UPH055	Major Elective Course-II: Mathematical Methods		Introduced	Based on the recommendations of staff, it has been introduced.
46.	V			21UPH056	Major Elective Course-II: Microprocessor	Unit I to V	Revised and updated	To meet out the recent trends.

					Fundamentals			Based on the Board recommendations, it is shifted to VI Semester and contents of unit II and III is reduced.
47.	V	18UPHS51	Skill Based Course-II: Medical Physics				Shifted to 6th semester as an Elective Course - 21UPHO63	
48.	V	18UPHS52	Skill Based Course-II: Energy Physics -I				Shifted to 6th semester as an Elective Course - 21UPHO62	Based on the Board recommendations, it is shifted to 5 th semester.
49.	V			21UPHS51	Skill Enhancement Course-V: Fibre Optics	Unit I – V Unit I – V	Introduced	To give broad insight into the concepts of optics used in modern communications technologies and enhance job opportunities. Based on the Board recommendations, Course contents were reframed based on text book.
50.	V			21UPHJ51	Internship		Introduced	Learners to develop professionalism in a working environment and acquire practical skills.
51.	VI	18UPHC61	Core Course-XIV: Condensed Matter Physics	21UPHC61	Core Course - XIII : Solid State Physics	Unit I to V	Nomenclature changed Revised and updated	To provide insight into the solid state physics concepts.

52.	VI	18UPHC62	Core Course-XV : Nuclear Physics	21UPHC62	Core Course - XIV : Nuclear Physics	Unit I to V Unit III & IV	Revised and updated	To provide insight into the Nuclear physics concepts. Based on the Board recommendations, contents of unit III and IV is reduced.
53.	VI	18UPHC63	Core Course-XVI: Digital Electronics				Removed	Unit I - V are compressed into 3 Units and given in 21UPHC63.
54.	VI			21UPHC63	Core Course - XV : Digital and Communication Electronics	Unit I to III Unit IV & V	Revised and updated Introduced	Concepts of Modulation and Demodulation, Digital and Satellite communication are included to give broad knowledge of communication technologies.
55.	VI			21UHJ61	Core Course - XVI : Project		Introduced	To empower the students with research skills
56.	VI	18UPHC6P	Core Course-XVII: Major Physics Practical-III				Removed	Based on the Feedback from Stakeholders, Semester Pattern Practical is introduced to make students more Exams friendly. Few experiments are included in 21UPHC5P.
57.	VI	18UPHC6Q	Core Course-XVIII: Major Physics Practical-IV				Removed	Based on the Feedback from Stakeholders, Semester Pattern Practical is introduced to make students more Exams friendly. Few experiments are included in 21UPHC6P.
58.	VI			21UPHC6P	Core Course - XVII :	20 (any16)	Introduced	Based on the Feedback from

					Practical - Electronics	Experiments		Stakeholders Semester Pattern Practical is introduced to make students more Exams friendly. Few new experiments are included for the better understanding of the concepts of analog and digital electronics.
59.	VI	18UPHO61	Optional/Elective Course-III: Nanotechnology and Instrumentation	21UPHO61	Major Elective Course - III: Nano Physics	Unit I to V Unit II	Nomenclature changed Revised and Updated	As per teacher's feedback, the course is updated to make it more relevant. Based on the Board recommendations, contents were reduced.
60.	VI	18UPHO62	Optional/Elective Course-III: Microprocessor Fundamentals				Shifted to 5th semester	
61.	VI			21UPHO62	Major Elective Course - III: Energy Physics	Unit I to V	Revised and Updated	Contents of 18UPHS52 and 18UPHS61 are compressed. Based on the Board recommendations, it is shifted to 5 th semester and Concepts of Solar Photovoltaics removed and Concepts of Biomass & Geothermal Energy is added.
62.	VI			21UPHO63	Major Elective Course - III: Medical Physics	Unit I to V Unit I - V	Revised and Updated	Specialised Medical Equipment and Advances in Medical Instrumentation are included. Based on the Board recommendations, contents of each

								unit are reduced.
63.	VI	18UPHV61	Value Based Course-II: Physics of Household Appliances-II				Removed	
64.	VI	18UPHS61	Skill Based Course-IV: Energy Physics-II				Shifted as Elective Course - 21UPHO62	Based on the Board recommendations, it is shifted to 5 th semester.
65.	VI			21UPHE61	Skill Enhancement Course-VI: Solar Cells	Unit I - V	Introduced Nomenclature changed as "Solar Photovoltaics"	To give broad insight into the concepts of Solar Cells in the context of solar energy utilization and enhance job opportunities. Based on the Board recommendations, entire course syllabus is reframed based on text book B.H. Khan.

Courses offered to Other Departments

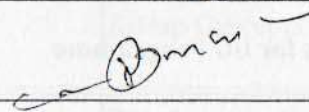
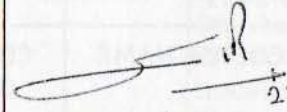

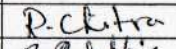



S.No	Semester	2018-2021		2021-2024		Content/ Unit	Retained/ Shifted Changed/ Introduced	Justification
		COURSE CODE	COURSE NAME	COURSE CODE	COURSE NAME			
1.	I/III	18UMAA11/ 18UCHA31	Allied Course-I/III Physics - I	21UMAA11/ 21UCHA31	Allied Course- I/III: Allied Physics-I	Unit I to V Unit I to IV	Revised and Updated	Based on feedback given by teachers, the content of the course is modified. Based on the Board recommendations, Unit I to IV contents were reframed based on text books.
2.	I/III			21UMAA1P/ 21UCHA3P	Allied Course I/III : Allied Physics Practical - I	10 (any 8) Experiments 12 (any 8) Experiments	Introduced	Based on the Feedback from Stakeholders Semester Pattern Practical is introduced to make students more Exams friendly. Few new experiments are included for better understanding of the concepts of Physics. Based on the Board recommendations, two experiments were added.
3.	II/IV	18UMAA21/ 18UCHA41	Allied Course-II/IV: Physics - II	21UMAA21/ 21UCHA41	Allied Course-II/IV: Allied Physics - II	Unit I to V Unit IV	Revised and Updated	Based on feedback given by teachers, the content of the course is modified. Based on the Board recommendations, Diode Concepts were included and

						Unit V		Op-Amp concepts were removed. K-Map Concepts were removed.
4.	II/IV	18UMAA2P /18UCHA4P	Allied Physics Practical				Removed	Based on the Feedback from Stakeholders, Semester Pattern Practical is introduced to make students more Exams friendly. Few experiments are included in 21UMAA1P and 21UMAA2P.
5.	II/IV			21UMAA2P/ 21UCHA4P	Allied Course II/IV : Allied Physics Practical - II	10 (any 8) Experiments	Introduced	Based on the Feedback from Stakeholders Semester Pattern Practical is introduced to make students more Exams friendly. Few new experiments are included for better understanding of the concepts of Physics. Based on the Board recommendations, two experiments were added.
						12 (any 8) Experiments		

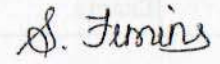
Certificate Courses for UG Programme

S.No	Semester	2018-2021		2021-2024		Content/ Unit	Retained/ Shifted Changed/ Introduced	Justification
		COURSE CODE	COURSE NAME	COURSE CODE	COURSE NAME			
1.		18UPHEX1	Certificate Course in Electricity and Electrical Appliances				Shifted as Skill Enhancement Course - 21UPHS31	
2.	I			21UPHEX1	Certificate Course in GK and Test of Reasoning		Introduced	To face competitive examinations.
3.	II	18UPHEX2	Certificate Course in Applied Physics	21UPHEX2	Certificate Course in Applied Physics	Unit I, III, IV and V Unit II	Revised and Updated Removed	Holography is introduced. Ultrasonics is included in the Skill Enhancement Course 21UPHS21.
4.	III			21UPHEX3	Certificate Course in General Physics for Competitive Exams		Introduced	To face the IIT-JAM Exam and other competitive examinations.
5.	IV			21UPHEX4	Certificate Course in Modern Physics for Competitive Exams		Introduced	To face the IIT-JAM Exam and other competitive examinations.

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2.	University Nominee	Dr. Sujin P. Jose Assistant Professor Department of Computational Physics Madurai Kamaraj University, Madurai -625 021	 22-1 Dr. SUJIN P. JOSE Assistant Professor Department of Computational Physics School of Physics Madurai Kamaraj University Madurai -625 021
3.	Academic Expert 1.	Dr. N. Prithivikumar, Head & Associate Professor, Department of Physics, V.H.N. Senthikumara Nadar College (Autonomous), Virudhunagar-626 001.	 Dr. N. PRITHIVIKUMARAN Head & Associate Professor Department of Physics VHNSN College (Autonomous) Virudhunagar - 626 001.
4.	Academic Expert 2.	Dr. M. Sivakumar, Associate Professor, Department of Physics, Alagappa University, Karaikudi - 630 003.	
5.	Industrialist	Mr. J. Senthil Ananda Prakash B.E. (ECE) Prakash Motors, 1582, PKN road, Sivakasi.	
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Signature of Chairman of the Board


Dean of Academic Affairs


PRINCIPAL