



K.S.RANGASAMY COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS)
TIRUCHENGODE - 637215
DEPARTMENT OF PHYSICS

Name & Official Address	Position	Nominated by
Dr. G. Suresh Kumar Assistant Professor and Head (PG) Department of Physics K.S.Rangasamy College of Arts and Science (Autonomous) Tiruchengode – 637215	Chairman	Principal
Department Faculty Members		
1. Dr. M. Venkatesh Assistant Professor and Head (UG) Department of Physics K.S.Rangasamy College of Arts and Science (Autonomous) Tiruchengode – 637215 2. Dr. S. Jayanthi Assistant Professor Department of Physics (PG) K.S.Rangasamy College of Arts and Science (Autonomous) Tiruchengode – 637215 3. Mr. J. Duraimurugan Assistant Professor Department of Physics (UG) K.S.Rangasamy College of Arts and Science (Autonomous) Tiruchengode – 637215 4. Ms. R.L. Menaka Assistant Professor Department of Physics (UG) K.S.Rangasamy College of Arts and Science (Autonomous) Tiruchengode – 637215	Members	Principal

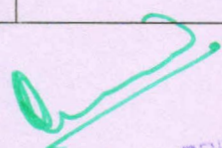

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External Members		
Subject Experts		
1. Dr. K. Thamilmaran Professor Centre for Nonlinear Dynamics School of Physics Bharathidasan University Tiruchirappalli - 620 024	Member	Vice Chancellor
2. Dr. E. K. Girija Assistant Professor Department of Physics Periyar University Salem 636 011	Member	Academic Council
3. Dr. K.B. Rajesh Assistant Professor Department of Physics Chikkanna Government Arts College, Tiruppur 641602	Member	Academic Council
Representing Industry		
Mr. T. Periyasamy Team Leader-Photogrammetry Intrasaptial Softech PVT LTD, Bangalore	Member	Principal
Meritorious Alumni		
Mr. S. Surendhiran Research Scholar Centre for Nanoscience and Technology K.S. Rangasamy College of Technology Tiruchengode 637 215	Member	Principal
Supporting Department(s) - Faculty Members		
1. Dr. K.M. Prabhakaran Assistant Professor & Head Department of Electronics & Communication K.S.Rangasamy College of Arts & Science Tiruchengode - 637 215	Co-opted member	Principal
2. Mr. T. Rajendrakumar Assistant Professor & Head (UG) Department of Mathematics K.S.Rangasamy College of Arts & Science Tiruchengode - 637 215	Co-opted member	Principal



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2. Dr. S. Jayanthi Assistant Professor, Department of Physics (PG) K.S.Rangasamy College of Arts and Science (Autonomous) Tiruchengode – 637215		
3. Mr. J. Duraimurugan Assistant Professor Department of Physics (UG) K.S.Rangasamy College of Arts and Science (Autonomous) Tiruchengode – 637215	Members	Principal
4. Ms. R.L. Menaka Assistant Professor Department of Physics (UG) K.S.Rangasamy College of Arts and Science (Autonomous) Tiruchengode – 637215		


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3. Dr. A. Kathirvel Assistant Professor & Head Department of Chemistry K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	Co-opted member	Principal
4. Mr. M. Prakasam Assistant Professor & Head (PG) Department of Computer Science K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	Co-opted member	Principal
5. Mr. J. Tamilselvan Assistant Professor & Head (UG) Department of Computer Science K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	Co-opted member	Principal
6. Dr. G. Saravanan Assistant Professor & Head Department of Biochemistry K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	Co-opted member	Principal


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Dr. G. Suresh Kumar

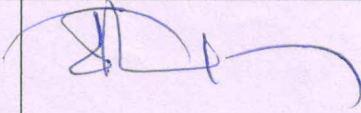

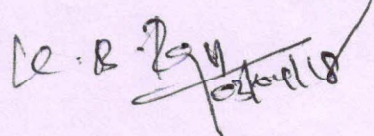
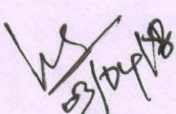
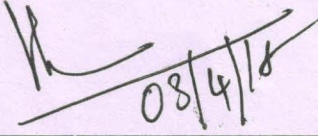
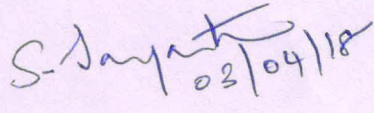
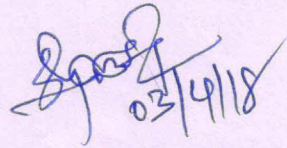
Chairman- BOS Physics

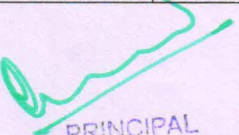
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The board of studies for Physics (UG & PG) is held on 03-04-2018 at the Department of Physics, K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode – 637215, to approve the syllabus with effect from the academic year 2018-2019.


The syllabus for 2018-2019 has been thoroughly discussed and resolved that the programme structure for B.Sc., Physics and M.Sc., Physics are approved with effect from the academic year 2018-2019.

The suggestions given by members are given in Annexure-I & Annexure-II.

S.No.	Name & Official Address	Signature
1	Dr. K. Thamilmaran Professor Centre for Nonlinear Dynamics School of Physics, Bharathidasan University Tiruchirappalli - 620 024	
2	Dr. E. K. Girija Assistant Professor Department of Physics, Periyar University Salem 636 011	
3	Dr. K.B. Rajesh Assistant Professor Department of Physics Chikkanna Government Arts College, Tiruppur 641602	
4	Dr. G. Suresh Kumar Assistant Professor and Head Department of Physics K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode – 637215	
5	Dr. M. Venkatesh Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode – 637215	
6	Dr. S. Jayanthi Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode – 637215	
7	Mr. J. Duraimurugan Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode – 637215	


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8	Ms. R.L. Menaka Assistant Professor Department of Physics K.S.Rangasamy College of Arts and Science (Autonomous), Tiruchengode – 637215	R. L. Menaka 3/4/18
9	Mr. T. Periyasamy Team Leader-Photogrammetry Intrasaptial Softech PVT LTD, Banglore	Absent
10	Mr. S. Surendhiran Research Scholar Centre for Nanoscience and Technology K.S. Rangasamy College of Technology Tiruchengode 637 215	S. Surendhiran 3/4/18
11	Dr. K.M. Prabhakaran Assistant Professor & Head Department of Electronics & Communication K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	K.M. Prabhakaran 3/4/2018
12	Mr. T. Rajendrakumar Assistant Professor & Head (UG) Department of Mathamatics K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	T. Rajendrakumar 3/4/18
13	Dr. A. Kathirvel Assistant Professor & Head Department of Chemistry K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	A. Kathirvel 03/04/18
14	Mr. M. Prakasam Assistant Professor & Head (PG) Department of Computer Science K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	M. Prakasam 3/4/18
15	Mr. J. Tamilselvan Assistant Professor & Head (UG) Department of Computer Science K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	J. Tamilselvan 03/04/18
16	Dr. G. Saravanan Assistant Professor & Head Department of Biochemistry K.S.Rangasamy College of Arts & Science Tiruchengode – 637 215	G. Saravanan 3/4/18


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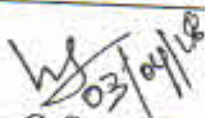
Annexure - I

The following are the corrections and suggestions given by the board of studies members for the new B.Sc., Physics syllabus, which will be effective from the academic year 2018-2019.

S.No	Subject	Remarks
1.	Core -I: Properties of Matter and Sound	1. Unit-V: contents may be incorporated with some application-oriented topics. 2. Medical applications and Non-Destructive Testing topics may be included.
2.	Core-II Thermal physics	1. Unit-V: few contents must be incorporated.
3.	Core practical I: Practical physics -I	1. The number of experiments may be included with choices (10 out of 12) Ultrasonic interferometer. 2. Velocity determination of ultrasonic waves.
4.	Core -III: Mechanics	1. Unit-I: The term loss in kinetic energy must be kept at end of the unit. 2. Few typographical errors must be rectified in this subject.
5.	Core- IV: Optics	1. Unit-IV: The words Quarter wave and Half wave should be modified as Quarter-wave and Half-wave. 2. Unit-V: Give the detailed contents in the photonics subject with relevant topics. 3. Either introduce laser topics or photoelasticity topics. For this, refer to the book Engineering Physics by P.K. Palanisamy.
6.	Core practical- II: Practical physics-II	1. Introduce polarization-oriented practical using a laser source.
7.	Allied I/III: Physics I	1. In this paper Unit II topics are removed. In Unit IV Diffraction related topics are added.
8.	Allied Practical I/III: Physics I	1. Few Experiment was introduced also the details were given related to the compound Pendulum experiments.
9.	Allied II/IV: Physics II	1. In Unit - IV, the topic is full-wave rectifier is added.
10.	Allied Practical II/IV: Physics II	1. One experiment is removed in this practical paper also added the new experiment.
11.	Value Added on Course: Electrical Appliances: Maintenance and Servicing	1. The new value-added course "Electrical Appliances: Maintenance and Servicing" was introduced instead of Physics in Everyday Life.



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Chairman - BOS Physics

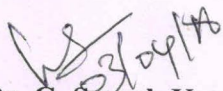
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Annexure-II

The following are the corrections and suggestions given by the board of studies members for M.Sc., Physics syllabus, which will be effective for the students admitted from the academic year 2018-2019.

S.No	Subject	Remarks
1	General	1. Question paper pattern must contain one compulsory problem in Part A for core papers. Instruct it to question paper setter. 2. Introduce and add advanced-level reference books for all subjects. 3. Model question paper pattern may be enclosed in the syllabus book. 4. Practical external examiners may be allotted from University approved examiner list.
2	Core-I: Mathematical physics	1. Reference books: G. Arfken, H. Weber, F.E. Harris, Mathematical Methods for Physicists, Elsevier publications should be included. 2. Unit-II: Matrix: Eigenvalue problems may be introduced Fourier transform: Fundamental topics may be included Fourier transform of the derivative must be excluded 3. Refer contents from CSIR/NET syllabus.
3	Core-II: Classical mechanics	1. Add Applications of Hamilton's equations: A particle moving in EM field. 2. Add Reference books: R. G. Takwale, P. S. Puranik, Introduction to Classical Mechanics, Tata McGraw-Hill Education.
4	Core-III: Statistical mechanics	1. More reference books may be included as 1. K.Huang, Statistical mechanics, John Wiley & Sons and 2. F.W. Sears, G.L. Salinger, Statistical Mechanics. 2. Unit-IV: Black body radiation & Planck's constant should be included after Bose-Einstein condensation.
5	Core-III: Condensed Matter Physics	Unit IV: Include "Determination of magnetic susceptibility"
6	Core practical-II: Advance physics practical-II	Include the following experiments 1. Refractive index of a liquid using laser 2. Characterization of optical fiber: Bending loss, Numerical aperture, Attenuation, etc.


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BOS Meeting & Syllabus Revision Summary (B.Sc., Physics)

Based on the suggestions given by BOS members (Annexure I), COE and minutes of Department syllabus revision meeting (I, II & III), the following major changes has been made for new B.Sc., Physics syllabus (Semester I & II) which will be effective from the academic year 2018-2019.

S.No	Subject	Remarks
1.	Core I: Properties of Matter and Sound	In Unit – IV the topic 'Simple Harmonic Motion removed also added the topic of Sound. The medical application and Non-destructive testing content were added in Unit – V. There is 10% change in the paper.
2.	Core II: Thermal Physics	The paper name changed from Heat and Thermodynamics to Thermal Physics. Few topics were shifted from Unit – V to Unit – IV. There is 5% change in the paper.
3.	Core Practical I: Practical Physics I	The first experiment was newly added. The eight experiments were removed namely method of mixture. Also, update the all experiments. 15% changes present in the practical paper.
4.	Core III: Mechanics	In Unit – I Content was updated and rearranged. Few contents were added in Unit – V. There is 10% changes in this paper.
5.	Core IV: Optics	In Unit – IV the few names of the content were modified. Unit – V, the existing content was completely changed also included the photoelasticity-related topics. There is 20% changes in this paper.
6.	Core Practical II: Practical Physics II	All experiments were updated. There is less than 5% change in the paper.
7.	Allied I/III: Physics I	In this paper, some topics in Unit II are removed. In Unit IV Diffraction related topics are added. There is 5% changes in this paper.
8.	Allied Practical I/III: Physics I	Few Experiment was introduced also the details were given related to the compound Pendulum experiments. There is 10% changes in the paper.
9.	Allied II/IV: Physics II	In Unit – IV, the topic is full-wave rectifier is added. There is less than 5% change in the paper.
10.	Allied Practical II/IV: Physics II	One experiment is removed in this practical paper also added the new experiment. There is 10% changes in the paper.
11.	Value Added on Course: Electrical Appliances; Maintenance and Servicing	The new value-added course "Electrical Appliances: Maintenance and Servicing" was introduced instead of Physics in Everyday Life. There is 100% new in the syllabus

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BOS Meeting & Syllabus Revision Summary (M.Sc., Physics)


Based on the suggestions given by BOS members (Annexure-II), COE, and minutes of the Department syllabus revision meeting (I, II & III), the following major changes have been made for M.Sc., Physics syllabus (Semester I & II) which will be effective for the students admitted from the academic year 2018-2019 onwards..

S.No	Subject	Remarks
1.	Core-I: Mathematical physics	Based on suggestions few topics included in Unit II are the Fourier series, Dirichlet's theorem, properties, and applications of Fourier transform. Also in Unit III Differential equation: Linear ordinary differential equations of first and second order was included There is a 10% change in the syllabus.
2.	Core-II: Classical Mechanics	Few topics included in unit - II are the Hamiltonian equation: Particle moving in an EM field, Derivation of the Lagrangian equation from Hamiltonian principle. There is a 5% change in the syllabus
3.	Core-III: Statistical Mechanics	Based on feedback received from various stakeholders the content of the syllabus was fully revised and major topics were included based on the NET/GATE syllabus in the overall content. 50% of the syllabus was revised to increase the weightage of this paper.
4.	Core-IV: Condensed Matter Physics	Advanced Electronics paper is moved to the third semester and Condensed Matter Physics paper is placed for a semester- I. In Unit – IV, the Determination of magnetic susceptibility is included and the topics Antiferromagnetism, ferrimagnetism topics were removed. Duration of persistent current and flux quantization topics were removed in unit V. 5% syllabus change in this subject.
5.	Core practical-I: Advanced physics practical-I	Electronics Practical paper combined with Microprocessor practical and it is included as Core practical-III: Advanced Electronics practical in semester 3 based on feedback received from various stockholder and it is moved to the third semester. Core practical-II: Advanced physics practical in the previous curriculum was separated into Advanced physics practical-I and Advanced physics practical-II with 50% of new content


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		and included in the semester I and II respectively. 50% syllabus change in this subject.
6.	Career competency skills I	Common course: Career competency skills I was revised with change in units II, IV, V. 40% syllabus change in this subject.
7.	Core-V: Quantum mechanics-I	Few topics included in units I & II are Hilbert space and Barrier penetration problems. There is a below 5% change in the syllabus.
8.	Core-VI: Electro-Magnetic Theory	Condensed Matter Physics paper is moved to Semester - I and Electromagnetic theory paper are moved to II semester from III. Based on feedback received from various stakeholders the content of the syllabus was fully revised and major topics were included based on the NET/GATE syllabus in the overall content. Unit V was removed and new content was included Major topics had been revised in unit I to V and few topics have been excluded from the syllabus. There is a 40% change in the syllabus of this subject.
9.	Elective-II: Biomaterials	Physics of Nanoscale paper was moved to the third semester and Biomaterial paper is placed in the second semester. Minor changes about 3% in the syllabus.
10.	Core practical II: Advanced Physics Practical II	Core practical-II: Advanced physics practical in the previous curriculum was separated into Advanced physics practical-I and Advanced physics practical-II with 50% of new content. And included in the semester I and II respectively. 50% syllabus change in this subject.
11.	Inter-Disciplinary Course I: Computer Graphics and Multimedia	Numerical Methods and Programming in 'C' paper was removed and Computer Graphics and Multimedia paper is added to IDC-I in the second semester based on feedback received from various stockholders and 100% change in syllabus.
12.	Inter-Disciplinary Course I: Multimedia Tools	Based on feedback received from various stockholder Numerical Methods using 'C' Practical was removed and Multimedia tools practical is added to IDC practical I in the second semester. 100% change in syllabus.
13.	Career competency skills II	The syllabus was fully revised to enhance employability skills and to develop career competency. Career Competency Skills II: 80% change in syllabus.


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