M.Sc.Physics – I,II,III & IV Semesters

Code	Course Name	Course Outcomes
M.Sc.Physics – I Semester		
PPHT11	**Mathematical Physics I**	**CO1:** Expose to solve first, second, higher order, series differential equations K2 **CO2:** Acquire sound knowledge on special functions K4 **CO3:** Solve differential equations using Laplace transform K3 **CO4**: Grasp problem solving skills K4 **CO5:** Understand the physics concepts using mathematics K2
PPHT12	**Classical Mechanics**	**CO1:** Learn about the dynamics of system of particlesusing Hamiltonian, Lagrangian and Jacobi K1 **CO2:** Understand the planetary motion using kepler's law K2 **CO3:** Get great exposure about kinematics of rigid motion K4 **CO4**: Solve small oscillations using Legendre transformations and Hamiltonian K3 **CO5:** Solve harmonic oscillator problem using canonical transformation and Hamiltonian Jacobi K5
PPHT13	**Applied Electronics**	**CO1:** Know about operation of Operational Amplifier K1 **CO2:** Solve mathematical equation using OP-Amp K3 **CO3:** Understand the concept of data storage elements K2 **CO4**: Know about theory and operation of different optical devices. K4 **CO5:** Train the students to get employability in electronic industry K5

PPHP11	Electronics Practical – I	CO1:Construct different waveform generators using op-amp K2
		CO2: Solve arithematic operations using IC7483 K4
		CO3: Design Multiplexer and demultiplexer using op-amp K3
		CO4:Acquiring the skill of fabricating the various electronic circuits K2
		CO5: Mastering the concept of Op-amps K5
PPHE11	Astrophysics	CO1: Grasp basic knowledge about celestial mechanics K2
		CO2: Understand the usage of various astronomical instruments K2
		CO3: Know the physical processes involved in solar systems K4
		CO4: Gain deep insight on cosmology and Cosmic radiation K3
		CO5: Acquire the fundamental concepts of Stellar Evolution, White dwarfs, Neutron Stars and
		Black Holes K2
PPHE11	Numerical Methods	CO1: Understand the curve fitting methods and its significance K2
		CO2: Improve the problem solving skills in algebraic, transcendental and simultaneous equation K3
		CO3: Learn to interpolate and get an idea about various interpolation techniques K3
		CO4: Gain deep conceptual insight on different polynomials K4
		CO5: Enhance the analytic skill to crackthe competitive examinations K4

Code	Course Name	Course Outcomes
M.Sc.Physics – II Semester		
PPHT21	**Mathematical Physics II**	**CO1:** Understand about Fourier series, integrals and transform K2 **CO2:** Solve physics problem using partial differential equations K3 **CO3:** Grasp knowledge about complex numbers and functions K4 **CO4**: Apply different integral methods to solve complex variables K4 **CO5:** Choose right series to solve problem in Physics. K5
PPHT22	**Quantum Mechanics I**	**CO1:** Get knowledge about wave mechanics K1 **CO2:** Solve one dimensional and three dimensional problem using Schrodinger equation K3 **CO3:** Acquire the knowledge about the importance of operators in quantum mechanics K2 **CO4**: Understand the commutation relations, in turn determine eigen values K3 **CO5:** Ability to develop the problem solving skills in quantum mechanics K4
PPHT23	**Statistical Mechanics And Thermodynamics**	**CO1:** Gain knowledge basic concept of ensembles K2 **CO2:** Explore the different theories and functions related to properties of gases K3 **CO3:** To distinguish between Bose –Einstein and Fermi-Dirac statistics K4 **CO4**: Exposure about kinetic theory of gases K2 **CO5:** Get knowledge about the different fluctuations and noise problems in thermodynamics K2
PPHP22	**General Practical II**	**CO1:** Understand the concept and get hands on

		training on instruments K2
		CO2: Apply different physics concepts to analyze the data K3
		CO3: Understand and determine the different physical parameters K2
		CO4: Practically acquire the applications of theoretical physics K4
		CO5: Analyze the data obtained from Indian Institute of Astrophysics, Kodaikanal and get knowledge about different astronomical objects K4
PPHE22	**Materials Characterization**	**CO1:** Understand the theory and working principle of different instruments. K2
		CO2: Grasp the knowledge about concept of differentequipments used for material analysis K4
		CO3: Learn the technical specifications of research instruments K3
		CO4: Learn specific analysis physical and chemical properties of the materials K3
		CO5: Enhance the employability skills K5
PPHE22	**PPHE22**	**CO1:** Gain knowledge about architecture, instruction set, peripheral devices of 8085 microprocessor. K2
		CO2: Familiarize with interface memory and application of microprocessor. K3
		CO3: Able to write program and solve some mathematical problems. K4
		CO4: Interface specific software with devices/instruments K5
		CO5: Can seek employability in electronic industry K3

Code	Course Name	Course Outcomes
M.Sc.Physics – III Semester		
PPHT31	**Electromagnetic Theory**	**CO1:** Learn the fundamentals of electrostatics K1 **CO2:** Acquire the knowledge about magnetostatics K2 **CO3:** Gain knowledge about the Maxwell equation K2 **CO4**: Apply Maxwell equation and its application to wave propogation K3 **CO5:** Learn about electric dipoles and its theory K2
PPHT32	**Quantum Mechanics-II**	**CO1:** Learn about the fundamental difference between time dependent and time independent perturbation theory K2 **CO2:** Grasp the concept of WKB approximation and its application K3 **CO3:** Gain knowledge about Variation method and apply to hydrogen molecule K3 **CO4**: Explore the features of Scaterring cross section using different formula K2 **CO5:** Acquire problem solving skill in quantum physics K5
PPHT33	**Solid State Physics**	**CO1:** Learn and determine different crystal structures of materials K1 **CO2:** gain knowledge on the theory of lattice vibration and correlate with materials thermal Properties K2 **CO3:** Learn about physical properties of materials in terms of its band structure K3 **CO4**: Understand about superconductivity and its application in real world K2

		CO5: Grasp the knowledge about magnetic properties of material K4
PPHP33	**Practical III**	**CO1:** Understand the structure of C programming K2
		CO2: Learn about variables and constant of C-programming K1
		CO3: Understanding a functional hierarchical code organization K2
		CO4: Ability to write algorithm for given mathematical problem K3
		CO5: Ability to execute and solve any mathematical problems. K3
PPHE33	**Materials Science**	**CO1:** Understand the basic knowledge preparation method ofnanomaterialsK1
		CO2: Acquire knowledge about application and various properties of polymers K2
		CO3: Gain knowledge aboutdielectric, pyroelectric and ferroelectric materials and its Application K2
		CO4: Understand the different purification techniques involved in electronic materialsK3
		CO5: Gain in depth knowledge about magnetic materials. K4
PPHE33	**Solar Cells**	**CO1:** Grasp the knowledge about semiconductor materials K1
		CO2: Understand about solar energy and its utilization K2
		CO3: Learn about third and fourth generation solar cells K3
		CO4: Design and fabricate the solar cell K5
		CO5: Start the research work related to solar cell K3

Code	Course Name	Course Outcomes
M.Sc.Physics – I Semester		
PPHT41	**Spectroscopy**	**CO1:** Understand about principle and concept of different spectroscopic techniques K2
		CO2: Understand deeply about different instrumentation and working procedure of spectroscopic
		technique. K2
		CO3: Identity the spectroscopic techniques to analyze different mechanism and properties of the
		Materials K3
		CO4: Identify and analyze which spectroscopic tool is used for their research work K3
		CO5: Can seek employability in industries K4
PPHT42	**Nuclear Physics And Particle Physics**	**CO1:** Learn about basic properties of nuclei K1
		CO2: Acquire knowledge about different nuclear models K2
		CO3: Understand what happen when charged particles and radiation passed through matter by
		various experimental procedure K2
		CO4: Gain knowledge about Q-value and theories of nuclear reactions K4
		CO5: Learn about different classification and properties of elementary particles.K4

14. M.A. Public Administration – I,II,III & IV Semesters

Code	Course Name	Course Outcomes
M.A.Public Administration – I Semester		
PPAT11	**Introduction to Public Administration**	**CO1:**New Public Administration and New Public Management **CO2:**Govern in collaboration with other leaders, employees, volunteers, and the public. **CO3:**strategic plans to promote organizational effectiveness and minimize risk. **CO4:**organizational needs and decisions effectively in written and oral forms. **CO5:**critical thinking and problem solving skills to complex strategic
PPAT12	**Administrative Thinkers**	**CO1:**Contribution of Administrative Thinkers. **CO2:**The works and studies related to Administrative Thinkers **CO3:**Implementation and effects of public policies and laws. **CO4:**Various aspects and dimension of the Theories and Practice of Modern Government. **CO5:**Historical development of public *administration* and the major *thinkers.*
PPAT13	**International Organizations**	**CO1:**Various international conventions and treaties which are binding on the member nations . **CO2:**Analytical skills relevant to International Administration and Global Governance.

Code	Course Name	Course Outcomes
		CO3: Skills needed for both professional careers in and post-graduate research related to international administration and global governance **CO4:**Equip students with the analytical skills to assess the international policy **CO5:**Complex interrelations among domestic and international governmental, intergovernmental and nongovernmental actors.
PPAT14	**Comparative Public Administration**	**CO1:**Political culture, constitutional frame work, civil service, public sector agencies , federal and local government, financing system, coordination of the system, managing the system, accountability, secrecy and openness, democracy and so on **CO2:**Theories, methods and types of comparative public administration research **CO3:**Models and traditions of public administration **CO4:**Public administration development and reforms **CO5:**Organization and functions of public administration in different countries
PPAE11	**Soft Skills**	**CO1:**Etiquettes for Public Speaking **CO2:**Team work, presentation and public communication **CO3:**Public speaking **CO4:**Adapt to new situations and reflect upon professional practice in order to most effectively address challenges **CO5:**Developing interpersonal communication skills including report writing, workplace discussions, negotiation and management strategies.

Code	Course Name	Course Outcomes
M.A.Public Administration – II Semester		

PPAT21	**Public Personnel Administration**	**CO1:**Concept and its philosophical ground to study civil service system in India. **CO2:**Public Personnel Administration in India **CO3:**Employee recruitment, Selection, Training, discipline, development,Grievance redressal and assessment of public safety of employees. **CO4:**Personnel administration of the concerned agency **CO5:**Public safety administrators in public safety administration.
PPAT22	**Public Financial Administration**	**CO1:Collection and use of qualitative and quantitative data** **CO2: Financial resources management** **CO3:**Ethics and integrity in public service and reflect on ways to incorporate public service values in administering agencies, policies and programs. **CO4:**Critical issues such as helping organizations meet the ever-changing needs of the general population . **CO5:**Theory and research based works.
PPAT23	**Indian Administration**	**CO1:**Historical evolution and socio-economic, political, cultural and global context of Indian Administration; **CO2:**Transformative role of Indian Administration **CO3:**Multi-dimensional problems and processes of Indian Administration; **CO4:**Forms of Indian Administration **CO5:**Emerging issues in Indian Administration in the context of changing role of state and civil society
PPAT24	**Environmental Administration**	**CO1:**Environmental management approaches at national and international levels **CO2:**Environmental management in relation to the major principles of sustainable development like biodiversity conservation; economic sustainability etc

		CO3:Concepts and methods into real-world environmental management practices.
		CO4:Able to evaluate critical information in oral and written forms.
		CO5:Environmental management analysis outputs of professional quality, both independently and within team environments
PPAE22	**Gender Studies**	CO1:Biologically determined and socially constructed Gender roles.
		CO2:Gender disparity and gender discrimination within the family, education, political and societal systems
		CO3:Empowerment and power relations
		CO4:Gender Approaches to Development.
		CO5:Information on central and state government initiatives towards women's studies.

Code	Course Name	Course Outcomes
M.A.Public Administration – III Semester		
PPAT31	**Public Policy and Analysis**	CO1:Important public policies formulated in India
		CO2:Ills prevailing in the society and aids to identify the solutions
		CO3:Basic areas of public policy
		CO4:Decision-making in the public sector
		CO5:Leading and managing policy initiatives from all levels of an organizations
PPAT32	**Administrative Law**	CO1:Fundamentals of the Indian legal system
		CO2:Constitutional principles most relevant to agency action and
		Public administration

		CO3: Administrative law as applied to nonprofit practice **CO4:**Develop fluency in administrative law terminology and concepts. **CO5:**Judicial decisions interpreting and establishing administrative law.
PPAT33	**Local Government in India**	**CO1:**evolution of local self-government in India. **CO2:**active and responsible leadership role in the functioning of Local Government Institutions. **CO3:**Equip the youth regarding planning, implementation and monitoring of various development and welfare programmes. **CO4:**Enable the youth to participate in disaster management and sustainable development. **CO5:**strive for realising Good Governance at the Grassroots
PPAT34	**Research Methodology/ Internship in Public Bodies-Report Presentation**	**CO1:**Social science research in relation to Public Administration **CO2:**The strengths and weaknesses of various qualitative and quantitative approaches to measurement. **CO3:**Research skills for data processing and policy implications. **CO4:**Data interpretation and Statistical Applications **CO5:**systematic research work to novel problems
PPAE33	**Public Administration for Civil Services**	**CO1:**IAS Public Administration syllabus. **CO2:**Public Administration subject along with General Studies for IAS preparation. **CO3:**role of Public Services in Tamilnadu **CO4:**India's development experience and changing role of administration. **CO5:**Motivation on civil service examinations.

Code	Course Name	Course Outcomes
M.A.Public Administration – IV Semester		
PPAT41	**Social Welfare Administration**	**CO1:**Institutional capacity building strategies and programmes **CO2:**History of Social Welfare Administration in India **CO3:**Various aspects and dimension of the Social Welfare Administration. **CO4:Various** concepts related to social welfare **CO5:**Difference between Public administration and Social Welfare administration.
PPAT42	**Development Administration**	**CO1:**Underdeveloped or developing nations. **CO2:**Temperament of organized approach,soft skills and sensitivity to the values of others. **CO3:**Aware of developmental programmes. **CO4:**Approaches to Development Administration **CO5:**Development Planning in India
PPAD41	**Dissertation-Viva Voce**	**CO1**.To familiarize the students with the process of formulating, implementing and evaluating the projects. **CO2**.To develop skills of project formulation **CO3**.To teach the methods of analysis and evaluation of projects. **CO4**.To provide students with the opportunity to synthesise knowledge from various areas of learning, and critically and creatively apply it to real life situations **CO5**.After successful completion of this course the student will be able to understand comprehend and analyze various aspects and dimension of the field Works