

January Semester

2025



Indian Institute of Science Education & Research (IISER) Tirupati

BS-MS, iPh. D. and PhD

BSMS Sem VI&VIII, iPhD II,IV and PhD

Courses in Biology

Course Code	Name of the Course	Name of the Instructor/s	Credits	Course Type	Open for	
					BSMS	PhD
BIO321/621	Microbiology	Dr. Suchi Goel	4	L	VI	Y
BIO324/624	Animal Physiology	Dr. Ramkumar Sambasivan	4	L	VI	Y
BIO325/625	Plant Developmental Biology	Dr. Swarup Roy Choudhury*, Dr. Eswar Rami Reddy	4	L	VI	Y
BIO328/628	Advanced Molecular Biology	Dr. Annapurna Devi Allu*, Dr. Anand Kumar Singh	4	L	VI, VIII	Y
BIO329/629	Behavioural Ecology	Dr. Nandini Rajamani	4	L	VI, VIII	Y
BIO426/726	Applied Plant Biology	Dr. Eswar Rami Reddy*, Dr. Annapurna Devi Allu	4	L	VIII	Y
BIO427/727	Bioinformatics lab	Dr. Sreenivas Chavali	4	L	VIII	Y
BIO428/728	Stem Cell and Regenerative medicine	Dr. Pavitra Chavali	3	L	VIII	Y
BIO440	Experimental Biology Lab II	Dr. Prasanna Katti*, Prof. Guruprasad, Dr. V.V. Robin	4	P	VIII	
BIO441	Biophysics	Dr Hussain Bhukya*	3	L	VI,VIII	Y
BIO443/743 CHM443/743	Fluorescence in Biology	Dr. Nibedita Pal	3	L	VIII	Y
BIO444/744	Chemical Biology	Dr. Ashwani Sharma	3	L	VI,VIII	Y
BIO445/745	Advanced Neuroscience	Dr. Vasudharani Devanathan	3	L	VI,VIII	Y
BIO462/762	Deep Learning	Dr. Arunima Banerjee*, Dr. Debashish Koner (Guest Faculty)	3	L	VIII	Y
BIO446/746	Drug Discovery and Development	Dr. Ambrish Saxena & Prof. Rajesh Viswanathan	4	L	VIII	Y
BIO747	Integrative molecular modelling	Dr. Rajeswari Appadurai*, Dr. Rajashekar Varma Kadumuri	4	L+P	-	Y
BIO748	OMICS Data Analysis	Dr. Rajashekar Varma Kadumuri*, Dr. Sreenivas Chavali	4	L+P	-	Y

Courses in Chemistry

Course Code	Name of the Course	Name of the Instructor/s	Credits	Course Type	Open for		
					BS-MS	I-PhD	Ph.D.
CHM322/622	Methods in Organic Synthesis	Dr. Kiran Kumar Pulukuri* Dr. Shibdas Banerjee	4	L	VI, VIII	Y	Y
CHM323/623	Organometallic Chemistry	Dr. Sudipta Roy* Dr. Ekambaram Balaraman	4	L	VI, VIII	Y	Y
CHM325/625	Chemical Kinetics and Surface Chemistry	Dr. Soumit Sankar Mandal*	4	L	VI, VIII	Y	Y
CHM326/626	Electrochemistry	Dr. Vanchiappan Aravindan* Dr. Janardan Kundu	4	L	VI, VIII	Y	Y
CHM327/627	Stereochemistry and Asymmetric Synthesis	Prof. Ponneri C. Ravikumar	4	L	VI	Y	Y
CHM302	Lab Rotation	Dr. Gopinath Purushothaman* Dr. Anees Palapuravan	5	H		Y	
CHM420	Semester Project	Dr. Anees Palapuravan	3	H	VIII	N	N
CHM428/728	Statistical Mechanics II	Dr. Rakesh S. Singh*	4	L	VI, VIII	Y	Y
CHM422/722	Organic Synthesis II	Prof. Rajesh Viswanathan* Dr. Gopinath Purushothaman	4	L	VIII	Y	Y
CHM443/743	Fluorescence in Biology	Dr. Nibedita Pal	3	L	VIII	Y	Y
CHM444/744	Chemical Biology	Dr. Ashwani Sharma*	3	L	VI, VIII	Y	Y
CHM441/741	Inorganic Spectroscopy	Dr. Pankaj Kumar Koli* Dr. Rana Saha	4	L	VIII	Y	Y
CHM424/724	Supramolecular Chemistry	Dr. Anees Palapuravan	4	L	VIII	Y	Y
CHM464/764	Astrochemistry	Dr. Raghunath O. Ramabhadran*	3	L	VI, VIII	Y	Y
CHM426/726	Simulation & Modelling	Dr. Padmabati Mondal*, Prof. Prasenjit Sen (Guest Faculty)	4	L	VIII	Y	Y
CHM446/746	Drug Discovery and Development	Dr. Ambrish Saxena & Prof. Rajesh Viswanathan	4	L	VIII	Y	Y
CHM462/762	Deep Learning	Dr. Arunima Banerjee* Dr. Debasish Koner (Guest Faculty)	3	L	VIII	Y	Y

Courses in Earth & Climate Sciences

Course Code	Name of the Course	Name of the Instructor/s	Credits	Course type (L/P/L+T)	Sem Open in for	
					BSMS	PhD
ECS321/621	Atmospheric Thermodynamics and Cloud Physics	Dr. K. Saikranthi	4	L	VI	Y
ECS322/622	Advanced Mineral Science	Dr. Aniket Chakrabarty	4	L	VI	Y
ECS323/623	Geophysical Inverse Theory	Dr. Utpal Saikia	4	L	VI	Y
ECS324	Environmental Science and Sustainability	Dr. Sukhmeen Kaur Kohli	4	L	VI & VIII	–
ECS420	Semester Project	Dr. Aniket Chakrabarty	3	P	VIII	–
ECS421/721	Igneous Petrology	Dr. Aniket Chakrabarty	4	L	VIII	Y
ECS422/722	Atmospheric Dynamics	Dr. K. Saikranthi	4	L	VIII	Y
ECS423/723	Ore Geology	Dr. Chandan Kumar B	4	L	VIII	Y
ECS462/762	Deep Learning	Dr. Arunima Banerjee*, Dr. Debasish Koner (Guest Faculty)	3	L	VIII	Y

Courses in Humanities & Social Sciences

Course Code	Name of the Course	Name of the Instructor/s	Credits	Course type (L/P/L+T)	Sem Open in	
					BSMS	PhD
HSS321	Essentials of Professional Communication	Dr. Bhanusree Reddy	3	L	VI,VIII	N
HSS322	Macroeconomics	Dr. Chandrashekar Raghutla	3	L	VI,VIII	N
HSS323	Scientific Writing and Communication	Dr. Baburam Upadhaya	3	L	VI,VIII	N
HSS324/624	Network Science	Dr. Abhijit Chakraborty Dr. Aradhana Singh	4	L+T	VI,VIII	Y
HSS410	Semester Project	Dr. Abhijit Chakraborty	4	H	VIII	N
HSS623	Scientific Writing and Communication	Dr. Baburam Upadhaya	4	L	–	Y
HSS625	Literary Theory and Criticism	Dr. Doreswamy	4	L	N	Y
HSS626	Research Methodology in Social Sciences	Dr. Chandrashekar Raghutla	4	L	N	Y
HSS627	Energy Economics	Dr. Chandrashekar Raghutla	4	L	N	Y

Courses in Mathematics

Course Code	Name of the Course	Coordinator/Instructor	Credits	Course type (L/P/L+T)	Open in	
					BSMS	PhD
MTH321	Fields and Galois Theory	Dr. Sourav Das	4	L	VI, VIII	
MTH322	Complex Analysis	Dr. Venketasubramanian C G	4	L	VI, VIII	
MTH323	Analysis in Euclidean Spaces	Dr. Souradeep Majumder	4	L	VI, VIII	
MTH324	Measure Theory and Integration	Dr. Dr. Subhash B	4	L	VI, VIII	
MTH342	Introduction to Classical Groups	Dr. Venketasubramanian C G*, Dr. Suneel Kumar (Instructor)	3	L	VI, VIII	
MTH343/643	Indian Mathematics: From Vedic to Pre-modern Period	Dr. Anilatomaja Aryasomayajula Dr. Venketeswara R. Pai (Instructor)	2	L	VI, VIII	Y
MTH420	Semester Project	Dr. Subhash B	3	H	VIII	
MTH421	Commutative Algebra	Dr. Girja Shanker Tripathi	4	L	VIII	
MTH423	Algebraic Topology	Dr. Gururaja H A	4	L	VIII	
MTH424	Partial Differential Equations	Dr. Anilatomaja Aryasomayajula*, Dr. Joydev Halder (Instructor)	4	L	VIII	
MTH428	Representation Theory of Finite Groups	Prof. Nagaraj D S	4	L	VIII	
MTH621	Algebra II	Dr. Girja Shanker Tripathi	4	L		Y
MTH622	Analysis II	Dr. Subhash B*, Dr. Anilatomaja Aryasomayajula	4	L		Y
MTH623	Topology II	Dr. Gururaja H A	4	L		Y
MTH624	Representation Theory	Prof. Nagaraj D S	4	L		Y

Courses in Physics

Code	Course (Credits)	Instructor	Credits	Course Type (L/P/L+T)	Sem Open in for		
					BSMS	IPh D	Ph D
PHY321/621 PHY323/623	Optics	Dr. Dileep Mampallil	4	L	VI, VIII	II	Y
PHY322 PHY324	Condensed Matter Physics I Solid State Physics	Dr. Ankur Das	4	L	VI, VIII	II	
PHY323/623 PHY321/621	Quantum Mechanics II	Dr. Sudipta Dutta	4	L	VI, VIII	II	Y
PHY324/624	Electrodynamics II	Dr. Tapan Chandra Adhyapak* Dr. Ankur Das	4	L	VI, VIII	II	Y
PHY325/625 PHY411/711	Statistical Mechanics II Advanced Statistical Mechanics	Dr. Rakesh S. Singh	4	L	VI, VIII	II	Y
PHY326/626 PHY416/716	Experimental Methods in Physics	Dr. Nihar Ranjan Sahoo	4	L	VI, VIII	II	Y
PHY327/627 PHY326/626	Nonlinear Dynamics	Dr. Aradhana Singh	4	L	VI, VIII	II, IV	Y
PHY320 PHY345	Advanced Physics Lab III	Dr. Dileep Mampallil* Dr. Jessy Jose	3	P	VI	---	---
PHY302	Semester Project	Dr. Ravi Kumar Pujala	4	H	---	II	---
PHY420	Semester Project	Dr. Ravi Kumar Pujala	3	H	VIII	---	---
PHY421/721	Nuclear and Particle Physics	Dr. Chitrasen Jena	4	L	VIII	IV	Y
PHY423/723	Gravitation & Cosmology	Dr. Arunima Banerjee	4	L	VIII	IV	Y

PHY424/724	Advanced Condensed Matter Physics	Dr. Sambuddha Sanyal	4	L	VIII	IV	Y
PHY425	Advanced Physics Lab IV	Dr. Chitrasen Jena* Dr. S. Sunil Kumar	4	P	VIII	IV	---
PHY426/726	Simulation & Modelling	Dr. Padmabati Mondal* Prof. Prasenjit Sen (Guest Faculty)	4	L	VIII	IV	Y
PHY441/741	Photonics	Dr. Kanagasekaran T	3	L	VIII	IV	Y
PHY443/743	Soft Matter Physics	Dr. Ravi Kumar Pujala	3	L	VIII	IV	Y
PHY462/762 CSA462/762	Deep Learning	Dr. Arunima Banerjee* Dr. Debasish Koner (Guest Faculty)	3	L	VIII	IV	Y

Old Course Code / Name

New Course

Semester Change

**Academic Office,
24.12.2024**