

Teaching Assignment Monsoon Semester (Session: 2026-27)			
CORE COURSE			
1xx Courses			
BIO101	The basis and diversity of life	Samrat Mukhopadhyay	
BIO111	Biology lab I	Vidya Devi Negi Amar Deep Shravan Kumar Mishra Sharvan Sehwat Ravi Suresh Devani Vinesh Sheno	
CHM101	Basic inorganic chemistry	Suman K. Barman	
CHM111	Chemistry lab I	Angshuman Roy Choudhury Raj Kumar Roy Kuduva R. Vignesh	
MTH101	Basic linear algebra	Amit Kulshrestha	
HSS101	Language skills	Adrene Freeda D'Cruz, Pritika Nehra	
PHY101	Mechanics	Yogesh Singh Sudeshna Sinha Sandeep K. Goyal	
PHY111	Physics lab I	Prasenjit Das Kavita Dorai Eswaraiah Chakali	
IDC101	Introduction to programming	Satyajit Jena (PHY) (Co-ordinator) Shane D' Mello (MTH) (Co-instructor) K. R. Shamasundar (Co-instructor) DBS-to be added (Co-instructor)	
2xx Courses (premajor)			
BIO201	Genes and development	Sudip Mandal, Jogender Singh	
BIO202	Cells and organismal architecture	Rajesh Ramachandran	
BIO211	Biology lab III	Hasan Mohamaad Ravi Suresh Devani Vinesh Sheno	
CHM201	Introduction to spectroscopic methods	Sabyasachi Rakshit	
CHM202	Chemical thermodynamics (available as IDC who do not take chemistry as a pre-major)	Samrat Ghosh	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only.
 (For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.

CHM211	Chemistry lab III	Arijit Kumar De Sanchita Sengupta	
MTH201	Differential and integral calculus	Krishnendu Gongopadhyay	

MTH202	Elementary number theory (available as IDC with same course number MTH202 who do not take mathematics as a pre-major)	Mihir Sheth	
MTH203	Sequences and series (available as IDC with same course number MTH203 who do not take mathematics as a pre-major)	Chetan Tukaram Balwe	
HSS201	History of science	Philose Koshy	
PHY201	Waves and optics	Abhishek Chaudhuri	
PHY202	Overview of mathematical methods (available as IDC with same course number PHY202 who do not take physics as a pre-major)	Rajeev Kapri	
PHY211	Physics lab III	Sandeep K. Goyal Samir Kumar Biswas Kamal Priya Singh	
EES201	Introduction to earth sciences	Sharmila Bhattacharya Meenakshi Devi, Sourabh Bhattacharya	
EES202	Introduction to atmospheric and climate sciences	Baerbel Sinha Raju Attada,	
EES211	Basic mineralogy and petrology lab	Sourabh Bhattacharya Yunus Ali Pulpadan	Meenakshi Devi

**IDC course options available for MS25 (premajors)
(only one of the following to be chosen depending on the premajor)**

PHY202	Overview of mathematical methods (available as IDC with same course number PHY202 who do not take physics as a pre-major)	Rajeev Kapri	
MTH202	Elementary number theory (available as IDC with same course number MTH202 who do not take mathematics as a pre-major)	Mihir Sheth	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only.
(For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.

MTH203	Sequences and series (available as IDC with same course number MTH203 who do not take mathematics as a pre-major)	Chetan Tukaram Balwe	
CHM202	Chemical thermodynamics (available as IDC who do not take chemistry as a pre-major)	Samrat Ghosh	
IDC204	Theory of computation	Arghya Mondal	
SEMINAR COURSES			

For Int-PhD IDC451 (Mandatory for Int-PhD students of BIO, MTH, PHY) Not required / not mandatory for CHM Int- PhD (from Aug 2025 onwards)	Seminar delivery	Sharvan Sehrawat (BIO) Debmalya Chakraborty (PHY) Amit Kulshrestha (MTH)	
For PhD Mandatory IDC601 (a) (Mandatory for PhD students of BIO, MTH, PHY, HSS) (b) Not required / not mandatory for CHM and EES PhD students from Aug 2025	Seminar delivery	N. G. Prasad (BIO) Lolitika Mandal (BIO) Arunika Mukhopadhaya (BIO) Kavita Dorai (PHY) Amit Kulshrestha (MTH) Dr. Debdulal Saha (HSS)	

MAJOR COURSES

Biology Major Courses (BIO3XX)
(from MS22 batch onwards (Monsoon Semester 2024 onwards) all theory BIO3XX and BIO4XX and BIO6XX courses are electives but a practical/lab course is mandatory)

BIO301	Animals: form and function	Samarjit Bhattacharyya	
BIO302	Advanced cell biology	Mahak Sharma	
BIO303	Experimental design and hypothesis testing	N. G. Prasad	
BIO304	Essential biochemistry	Kausik Chattopadhyay	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only.
(For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.

BIO308	Fundamentals of microbiology	Indranil Banerjee	
BIO311A#	Advanced biology lab I: Molecular methods in biology	Shravan Kumar Mishra Sadhan Chandra Das Santosh B. Satbhai	
BIO311B#	Advanced biology lab I: Principles and techniques of cell biology	Arunika Mukhopadhaya Samarjit Bhattacharyya	

#Students would be choosing **one** of the BIO311 practical.

Biology Major Courses (BIO4XX)
(from MS22 batch onwards (Monsoon Semester 2024 onwards) all theory BIO3XX and BIO4XX and BIO6XX courses are electives but a practical/lab course is mandatory)

BIO401	Structure and function of genomes	Ram Yadav	
BIO402	Microbial physiology and microbial genetics	Rachna Chaba	

BIO411	Bioinformatics lab	Shashi Bhushan Pandit	
BIO453	Principles underlying instrumental biomacromolecular analyses	Purnananda Guptasarma	
BIO461	Advanced neuroscience	Hasan Mohammad	

Chemistry Major Courses (CHM3XX)
(New syllabus of CHM3XX will be applicable to MS23 onwards and MP25 onwards. Students of other batch with pending F grades need to contact HoD)

CHM301	Quantum chemistry-I	Priyakumari C P	
CHM302	Organic chemistry - reactions and mechanism	S. S. V. Rama Sastry	
CHM303	Main group chemistry	Sanjay Singh	
CHM311	Organic chemistry lab	R. Vijaya Anand	

Chemistry Major Courses (CHM4XX)
(new syllabus of CHM4XX will be applicable for MS23 onwards and MP25 onwards). Students of other batch with pending F grades need to contact HoD)

CHM401	Molecular spectroscopy	Balanarayan Pananghat	
CHM402	Chemistry of materials	Ujjal K. Gautam	
CHM411	Physical chemistry lab	Jino George	

Mathematics Major Courses (MTH3XX)

MTH301	Real analysis	Abhik Ganguli	
MTH302	Linear algebra	Tanusree Khandai	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only.
(For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.

MTH303	Set theory and logic	Alok Maharana	
MTH304	Group theory	Pranab Sardar	
Mathematics Major Courses (MTH4XX)			
MTH401	Ordinary differential equations	Lingaraj Sahu	
MTH402	Functional analysis	Jotsaroop Kaur	
MTH403	Fields and Galois theory	Santhosh Kumar Pamula	
Physics Major Courses (PHY3XX)			
PHY301	Classical mechanics	Dipanjan Chakraborty	
PHY302	Quantum mechanics	Sanjeev Kumar	
PHY303	Electrodynamics	Harvinder Kaur Jassal	
PHY310	Mathematical methods for physicists I	Anil Kumar Dasanna	
PHY311	Advanced optics and spectroscopy lab	Mandip Singh Goutam Sheet	
Physics Major Courses (PHY4XX)			
PHY401	Nuclear and particle physics	K. P. Yogendran	
PHY402	Solid state physics	Kinjalk Lochan	
PHY403	Atomic and molecular physics	Pankaj Kushwaha	
PHY411	Nuclear physics lab	Vishal Bhardwaj Debmalya Chakraborty	
EES Major courses (EES3XX)			
EES301	Global biogeochemical cycles and climate change	Baerbel Sinha Manoj Kumar	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only.
 (For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.

EES311	Air, water and soil lab	Baerbel Sinha Anoop Ambili Sunil A. Patil	
EES Major courses (EES4XX)			
EES401	Natural hazards and disaster risk reduction	Yunus Ali Pulpadan	
EES411	Computational geosciences lab	Raju Attada, Chandrakant Ojha	
Earth and Environmental Sciences Departmental Elective Courses for 3rd and 4th year (students can check the list of courses required for Geology major or Environmental Sciences major and may also talk to HoD)			
EES403	Advanced remote sensing and GIS	Chandrakant Ojha	Meenakshi Devi
EES410	Economic geology	Sourabh Bhattacharya	
EES631	Advanced geochemistry	Sharmila Bhattacharya	
EES633	Principles of environmental chemistry	Manoj Kumar	
EES638	Paleoclimatology	Anoop Ambili	
EES642	Environmental microbiology	Sunil A. Patil	
PHD COURSES (Mandatory)			
Mathematics PhD Courses (MTH6XX) (Mandatory)			
MTH601	Topics in algebra	Chandrakant Sharma Aribam	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only.
 (For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.

MTH602	Topics in topology	Shane D' Mello	
Physics PhD Courses (PHY6XX) (Mandatory)			
PHY601	Review of classical mechanics	Ananth Venkatesan	
PHY602	Review of electrodynamics	Eswaraiah Chakali	
EES and Chemistry PhD Courses (CHM6XX) (Mandatory)			
CHM634 (Mandatory for EES PhD) (Mandatory for CHM PhD) (Mandatory for CHM Int-PhD)	Research methodology (2 credits)	Sugumar Venkataramani	R. Vijaya Anand, Raj Kumar Roy, Ujjal K. Gautam,
HSS641 (mandatory for HSS PhD students)	Research methods (4 credits)	Anu Sabhlok Ritajyoti Bandyopadhyay	
ELECTIVES			
IDC courses (electives)			
IDC404	Computational genomics	Kuljeet Sandhu	
IDC408	Environmental hygiene, sanitation and waste management	Arvind Kumar Shakya	
IDC409	Introduction to data science and artificial intelligence	Vishal Bhardwaj	
IDC412	Field experience in science education	T.V. Venkateswaran (Co-ordinator) instructor yet to be added	
IDC636	Pedagogy of science	Yet to be added	
IDC637	Science communication	T.V. Venkateswaran (instructor, Co-ordinator)	
Humanities & Social Sciences (electives)			
HSS602	Social theory: concepts and debates	Anu Sabhlok, Ritajyoti Bandyopadhyay	
HSS618	India from prehistory to early history	Parth R. Chauhan V. Rajesh	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only.
 (For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.

HSS634 (Open to HSS PhD scholars, MS thesis in HSS and to anyone who has taken both HSS602 and HSS622. Else by instructor discretion)	Themes in infrastructure studies	Anu Sabhlok Ritajyoti Bandyopadhyay	
HSS635 (Open to PhD students only)	Political philosophy	Pritika Nehra	
HSS637 (Open to HSS PhD scholars only- Else by instructor discretion)	Reading records	Anu Sabhlok Ritajyoti Bandyopadhyay	
HSS640	Charlie Chaplin's aesthetic universe	Adrene Freeda D'Cruz	
HSS643 (Open to PhD students only)	Field course in palaeoanthropology and allied disciplines	Parth R. Chauhan	
HSS649 (Open to HSS PhD students only)	Themes in environmental histories of India	V. Rajesh	
HSS650	Public policy	Debdulal Saha	
HSS652 (Open to PhD students only)	Select Topics in Contemporary Global Political Thought	Pritika Nehra	
Chemical Sciences (electives)			
CHM601	Advanced inorganic chemistry	Sanjay Mandal	
CHM602	Magnetic resonance	Ramesh Ramachandran	
CHM606	Bio-organic and medicinal chemistry	Sugumar Venkataramani	
CHM607	Chemical crystallography	Angshuman Roy Choudhury	
CHM610	Chemistry of natural products	S. Arulananda Babu	
CHM611	Frontiers of organometallic chemistry	Debashis Adhikari	
CHM618	Bioinorganic chemistry	Pritam Mondal,	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only.
 (For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.

CHM619	Numerical methods in chemistry	Sajal Kumar Giri	
CHM633	Selected analytical techniques in organic chemistry	Subhabrata Maiti	
Earth and Environmental Sciences Courses (electives)			
EES403	Advanced remote sensing and GIS	Chandrakant Ojha	Meenakshi Devi
EES410	Economic geology	Sourabh Bhattacharya	
EES631	Advanced geochemistry	Sharmila Bhattacharya	
EES633	Principles of environmental chemistry	Manoj Kumar	
EES638	Paleoclimatology	Anoop Ambili	
EES642	Environmental microbiology	Sunil A. Patil	
Physical Sciences (electives)			
PHY421	Laser physics and advanced optics	Tripta Bhatia	
PHY422	Computational methods in physics I	Samir Kumar Biswas	
PHY424	Relativistic quantum mechanics and quantum field theory	Ambresh Shivaji	
PHY637	Astrophysics I: astrophysical processes and stars	Biman B Nath	
PHY644	Foundations of quantum mechanics	Manabendra Nath Bera	
PHY668	Soft condensed matter	Ramandeep Singh Johal	
PHY670	Astrostatistics	Jasjeet Singh Bagla	
PHY674	Experimental implementations of quantum information processing	Arvind	
Mathematical Sciences			
Mandatory: Directed Electives to be offered compulsorily (4th year student need to choose at least one of the following)			
MTH404	Commutative and homological algebra	Chanchal Kumar	
MTH405	Probability theory	Neeraja Sahasrabudhe	
MTH406	Manifolds	Soma Maity	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only. (For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.

Mathematical Sciences (Electives)			
MTH436	An introduction to knots and braids	Mahender Singh	
MTH438	An introduction to linear algebraic groups	Varadharaj Ravi Srinivasan	
Biological Sciences (electives)			
BIO615	Developmental biology	Lolitika Mandal	
BIO616	Animal behaviour: proximate mechanism, ultimate causes	Manjari Jain	
BIO631	Molecular pathogenesis	Vidya Devi Negi	
BIO636	Molecular tools for ecology and evolution (practical)	Rhitoban Ray Choudhury Kritika M. Garg	
BIO640	Conservation genetics	Kritika M. Garg	

58th Senate: All courses considered as revised courses and as version 2. All course numbers will carry v.2 suffix in ERP only.
 (For MS24 chemistry major new syllabus of CHM301, CHM302, CHM303, CHM311 are applicable and all these course numbers will carry v.2 suffix in ERP only. For MS23 chemistry major new syllabus of CHM401, CHM402, CHM411 are applicable and all these course numbers will carry v.2 suffix in ERP only). EES410 = 68th Senate, version 3 course, will carry v.3 suffix in ERP only. HSS641 (only title changed, version 3 course, will carry v.3 suffix in ERP only. BIO311A, BIO311B, EES647, BIO637 (for PhD 4 credits) BIO639 (for Int-PhD, 2 credits), BIO636, MTH610, PHY672, EES417, HSS565, HSS655, CHM634, EES418, BIO461, IDC215 and IDC216, PHY674 = 64th Senate courses, are version 1 course, will carry v.1 suffix in ERP only. BIO640 is version 1 course, will carry v.1 suffix in ERP only.