

SWAYAM Courses for July Dec 2020 Semester for Mathematics & Sciences

S.No.	Name of Course	Offered by	Name of Faculty	No. of weeks	URL
	NPTEL				
1	A basic course in number theory	IIT Bombay	Prof. Shripad Garge	12	https://www.swayam.gov.in/nd1_noc20_ma39/preview
2	Algebra - I	IMSc	Prof. S. Viswanath, Prof. Amritanshu Prasad	12	https://www.swayam.gov.in/nd1_noc20_ma25/preview
3	Analytical Chemistry	IIT Kharagpur	Prof. Debashis Ray	12	https://www.swayam.gov.in/nd1_noc20_cy18/preview
4	Application of Spectroscopic Methods in Molecular Structure Determination	IIT Madras	Prof. Sankararaman	8	https://www.swayam.gov.in/nd1_noc20_cy23/preview
5	Basic Statistical Mechanics	IIT Bombay	Prof. Biman Bagchi	12	https://www.swayam.gov.in/nd1_noc20_cy28/preview
6	Biophysical Chemistry	IIT Delhi	Prof. Pramit Kumar Chowdhury	12	https://www.swayam.gov.in/nd1_noc20_cy33/preview
7	Calculus of One Real Variable	IIT Kanpur	Prof. Joydeep Dutta	8	https://www.swayam.gov.in/nd1_noc20_ma26/preview
8	Calculus of Several Real Variables	IIT Kanpur	Prof. Joydeep Dutta	8	https://www.swayam.gov.in/nd1_noc20_ma27/preview
9	Chemical Crystallography	IISER Mohali	Prof. Angshuman Roy Choudhury	12	https://www.swayam.gov.in/nd1_noc20_cy25/preview

10	Co-ordination Chemistry (Chemistry of Transition Elements)	IIT Kharagpur	Prof. Debashis Ray	12	https://www.swayam.gov.in/nd1_noc20_cy19/preview
11	Complex Analysis	Kerala School of Mathematics	Prof. Pranav Haridas	12	https://www.swayam.gov.in/nd1_noc20_ma50/preview
12	Computational Commutative Algebra	CMI	Prof. Manoj Kummini	12	https://www.swayam.gov.in/nd1_noc20_ma38/preview
13	Computational Number theory and Algebra	IIT Kanpur	Prof. Nitin Saxena	12	https://www.swayam.gov.in/nd1_noc20_ma42/preview
14	Computational Physics	IISER Pune	Prof. Apratim Chatterji, Prof. Prasenjit Ghosh	12	https://www.swayam.gov.in/nd1_noc20_ph20/preview
15	Constrained and unconstrained optimization	IIT Kharagpur	Prof. Adrijit Goswami, Prof. Debjani Chakraborty	12	https://www.swayam.gov.in/nd1_noc20_ma32/preview
16	Dynamical System and Control	IIT Roorkee	Prof. N. Sukavanam, Prof. D.N. Pandey	12	https://www.swayam.gov.in/nd1_noc20_ma46/preview
17	Engineering Mathematics- I	IIT Kharagpur	Prof. Jitendra Kumar	12	https://www.swayam.gov.in/nd1_noc20_ma37/preview
18	Essential Mathematics for Machine Learning	IIT Roorkee	Prof. Sanjeev Kumar, Prof. S.K. Gupta	8	https://www.swayam.gov.in/nd1_noc20_ma35/preview

19	Experimental Physics I	IIT Kharagpur	Prof. Amal Kumar Das	12	https://www.swayam.gov.in/nd1_noc20_ph16/preview
20	Groups: Motion, symmetry & puzzles	IISER Mohali	Prof. Amit Kulshreshtha	4	https://www.swayam.gov.in/nd1_noc20_ma28/preview
21	Integral Transforms and their applications	IIT Delhi	Prof. Sarthok Sircar	12	https://www.swayam.gov.in/nd1_noc20_ma41/preview
22	Introduction to Abstract Group Theory	Chennai Mathematical Institute	Prof. Krishna Hanumanthu	8	https://www.swayam.gov.in/nd1_noc20_ma29/preview
23	Introduction to Abstract and Linear Algebra	IIT Kharagpur	Prof. Sourav Mukhopadhyay	8	https://www.swayam.gov.in/nd1_noc20_ma31/preview
24	Introduction to Chemical Thermodynamics and Kinetics	IISER Mohali	Prof. Arijit Kumar De	12	https://www.swayam.gov.in/nd1_noc20_cy22/preview
25	Introduction to classical mechanics	IIT Hyderabad	Prof. Anurag Tripathi	12	https://www.swayam.gov.in/nd1_noc20_ph17/preview
26	Introduction to Fuzzy Set Theory, Arithmetic and Logic	IIT Delhi	Prof. Nilandri Chatterjee	12	https://www.swayam.gov.in/nd1_noc20_ma48/preview
27	Introduction to Methods of Applied Mathematics	IIT Delhi	Prof. Mani Mehra, Prof. Vivek K Aggarwal	12	https://www.swayam.gov.in/nd1_noc20_ma49/preview
28	Introduction to Polymer Science	IIT Kharagpur	Prof. Dibakar Dhara	8	https://www.swayam.gov.in/nd1_noc20_cy21/preview
29	Introduction to R software	IIT Kanpur	Prof. Shalabh	8	https://www.swayam.gov.in/nd1_noc20_ma53/preview

30	Introductory Organic Chemistry I	IISER Pune	Prof. Neeraja Dashaputre, Prof. Harinath Chakrapani	8	https://www.swayam.gov.in/nd1_noc20_cy30/preview
31	Laplace Transform	IMSC	Prof. Indrava Roy	4	https://www.swayam.gov.in/nd1_noc20_ma43/preview
32	Laser: Fundamentals & Applications	IIT Kanpur	Prof. Manabendra Chandra	8	https://www.swayam.gov.in/nd1_noc20_cy17/preview
33	Linear Algebra	IIT Kanpur	Prof. Arbind Kumar Lal	12	https://www.swayam.gov.in/nd1_noc20_ma54/preview
34	Mathematical Finance	IIT Guwahati	Prof. N. Selvaraju, Prof. Siddhartha Pratim Chakrabarty	12	https://www.swayam.gov.in/nd1_noc20_ma52/preview
35	Mathematical Modelling: Analysis and Applications	IIT Roorkee	Prof. Ameeya Kumar Nayak	4	https://www.swayam.gov.in/nd1_noc20_ma47/preview
36	Mathematical Portfolio Theory	IIT Guwahati	Prof. Siddhartha Pratim Chakrabarty	12	https://www.swayam.gov.in/nd1_noc20_ma36/preview
37	Matrix Analysis with Applications	IIT Roorkee	Prof. S.K. Gupta, Prof. Sanjeev Kumar	8	https://www.swayam.gov.in/nd1_noc20_ma34/preview
38	Measure Theory	IMSC	Prof. Indrava Roy	12	https://www.swayam.gov.in/nd1_noc20_ma44/preview
39	Mechanisms in Organic Chemistry	IIT Bombay	Prof. Nandita Madhavan	8	https://www.swayam.gov.in/nd1_noc20_cy26/preview
40	Metals in Biology	IIT Bombay	Prof. D. Maiti	8	https://www.swayam.gov.in/nd1_noc20_cy29/preview

41	Non-Parametric Statistical Inference	IIT Delhi	Prof. Niladri Chatterjee	4	https://www.swayam.gov.in/nd1_noc20_ma55/preview
42	Nuclear and Particle Physics	IIT Guwahati	Prof. Poulose Poulose	12	https://www.swayam.gov.in/nd1_noc20_ph19/preview
43	Numerical Methods and Simulation Techniques for Scientists and Engineers	IIT Guwahati	Prof. Saurabh Basu	8	https://www.swayam.gov.in/nd1_noc20_ph23/preview
44	Numerical methods	IIT Roorkee	Prof. Ameeya Kumar Nayak, Prof. Sanjeev Kumar	8	https://www.swayam.gov.in/nd1_noc20_ma33/preview
45	One and two dimensional NMR spectroscopy for chemists	IISc Bangalore	Prof. N. Suryaprakash	12	https://www.swayam.gov.in/nd1_noc20_cy36/preview
46	Operations Research	IIT Roorkee	Prof. Kusumdeep	8	https://www.swayam.gov.in/nd1_noc20_ma45/preview
47	Path Integral Methods in Physics and Finance	IIT Roorkee	Prof. J.P. Singh	12	https://www.swayam.gov.in/nd1_noc20_mg55/preview
48	Principles of Organic Synthesis	IIT Guwahati	Prof. T. Punniyamurthy	12	https://www.swayam.gov.in/nd1_noc20_cy34/preview
49	Quantum Chemistry of Atoms and Molecules	IIT Bombay	Prof. Anindya Datta	12	https://www.swayam.gov.in/nd1_noc20_cy27/preview
50	Quantum Mechanics and Molecular Spectroscopy	IIT Bombay	Prof. G. Naresh Patwari	8	https://www.swayam.gov.in/nd1_noc20_cy31/preview
51	Reagents in Organic Synthesis	IIT Guwahati	Prof. Subhas Chandra Pan	12	https://www.swayam.gov.in/nd1_noc20_cy35/preview
52	Real Analysis I	IIT Palakkad	Prof. Jaikrishnan J	12	https://www.swayam.gov.in/nd1_noc20_ma51/preview

53	Regression Analysis	IISER Pune	Prof. Soumen Maity	12	https://www.swayam.gov.in/nd1_noc20_ma30/preview
54	Scientific Computing using Matlab	IIT Delhi	Prof. Mani Mehra, Prof. Vivek K Aggarwal	12	https://www.swayam.gov.in/nd1_noc20_ma40/preview
55	Semiconductor Optoelectronics	IIT Delhi	Prof. M.R. Shenoy	12	https://www.swayam.gov.in/nd1_noc20_ph24/preview
56	Solar Energy Engineering & Technology	IIT Guwahati	Prof. Pankaj Kalita	12	https://www.swayam.gov.in/nd1_noc20_ph14/preview
57	Solar Photovoltaics, Fundamentals, Tehcnology and Applications	IIT Roorkee	Prof. Soumitra Satapathi	8	https://www.swayam.gov.in/nd1_noc20_ph21/preview
58	Solid State Physics	IIT Kharagpur	Prof. Amal Kumar Das	12	https://www.swayam.gov.in/nd1_noc20_ph15/preview
59	Spectroscopic Techniques for Pharmaceutical and Biopharmaceutical industries	IIT Delhi	Prof. Shashank Deep	12	https://www.swayam.gov.in/nd1_noc20_cy32/preview
60	Stereochemistry	IIT Kharagpur	Prof. Amit Basak	8	https://www.swayam.gov.in/nd1_noc20_cy20/preview
61	Theoretical Mechanics	IIT Guwahati	Prof. Charudatt Kodolkar	12	https://www.swayam.gov.in/nd1_noc20_ph18/preview
62	Waves and Oscillations	IISER Pune	Prof. M.S. Santhanam	12	https://www.swayam.gov.in/nd1_noc20_ph22/preview

	AICTE				
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1	Applications of GeoGebra	IIT Bombay	Prof. Kannan Moudgalya	4	https://www.swayam.gov.in/nd2_aic20_sp03/preview
2	Critical Thinking	Shiv Nadar University	Partha Chatterjee	Self paced	https://www.swayam.gov.in/nd2_aic19_ma06/preview
3	Koha Library Management System	IIT Bombay	Prof. Kannan Moudgalya	12	https://www.swayam.gov.in/nd2_aic20_sp16/preview
4	R	IIT Bombay	Prof. Kannan Moudgalya	12	https://www.swayam.gov.in/nd2_aic20_sp35/preview
5	UCSF Chimera	IIT Bombay	Prof. Kannan Moudgalya	6	https://www.swayam.gov.in/nd2_aic20_sp41/preview
	CEC				
1	Applied Multivariate Analysis	University of Calcutta	Sugata Sen Roy	15	https://www.swayam.gov.in/nd2_cec20_ma17/preview
2	Cell Biology	Dept of Biotechnology, Manipur	Dr. K. Sanatmbi	12	https://www.swayam.gov.in/nd2_cec20_ma14/preview
3	Chemistry of d-Block elements, Quantum Chemistry & Spectroscopy	Dr. HariSingh Gour Vishwavidyalaya	Dr. Niraj	16	https://www.swayam.gov.in/nd2_cec20_ma16/preview
4	Criminalistics	Dept of Criminology and Forensic Sciences	Prof. Devasish Bose	8	https://www.swayam.gov.in/nd2_cec20_lb07/preview

5	Differential Calculus	Mahatma Gandhi College, Kannur	Dr. Bijumon Ramalayathil	15	https://www.swayam.gov.in/nd2_cec20_ma22/preview
6	Digital Library	INFLIBNET	Dr. Jagdish Arora	15	https://www.swayam.gov.in/nd2_cec20_lb08/preview
7	Industrial Pharmacy-I	HNB Garhwal University	Dr. Ajay Semalty	12	https://www.swayam.gov.in/nd2_cec20_lb05/preview
8	Molecular Biology	Dept. of Life Science, Gujarat University	Dr. Nayan K. Jain	8	https://www.swayam.gov.in/nd2_cec20_ma13/preview
9	Modern Algebra	Madurai Kamaraj University	Dr. T. Asir	8	https://www.swayam.gov.in/nd2_cec20_ma15/preview
10	Numerical Analysis	Vidyasagar University	Prof. Madhumangal Pal	15	https://www.swayam.gov.in/nd2_cec20_ma18/preview
11	Operations Research	Jadavpur University	Prof. Bibhas C. Giri	15	https://www.swayam.gov.in/nd2_cec20_ma19/preview
12	Organic Chemistry - I	JNU	Dr. B.S. Balaji	15	https://www.swayam.gov.in/nd2_cec20_ma20/preview
13	Partial Differential Equations	Jadavpur University	Prof. Alaka Das	15	https://www.swayam.gov.in/nd2_cec20_ma21/preview

	IGNOU				
1	Libraries: An introduction	IGNOU	Dr. Archana Shukla & Dr. Z. Yanthan	8	https://www.swayam.gov.in/nd2_nou20_lb09/preview

2	ICT in Libraries	IGNOU	Prof. Uma Kanjilal	12	https://www.swayam.gov.in/nd2_nou20_lb10/preview
3	Database and Content Organisation	IGNOU	Dr. V.V. Subrahmanyam	15	https://www.swayam.gov.in/nd2_nou20_lb06/preview
4	Document Processing and Organisation	IGNOU	Prof. Jaideep Sharma	Self Paced	https://www.swayam.gov.in/nd2_nou20_lb08/preview
5	Information Sources and Library Services	IGNOU	Dr. Archana Shukla	12	https://www.swayam.gov.in/nd2_nou20_lb07/preview
6	Library Automation and Digitisation	IGNOU	Prof. Uma Kanjilal	12	https://www.swayam.gov.in/nd2_nou20_lb05/preview