Swami Rama Himalayan University

NAAC A+

Report on

Sustainable Development Goal 9



INDUSTRY, INNOVATION AND INFRASTRUCTURE

2025

SDG 9: Industry, Innovation and Infrastructure

Swami Rama Himalayan University (SRHU) contributes to SDG 9 through research, patents, university spin-offs, and industry-linked research income. Under research on industry, innovation and infrastructure, SRHU has produced 103 aligned publications since 2012, including 84 publications during 2021–2025, with 27 published in 2025. The research addresses areas such as AI, IoT, Industry 4.0, circular economy, wastewater management, smart manufacturing, and sustainable technologies. Regarding patents, two SRHU publications during 2021–2025 were cited in patent applications, including research on valorisation of tender coconut mesocarp and nanotechnology for sustainable agriculture. For university spin-offs, SRHU's innovation ecosystem includes seven registered companies and pre-startups, with one holding a university-transferred design right. In research income from industry and commerce, during 2024–2025, Medicine generated ₹1.38 crore, while STEM generated ₹5.5 lakh. Arts and Humanities/Social Sciences reported no industry and commerce research income.

9.1 Research on industry, innovation and infrastructure

Research at SRHU advances SDG 9 by aligning industry, innovation, and infrastructure solutions with practical, real-world needs. Interdisciplinary teams of engineers, biologists, managers, and clinicians collaborate to translate laboratory research directly into resilient, community-level infrastructure, such as rural water supply systems. Driven by the unique geographic challenges of the Himalayan region, including slope instability, fluctuating spring discharge, cold- chain disruptions, and healthcare transportation barriers, the university develops affordable, durable technologies that strengthen local infrastructure, foster sustainable innovation, and support national development priorities.

9.1.1 Industry, Innovation and Infrastructure: publications

Since initiating its research on SDG 9 (Industry, Innovation and Infrastructure) in 2012, Swami Rama Himalayan University (SRHU) has produced 103 aligned publications. Research output has accelerated significantly in recent years: 84 of these papers (81.5%) were published between 2021 and 2025, culminating in 27 publications in 2025.

SRHU Research Publication Profile

Research Metric	Value
Total Publications during 2021-2025	84
FWCI	2.13
Citation Count	1713
Total Views	4237

List of Publications

S. No	Paper title	Authors	Journal/book name	Year	DOI
1	Hospital-associated effluents: the masked environmental threat that needs urgent attention and action	Sharma, C.; Gupta, S.; Vijay, K.; Kumar, V.	Discover Applied Sciences	2025	10.1007/s42452-024-06456-2
2	Process optimization for the extraction of Shorea robusta (Sal) seed oil using response surface methodology and its characterization: A sustainable approach to oil valorization	Thapa, D.; Vijay, V.; Naik, B.; KumarGupta, A.; Richa, R.	Food Chemistry: X	2025	10.1016/j.fochx.2025.103380
3	Biodiesel (biofuel) production from fish waste: A sustainable approach to biodiesel production	Rajput, V.; Topwal, A.; Sharma, C.; Vijay, K.; Kumar, V.R.	Sustainable Chemistry One World	2025	10.1016/j.scowo.2025.100124
4	Advanced insights into Dioscorea tuber starch: Green modification techniques, functional properties, and industrial applications	Kunwar, T.; Gupta, A.K.; Naik, B.; Tavassoli, M.; Boruah, T.	Food and Humanity	2025	10.1016/j.foohum.2025.100804
5	Handbook of Business Analytics	Sharma, R.; Rana, G.	Handbook of Business Analytics	2025	10.1201/9781003514282
6	Mechanical and rheological comparative studies of thermoplastic starch filled bio-composites and De-laminated nano-talc filled nano-composite of polypropylene	Goswami, R.; Khosla, A.; Alam, A.; Varshney, P.K.	AIP Conference Proceedings	2025	10.1063/5.0291913
7	Green and sustainable utilization of underutilized exudate gums from the Himalayan region:	Anand, A.; Nayak, P.; Boruah, T.; Naik, B.; Vijay, K.	Sustainable Chemistry and Pharmacy	2025	10.1016/j.scp.2025.102160

S. No	Paper title	Authors	Journal/book name	Year	DOI
	Advances in nutraceutical and pharmaceutical applications				
8	Industrial Cyber-Physical Systems Ensuring Safe Automation in Smart Manufacturing	William, P.; Mishra, V.P.; Kumar, P.; Agwan, R.; Chhabra, G.S.	Safe Data-Driven Control for Cyber-Physical Systems	2025	10.4018/979-8-3373-1832-5.ch010
9	Digitizing the Chain: Effects of Supply Chain Digitalization on Efficiency in Indian Manufacturing SMEs	Srinivasan, K.; Kamruddin, S.; Mallika, V.V.; Kumar, K.S.V.; Sinha, P.	Asian Journal of Interdisciplinary Research	2025	10.54392/ajir25310
10	Framework for Implementing Extended Reality in Agricultural Education	Ayasrah, F.T.; Verma, A.; Chaudhari, S.V.; Kumar, P.; Cengiz, K.	The Convergence of Extended Reality and Metaverse in Agriculture	2025	10.4018/979-8-3373-2797-6.ch002
11	A SWOT analysis of religious tourism in Kedarnath, Uttarakhand, India	Dhyani, A.; Rana, V.; Dimri, G.; Dimri, R.P.; Dhyani, A.	Challenges Opportunities and Limitations of Religious Tourism in the Next Decade	2025	Not recorded
12	Sal (Shorea robusta) seed oil: A sustainable alternative for cocoa butter and edible oil	Thapa, D.; Naik, B.; Vijay, K.; Gupta, A.K.; Kumar, V.	Future Foods	2025	10.1016/j.fufo.2025.100655
13	Insights into Extraction methods of pigments from Celosia cristata L. flower: A review	Sidique Bahar, Q.; Shahi, N.C.; Richa, R.; Rustagi, S.; Vijay, K.	Journal of Agriculture and Food Research	2025	10.1016/j.jafr.2024.101599
14	A state-of-the-Art review on edible electronics: Next-generation technologies for biocompatible and ingestible devices	Kataria, P.; Gupta, R.K.; Gupta, A.K.; Tavassoli, M.; Kaur, S.	Trends in Food Science and Technology	2025	10.1016/j.tifs.2025.104880
15	Unveiling the Digitalization Dilemma: A Study of Business Analytics Adoption in Small and Mid-Sized Manufacturing Firms Post-COVID-19	Harish, V.; Sharma, R.; Rana, G.	Communications in Computer and Information Science	2025	10.1007/978-3-031-80778-7_25

S. No	Paper title	Authors	Journal/book name	Year	DOI
16	IoT-Driven Predictive Maintenance in Industrial Systems Using Deep Neural Networks	Saxena, U.; Singh, G.; Chaudhary, N.; Kler, R.; Dubey, R.	International Conference on Intelligent and Innovative Practices in Engineering and Management, IIPEM 2025	2025	10.1109/IIPEM65914.2025.11548253
17	Adaptive QoS-Aware Routing for IoT Networks Using Deep Reinforcement Learning	Chaudhary, N.; Ather, D.; Kler, R.; Saxena, U.; Singh, G.	International Conference on Intelligent and Innovative Practices in Engineering and Management, IIPEM 2025	2025	10.1109/IIPEM65914.2025.11548315
18	Information Asymmetry: Unveiling Its Impact on Borrowers and Credit Risk	Kandpal, V.; Prabha, V.; Chandra, D.; Trivedi, A.	International Conference on Intelligent and Innovative Practices in Engineering and Management, IIPEM 2025	2025	10.1109/IIPEM65914.2025.11548514
19	Closer Guest Contact Through Contactless Technologies in Hotels	Dhyani, A.; Dhyani, A.; Rana, V.; Dimri, G.; Lal, S.K.	Future of Contactless Technology in Hotels and Restaurants	2025	10.4018/979-8-3373-1489-1.ch007
20	Development of Smart Materials for Enhanced Energy Storage in Solar Panels	Chauhan, A.; Pandey, G.; Sethi, M.; Deuri, J.; Rajput, V.	Solar Energy Optimization Using Generative Artificial Intelligence	2025	10.1002/9781394419494.ch2
21	Quantum Cryptography for Securing the Internet of Things: A Comprehensive Literature Survey	Makkar, G.D.; Pant, S.	Proceedings - 2025 5th International Conference on Internet of Things: Smart Innovation and Usage, IoT-SIU 2025	2025	10.1109/IOT-SIU65919.2025.11402714
22	Leveraging Digital Technologies for Circular Economy: Exploring the Role of AI, IoT, and Blockchain in Overcoming Future Challenges	Harish, V.; Sharma, R.; Rana, G.; Parashar, B.	Sustainable Economy Models in the Age of Industry 5.0	2025	10.1007/978-981-96-4104-8_4

S. No	Paper title	Authors	Journal/book name	Year	DOI
23	Mitigating Cybersecurity Threats in IoT-Enabled Smart Homes: Challenges and Solutions	Singh, T.; Walia, R.; Sharma, R.K.; Rawat, S.; Gandhi, P.	Lecture Notes in Networks and Systems	2025	10.1007/978-981-96-4319-6_16
24	Impact of Digital Diversity in the Global Business Environment: With the Inclusion of AI	Parashar, B.; Kautish, S.; Sharma, R.; Rana, G.; Negi, D.	Achieving Organizational Diversity, Equity, and Inclusion with AI	2025	10.4018/979-8-3693-3960-2.ch013
25	Strategic Integration of Green Human Resource Management and Circular Economy Principles for Sustainable Change Management	Trivedi, A.; Trivedi, N.	Approaches to Global Sustainability Markets and Governance	2025	10.1007/978-981-96-9055-8_9
26	Next-generation cybersecurity system in integration with Artificial Intelligence and blockchain	Singh, R.; Gehlot, A.N.; Akram, S.V.; Sharma, R.; Malik, P.K.	Smart Electronic Devices Artificial Intelligence Machine Learning and the Future	2025	10.1201/9781003643173-18
27	Analysis of Smart City Solutions for Sustainable Urban Growth in India	Kaur, G.; Mishra, A.; Kumar, P.; Kapoor, G.	1st International Conference on Advances in Computer Science Electrical Electronics and Communication Technologies (CE2CT 2025)	2025	10.1109/CE2CT64011.2025.10939348
28	Advancements in energy storage applications: harnessing the potential of fish industry waste	Rajput, V.; Naik, B.; Vijay, K.; Bhatt, S.C.; Rustagi, S.	Discover Materials	2024	10.1007/s43939-024-00161-y
29	Green chemistry revolutionizing sustainability in the food industry: A comprehensive review and call to action	Gupta, A.K.; Boruah, T.; Ghosh, P.; Vijay, K.; Rustagi, S.	Sustainable Chemistry and Pharmacy	2024	10.1016/j.scp.2024.101774
30	State-of-the-art non-destructive approaches for maturity index determination in fruits and vegetables: principles,	Anjali; Jena, A.; Bamola, A.; Preet, M.S.; Akhtar, S.	Food Production Processing and Nutrition	2024	10.1186/s43014-023-00205-5

S. No	Paper title	Authors	Journal/book name	Year	DOI
	applications, and future directions				
31	Advanced technologies for realizing sustainable development goals: 5G, AI, big data, blockchain, and Industry 4.0 application	Bhatt, A.; Joshi, P.; Joshi, K.P.; Bijalwan, A.	Advanced Technologies for Realizing Sustainable Development Goals 5G AI Big Data Blockchain and Industry 4.0 Application	2024	10.2174/9789815256680124010 1
32	Slaughterhouse blood: A state-of-the-art review on transforming by-products into valuable nutritional resources and the role of circular economy	Gupta, A.K.; Fadzlillah, N.A.; Sukri, S.J.M.; Bhuyan, S.; Rustagi, S.	Food Bioscience	2024	10.1016/j.fbio.2024.104644
33	Integrating circular economy in smart cities: Challenges and pathways to sustainable urban development	Trivedi, A.; Trivedi, N.	Smart Cities and Circular Economy The Future of Sustainable Urban Development	2024	10.1108/978-1-83797-957-820241006
34	Sustainable solutions for food security: Evaluating pre-treatment technologies in the growing fruits and vegetables industry of India	Joshi, A.; Gupta, A.K.; Mansi; Rustagi, S.; Preet, M.S.	Sustainable Chemistry and Pharmacy	2024	10.1016/j.scp.2024.101580
35	Micro-algae: Revolutionizing food production for a healthy and sustainable future	Naik, B.; Mishra, R.; Vijay, K.; Bhatt, S.C.; Rizwanuddin, S.	Journal of Agriculture and Food Research	2024	10.1016/j.jafr.2023.100939
36	Conversational artificial intelligence at industrial internet of things	Siddharth, D.; Jang Bahadur Saini, D.K.; Ramchandra, M.; Loganathan, S.	Conversational Artificial Intelligence	2024	10.1002/9781394200801.ch11
37	Green human resource management and environmental performance: mediating role of green innovation – a study from an emerging country	Rana, G.; Arya, V.	Foresight	2024	10.1108/FS-04-2021-0094

S. No	Paper title	Authors	Journal/book name	Year	DOI
38	A study of women entrepreneurs as catalysts for sustainable development — An inspirational story of Uttarakhand well known "Mushroom Girl"	Bijlwan, S.; Joshi, S.; Singh, T.P.	Women Entrepreneurs Building Sustainable Business Models in Digital Spaces Case Studies and Experiences	2024	10.1201/9781032725581-6
39	Intelligent IoT-Enabled Real-Time Monitoring System for Logistics Management	Joshi, P.; Singh, V.; Thapliyal, N.; Bhatt, A.; Mahur, M.	2024 International Conference on Computing Sciences and Communications (ICCSC 2024)	2024	10.1109/ICCSC62048.2024.10830332
40	Application of Artificial Intelligence for the Success of Supply Chain Operations in the Age of Data Analytics	Rana, G.; Sharma, R.; Parashar, B.	2024 International Conference on Smart Devices (ICSD 2024)	2024	10.1109/ICSD60021.2024.10751637
41	Node MCU and Lily Pad based Relay Protection System For Laboratory Micro-Grid	Malik, S.; Jain, S.; Tiwari, P.; Yamsani, N.; Al-Farouni, M.H.	2024 International Conference on Smart Devices (ICSD 2024)	2024	10.1109/ICSD60021.2024.10751602
42	Enhancing Diagnosis and Management of Conjunctivitis: Innovations, and Evidence-Based Strategies	Farswan, A.S.; Singh, M.F.; Dhasmana, A.; Kumar, G.; Jadon, V.S.	Proceedings 2024 International Conference on Healthcare Innovations Software and Engineering Technologies (HISET 2024)	2024	10.1109/HISET61796.2024.00056
43	Fishers 4.0: Revolutionizing Contemporary Fisheries Management through Industry 4.0 Integration	Joshi, P.; Bhatt, A.; Aggarwal, G.	Proceedings 2024 International Conference on Healthcare Innovations Software and Engineering Technologies (HISET 2024)	2024	10.1109/HISET61796.2024.00054

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44	Revolutionizing Communication: The Dynamic Shift with 5G Technology	Gupta, V.	Proceedings 2024 International Conference on Healthcare Innovations Software and Engineering Technologies (HISET 2024)	2024	10.1109/HISET61796.2024.00059
45	United Nations Sustainable Development Goals in the context of hydrological extremes	Uniyal, A.; Kaushik, N.; Uniyal, H.P.	Water Sustainability and Hydrological Extremes Quantity Quality and Security	2024	10.1016/B978-0-443-21499-8.00014-3
46	Minor flowers of European and American Countries	Uniyal, A.; Kumar, A.	Edible Flowers Health Benefits Nutrition Processing and Applications	2024	10.1016/B978-0-443-13769-3.00020-0
47	Emerging Trends in Food and Agribusiness Marketing	Pant, S.C.; Venkatesh, V.G.; Panday, P.; Shukla, G.P.; Parhi, S.P.	Emerging Trends in Food and Agribusiness Marketing	2024	10.4018/979-8-3693-6715-5
48	A critical review on green approaches in shape and size evolution of metal nanoparticles and their environmental applications	Kumari, M.; Pandey, S.; Giri, V.P.; Nautiyal, C.S.; Mishra, A.	Environmental Nanotechnology Monitoring and Management	2023	10.1016/j.enmm.2023.100895
49	Plasma treatment: An alternative and sustainable green approach for decontamination of mycotoxin in dried food products	Ranjan, R.; Gupta, A.K.; Ravi, P.; Rustagi, S.; Preet, M.S.	Journal of Agriculture and Food Research	2023	10.1016/j.jafr.2023.100867
50	Agro-industrial waste: a cost-effective and eco-friendly substrate to produce amylase	Naik, B.; Vijay, K.; Rizwanuddin, S.; Kumar, V.; Gupta, S.	Food Production Processing and Nutrition	2023	10.1186/s43014-023-00143-2
51	Current and emerging applications in detection and removal of bitter compounds in	Gupta, A.K.; Dhua, S.; Nayak, P.;	Food Bioscience	2023	10.1016/j.fbio.20

S. No	Paper title	Authors	Journal/book name	Year	DOI
	citrus fruit juice: A critical review	McClements, D.J.; Mishra, P.			23.102995
52	Application of smart manufacturing in business	Parashar, B.; Chaurasia, A.; Sharma, R.	AIP Conference Proceedings	2023	10.1063/5.0152794
53	Nanotechnology for bioremediation of industrial wastewater treatment	Kumari, M.; Bora, J.; Dhasmana, A.; Sinha, S.; Malik, S.M.	Advanced Application of Nanotechnology to Industrial Wastewater	2023	10.1007/978-981-99-3292-4_7
54	Energy from Waste: Poterioochromonas malhamensis Used for Managing Dairy Effluent and Producing Valuable Microalgal Lipid	Dhillon, N.; Gupta, S.; Kumar, V.R.; Bhandari, G.; Arya, S.	Journal of Pure and Applied Microbiology	2023	10.22207/JPAM.17.2.48
55	Valorization of tender coconut mesocarp for the formulation of ready-to-eat dairy-based dessert (Kheer): Utilization of industrial by-product	Naik, B.; Vijay, K.; Gupta, A.K.	Journal of Agriculture and Food Research	2023	10.1016/j.jafr.2023.100572
56	Ebola Virus Disease Vaccines: Development, Current Perspectives & Challenges	Malik, S.M.; Kishore, S.; Nag, S.; Padhi, B.K.; Sah, R.K.	Vaccines	2023	10.3390/vaccines11020268
57	The Challenges of Wastewater and Wastewater Management	Kumari, S.; Dwivedi, S.; Khan, E.A.R.; Dhasmana, A.; Malik, S.M.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial Wastewater Treatment	2023	10.1007/978-981-99-2598-8_5
58	Intelligent Supply Chain Orchestration: A Framework for Seamless Integration of Industry 4.0 Technologies	Harish, V.; Sharma, R.; Saini, R.K.; Negi, D.	Proceedings of the IEEE International Conference Image Information Processing	2023	10.1109/ICIIP61524.2023.10537750
59	Sustainable Green Approaches for Wastewater Purification	Kumari, P.; Dhasmana, A.; Kishore, S.; Mukherjee, N.; Malik, S.M.	Advanced and Innovative Approaches of Environmental Biotechnology in Industrial	2023	10.1007/978-981-99-2598-8_8

S. No	Paper title	Authors	Journal/book name	Year	DOI
			Wastewater Treatment		
60	Design of Atmel PLC and its Application as Automation of Coal Handling Plant	Pande, S.D.; Bhatt, A.; Chamoli, S.; Kute, U.T.; Hasane Ahammad, S.H.	2023 International Conference on Sustainable Emerging Innovations in Engineering and Technology (ICSEIET 2023)	2023	10.1109/ICSEIET58677.2023.10303627
61	Blockchain for the Internet of Things and Industry 4.0 Application	Siddharth, D.; Saini, D.K.J.B.; Kumar, S.	Handbook of Flexible and Smart Sheet Forming Techniques Industry 4.0 Approaches	2023	10.1002/9781119986454.ch10
62	Data-Centric AI Solutions and Emerging Technologies in the Healthcare Ecosystem	Khang, A.; Rana, G.; Tailor, R.K.; Abdullayev, V.H.	Data Centric AI Solutions and Emerging Technologies in the Healthcare Ecosystem	2023	10.1201/9781003356189
63	Role of Technologies in the Media and Entertainment Sector	Joshi, K.P.; Rastogi, R.; Kumar, S.S.; Saini, D.K.J.B.; Yadav, R.	Proceedings of the 2nd International Conference on Edge Computing and Applications (ICECAA 2023)	2023	10.1109/ICECAA58104.2023.10212145
64	Rhizospheric bacteria: the key to sustainable heavy metal detoxification strategies	Joshi, S.; Gangola, S.; Bhandari, G.; Malik, S.M.; Sláma, P.	Frontiers in Microbiology	2023	10.3389/fmicb.2023.1229828
65	Development in intelligent autonomous agents for the high-level cognitive functions like reasoning, planning, learning and abstraction	Neelima, N.; Chandra Sekhar, J.N.; Pullagura, L.; Saini, D.K.J.B.; Pande, S.D.	Journal of Interdisciplinary Mathematics	2023	10.47974/JIM-1661
66	Microbial exopolysaccharides and their application for bioremediation of environmental pollutants	Vijaylakshmi; Hemwati Nandan, R.M.; Chaudhary, S.; Bhandari, G.	Advanced Microbial Technology for Sustainable Agriculture and Environment	2023	10.1016/B978-0-323-95090-9.00014-5

S. No	Paper title	Authors	Journal/book name	Year	DOI
67	Remediation of heavy metals by rhizospheric bacteria and their mechanism of detoxification	Gangola, S.; Joshi, S.; Bhandari, G.; Bhandari, N.S.; Mittal, A.	Advanced Microbial Technology for Sustainable Agriculture and Environment	2023	10.1016/B978-0-323-95090-9.00005-4
68	Cyber Physical System Role in Stock Market	Dhyani, A.; Bisht, D.; Kathuria, S.; Chhabra, G.; Tiwari, P.	Proceedings of 5th International Conference on 2023 Devices for Integrated Circuit Devices	2023	10.1109/DevIC57758.2023.10135047
69	Innovation capability and effectiveness in public sector organisations: knowledge-based performance management practices	Rana, G.; Garg, P.	International Journal of Public Sector Performance Management	2023	10.1504/IJPSPM.2023.129696
70	A Perspective Review on Microbial Fuel Cells in Treatment and Product Recovery from Wastewater	Malik, S.M.; Kishore, S.; Dhasmana, A.; Minkina, T.M.; Rajput, V.D.	Water Switzerland	2023	10.3390/w15020316
71	Microbial Biosurfactants and Their Implication Toward Wastewater Management	Rawat, G.; Choudhary, R.; Kumar, V.R.	Handbook of Environmental Chemistry	2023	10.1007/698_2022_877
72	Exploring Microbial-Based Green Nanobiotechnology for Wastewater Remediation: A Sustainable Strategy	Malik, S.M.; Dhasmana, A.; Preetam, S.; Singh, R.K.; Rajput, V.D.	Nanomaterials	2022	10.3390/nano12234187
73	Microalgae-based removal of pollutants from wastewaters: Occurrence, toxicity and circular economy	Bhatt, P.; Bhandari, G.; Bhatt, K.; Simsek, H.	Chemosphere	2022	10.1016/j.chemosphere.2022.135576
74	Algae in wastewater treatment, mechanism, and application of biomass for production of value-added product	Bhatt, P.; Bhandari, G.; Turco, R.F.; Bhatt, K.; Simsek, H.	Environmental Pollution	2022	10.1016/j.envpol.2022.119688
75	Disaster and Mental Health Preparedness in India: A Scoping Review	Haldar, P.; Viswanath, L.; Srivastava, A.K.; Sati, H.C.	Indian Journal of Community Health	2022	10.47203/IJCH.2022.v34i02.004

S. No	Paper title	Authors	Journal/book name	Year	DOI
76	Occurrence, toxicity impacts and mitigation of emerging micropollutants in the aquatic environments: Recent tendencies and perspectives	Bhatt, P.; Bhandari, G.; Bilal, M.Q.	Journal of Environmental Chemical Engineering	2022	10.1016/j.jece.2022.107598
77	Dietary salt consumption pattern as an antecedent risk factor for hypertension: Status, vision, and future recommendations	Bhattacharya, S.; Bera, O.P.; Mohd Saleem, S.M.; Mehta, K.G.; Singh, A.J.	Clinical Nutrition ESPEN	2022	10.1016/j.clnesp.2021.12.006
78	Requirements of Applications of Wireless Sensor Networks for the Internet of Things	Saini, R.K.; Saini, M.K.; Sharma, R.	Internet of Things for Agriculture 4.0: Impact and Challenges	2022	Not recorded
79	White-layer thickness on EDM-processed AISI A2 steel - mathematical Modelling and analysis	Kumar, D.; Mer, K.K.S.; Payal, H.S.; Kumar, K.	Materiali in Tehnologije	2022	10.17222/mit.2022.353
80	Analytical and post analytical phase of an ISO 15189:2012 Certified cytopathology laboratory-a five year institutional experience	Chandra, S.; Kusum, A.; Gaur, D.S.; Chandra, H.	Journal of Cytology	2022	10.4103/JOC.JOC_90_20
81	Residual stress Modeling and analysis in AISI A2 steel processed by an electrical discharge machine	Kumar, D.; Mer, K.K.S.; Payal, H.S.; Kumar, K.	Materiali in Tehnologije	2022	10.17222/mit.2021.325
82	Microbial fuel cell united with other existing technologies for enhanced power generation and efficient wastewater treatment	Patwardhan, S.B.; Savla, N.; Pandit, S.; Kumar, V.R.; Prasad, R.	Applied Sciences Switzerland	2021	10.3390/app112210777
83	Rhizobiont in Bioremediation of Hazardous Waste	Kumar, V.R.; Prasad, R.; Kumar, M.K.M.	Rhizobiont in Bioremediation of Hazardous Waste	2021	10.1007/978-981-16-0602-1
84	Employer branding: Attracting and retaining employees for sustainable development in disruptive economy	Rana, G.; Sharma, R.	World Review of Science Technology and Sustainable Development	2021	10.1504/WRSTSD.2021.117839

Curricular Integration and Academic Mapping for SDG 2 Alleviation

Program Name	Course Name	Course Code
MD Physiology	Recent advances in the subject (including applied Physiology)	1101515
MD Biochemistry	Biomolecules, Principles of Biophysics and its biomedical importance, Cell biology, Fluid, electrolyte and acid-base balance, Analytical techniques, and instrumentation, Biostatistics and research methodology, Basics of medical education in teaching and assessment of Biochemistry.	1101508
MD Biochemistry	Molecular biology, Molecular and genetic aspects of cancer, Immunology, and Environmental Biochemistry.	1101508
MD Biochemistry	Basic principles and practice of clinical biochemistry, Biochemical analytes, Assessment of organ system functions, and Recent advances in biochemistry.	1101508
MD Pathology	Basic sciences as applied to the subject (general pathology, pathophysiology, immunopathology, and molecular biology).	1101513
MD Pathology	Hematology, transfusion medicine and laboratory medicine including instrumentation and quality control	1101513
MD Pathology	Recent advances in the subject	1101513
MD Microbioloy	Recent Advances & Applied Microbiology (AM).	1101511
MD Pharmacology	Clinical Pharmacology, Experimentation, Research, Biostatistics and Education	1101514
MD Pharmacology	Recent advances in Pharmacology	1101514
MD Community Medicine	Conceptual (and applied) understanding of Public Health, Community Medicine, Communicable and Non-Communicable diseases, emerging and re-emerging diseases, Applied Epidemiology, Health research, Biostatistics.	1101509
MD Community Medicine	Social & Behavioral sciences- applied aspects, Scientific communications & Medical writing, Research Methodology, Public Health Legislation, International Health & Global Disease Surveillance.	1101509
MD Community Medicine	Health Policy planning, Medical Education technology, Information Technology, Integration of alternative Health system including AYUSH, Occupational Health, Recent	1101509

Program Name	Course Name	Course Code
	advances in Public Health & Miscellaneous issues, Health Economics.	
MD Respiratory Medicine	Recent advances in pulmonary medicine and research methodology.	1101516
MD Anaesthesiology	Intensive Care Medicine, Pain Medicine and Recent Advances.	1101507
MD Radiation Oncology	Recent Developments in Oncology, Cancer Control Programmes, Research methodologies in oncology	1101518
MD ImmunoHematology & Blood Transfusion	Applied aspects of Basic Sciences in relation to transfusion Medicine	1101522
MD ImmunoHematology & Blood Transfusion	Immunolhematology, immunogenetics, transfusion-transmitted infections (TI), and applied Serology	1101522
MD ImmunoHematology & Blood Transfusion	Blood centre organization and management, blood components, Hematology, clinical transfusion Practices	1101522
MD ImmunoHematology & Blood Transfusion	Recent Advances in IHBT, regulatory requirements, quality management system, information management and automation in transfusion	1101522
MS General Surgery	Recent advances in surgery	1101501
DM Neonatology	Basic sciences relevant to the discipline of Neonatology, Perinatology, Research methods, Resuscitation, equipments	1101604
DM Cardiology	Basic sciences as related to cardiology (This should include anatomy, physiology, pathology, biochemistry, pharmacology and genetics as applicable to cardiology).	1101606
DM Cardiology	Diagnostic and Interventional Cardiology	1101606
DM Cardiology	Recent advances in cardiology (This should include recent advances in cardiac sciences, including genetics, immunology, therapeutics, pathophysiology, etc.).	1101606

Program Name	Course Name	Course Code
DM Critical Care Medicine	Basic Medical Sciences related to Critical care	1101607
DM Critical Care Medicine	Clinical procedures, interventions, Professionalism, Ethics & Research methods related to Critical Care Medicine	1101607
M.Ch Surgical Oncology	Basic Sciences	1101602
MCh. Urology	Basic Sciences Applied to Urology	1101605
MCh. Urology	Clinical Urology & Uro Pathology	1101605
MCh. Urology	Operative Urology	1101605
MCh. Urology	Recent advances in Urology	1101605
M.Sc. Clinical Research	Biostatistics	CMCR501
M.Sc. Clinical Research	General Biochemistry	CMCR502
M.Sc. Clinical Research	Genetics; Molecular Biology	CMCR503
M.Sc. Clinical Research	Introduction to Clinical Research	CMCR504
M.Sc. Clinical Research	Biomedical, Bioanalytical Techniques & Instrumentation	CMCR505
M.Sc. Clinical Research	General Epidemiology	CMCR506
M.Sc. Clinical Research	Spoken English	CDLa101
M.Sc. Clinical Research	Clinical Trials	CMCR511
M.Sc. Clinical Research	Pharmacology	CMCR512
M.Sc. Clinical Research	Immunology	CMCR513

Program Name	Course Name	Course Code
M.Sc. Clinical Research	Basic Clinical Microbiology	CMCR514
M.Sc. Clinical Research	IPR; Ethics	CMCR515
M.Sc. Clinical Research	Clinical Data Management	CMCR516
M.Sc. Clinical Research	Environmental & Regulatory Physiology	CMCR517
M.Sc. Clinical Research	Basics of Pharmaceutics	CMCR518
M.Sc. Clinical Research	Understanding the energy of positive words & thoughts/Power of Positive: Live	CDPR101
M.Sc. Clinical Research	Population Studies	CDSs101
M.Sc. Clinical Research	Introduction to Artificial Intelligence	CDEs101
M.Sc. Clinical Research	Principle of Management	CDMs101
M.Sc. Clinical Research	Gender inequality and gender studies	CDSs102
M.Sc. Clinical Research	Intensive study of a Disease: Etiology, Diagnostics & Therapeutics	CMCR651
M.Sc. Clinical Research	Biopharmaceuticals and Drug Development	CMCR601
M.Sc. Clinical Research	Quality control and assurance in Clinical Research	CMCR602
M.Sc. Clinical Research	Introduction to Clinical and Pharmacoepidemiology	CMCR604
M.Sc. Clinical Research	Research Methodology	CMCR605

Program Name	Course Name	Course Code
M.Sc. Clinical Research	Pharmacovigilance	CMCR606
M.Sc. Clinical Research	Research Project	CMCR650
M.Sc. Clinical Research	Medical writing	CMCR653
M.Sc. Clinical Research	Regulatory Affair	CMCR654
M.Sc. Clinical Research	Analytical Tools for Pharmaceuticals	CMCR655
M.Sc. Clinical Research	Disseration	CMCR700
M.Sc. Epidemiology	Introduction to Environmental, Occupational, Nutritional and Genetic Epidemiology	CMEP502
M.Sc. Epidemiology	Basic data handling and field exposure	CMEP001
M.Sc. Epidemiology	Basic Course in Biomedical Research	CMBR101
M.Sc. Epidemiology	Artificial Intelligence	CDAI101
M.Sc. Epidemiology	Intellectual Property	CDIP101
M.Sc. Epidemiology	Epidemiological Study Designs and Basics of Research Methodology	CMEP505
M.Sc. Epidemiology	Advanced data management	CMEP002
M.Sc. Epidemiology	Dissertation	CMEP700
M.Sc. Epidemiology	Environmental and Occupational Epidemiology	CMEC001
MSc Medical Physics	Electronics and Instrumentation	MPCC202
MSc Medical Physics	Applied Statistics and Computational Techniques	MPCC203
MSc Medical Physics	Principles of Radiation Detection and Instrumentation	MPCC204
M.Sc. Medical Anatomy	Research Methodology & Biostatistics	MMAN1104
M.Sc. Medical Anatomy	Fundamentals of Computer Applications	MMAN1105

Program Name	Course Name	Course Code
M.Sc. Medical Anatomy	Histological Techniques	MMAN1204
M.Sc. Medical Anatomy	Research Dissertation-I	MMAN1207
M.Sc. Medical Anatomy	Research Dissertation-II	
M.Sc. Medical Anatomy	Recent Advances in Anatomy	MMAN2204
M.Sc. Medical Anatomy	Research Dissertation-III	MMAN2206
M.Sc. Medical Microbiology	Research Methodology and Biostatistics - I	MMMI1103
M.Sc. Medical Microbiology	Fundamentals of Computer Lab - I	MMMI1104
M.Sc. Medical Microbiology	Practical – General Microbiology and General Immunology	MMMI1106
M.Sc. Medical Microbiology	Research Methodology and Biostatistics - II	MMMI1203
M.Sc. Medical Microbiology	Fundamentals of Computer Lab - II	MMMI1204
M.Sc. Medical Microbiology	Practicals – Systemic Bacteriology: Gram-positive bacteria and Gram-negative bacteria	MMMI1205
M.Sc. Medical Microbiology	Research Dissertation-I	
M.Sc. Medical Microbiology	Virology	MMMI2301
M.Sc. Medical Microbiology	Mycology	MMMI2302
M.Sc. Medical Microbiology	Parasitology	MMMI2303

Program Name	Course Name	Course Code
M.Sc. Medical Microbiology	Basic knowledge in Molecular biology	MMMI2304
M.Sc. Medical Microbiology	Practical – Virology, Mycology and Parasitology	MMMI2306
M.Sc. Medical Microbiology	Research Dissertation-II	
Bachelor of Physiotherapy (BPT)	Basic principles of biomechanics	BPT 203
Bachelor of Physiotherapy (BPT)	English, communication and soft skills	ECS201
Bachelor of Physiotherapy (BPT)	Basic computer and information sciences	CIS 201
Bachelor of Physiotherapy (BPT)	Bio-Physics	BPT 401
Bachelor of Physiotherapy (BPT)	Electrotherapy	BPT 403
Bachelor of Physiotherapy (BPT)	Clinical Orthopaedics and Traumatology	BPT 501
Bachelor of Physiotherapy (BPT)	General surgery including burns and Plastic surgery and obstetrics and Gynaecology	BPT 502
Bachelor of Physiotherapy (BPT)	Diagnostic imaging for physiotherapists	BPT 505
Bachelor of Physiotherapy (BPT)	Clinical Neurology and Neurosurgery	BPT 601
Bachelor of Physiotherapy (BPT)	Physiotherapy in orthopaedic and sports	BPT 602
Bachelor of Physiotherapy (BPT)	Physiotherapy in general surgery and Medicine	BPT 603
Bachelor of Physiotherapy (BPT)	P.T in Orthopaedics	BPT 401

Program Name	Course Name	Course Code
Bachelor of Physiotherapy (BPT)	P.T Neurology	BPT 402
Bachelor of Physiotherapy (BPT)	Biostatistics & Research Methodology	BPT 405
Bachelor of Physiotherapy (BPT)	Project work	BPT 405
BMLT	Basic Biochemistry-1	BMLT 101
BMLT	General Bacteriology	BMLT 102
BMLT	Haematology & Clinical Pathology- Basics	BMLT 103
BMLT	Biophysics, Enzymology & Clinical Biochemistry	BMLT 201
BMLT	Instrumentation and Basic Immunology	BMLT 202
BMLT	Histology and Cytopathology - Basics	BMLT 203
BMLT	Basic Computer and Information Sciences	CIS 201
BMLT	Systemic Bacteriology	BMLT 302
BMLT	Hematology & Blood Banking - Basics	BMLT 303
BMLT	Instrumentation in Biochemical Analysis	BMLT 401
BMLT	Virology and mycology	BMLT 402
BMLT	Histology & Cytopathology - Advanced	BMLT 403
BMLT	Heme metabolism, Endocrinology and organ function test	BMLT 501
BMLT	Haematology & Clinical Pathology - Applied	BMLT 503
BMLT	Quality Assurance in Clinical Biochemistry and Molecular Biology	BMLT 601
B.Sc. Medical Radiology & Imaging Technology (BRIT)	Basic Radiation Physics-I	BRIT103
B.Sc. Medical Radiology & Imaging Technology (BRIT)	Basic Radiation Physics-II	BRIT 203
B.Sc. Medical Radiology & Imaging Technology (BRIT)	Basic Computer and Information Sciences	CIS 201

Program Name	Course Name	Course Code
B.Sc. Medical Technology (Radiotherapy-BRT)	Radiation Physics-I	BRT103
B.Sc. Medical Technology (Radiotherapy-BRT)	Radiation Equipment and Radiobiology- I	BRT104
B.Sc. Medical Technology (Radiotherapy-BRT)	Radiation Physics- II	BRT203
B.Sc. Medical Technology (Radiotherapy-BRT)	Radiation Equipment and Radiobiology-II	BRT204
B.Sc. Medical Technology (Radiotherapy-BRT)	Basic Computer and Information Sciences	CIS 201
B.Sc. Medical Technology (Radiotherapy-BRT)	Principles of Cancer Control and Oncology Care-I	BRT302
B.Sc. Medical Technology (Radiotherapy-BRT)	External Beam Radiotherapy Techniques-I	BRT304
B.Sc. Medical Technology (Radiotherapy-BRT)	Principles of Cancer Control and Oncology Care-II	BRT402
B.Sc. Medical Technology (Radiotherapy-BRT)	External Beam Radiotherapy Techniques-II	BRT404
B.Sc. Medical Technology (Radiotherapy-BRT)	Brachytherapy & Nuclear Medicine-I	BRT501

Program Name	Course Name	Course Code
B.Sc. Medical Technology (Radiotherapy-BRT)	Advanced radiotherapy techniques-I	BRT502
B.Sc. Medical Technology (Radiotherapy-BRT)	Radiation safety & Quality assurance-I	BRT503
B.Sc. Medical Technology (Radiotherapy-BRT)	Brachytherapy & Nuclear Medicine-II	BRT601
B.Sc. Medical Technology (Radiotherapy-BRT)	Advanced radiotherapy techniques-II	BRT602
B.Sc. Medical Technology (Radiotherapy-BRT)	Radiation safety & Quality assurance-II	BRT603
B.Sc. Medical Technology (Radiotherapy-BRT)	Research Project & Academic Writing: (RP-Research Project/ DS-Dissertation/Th-Thesis)	R: (RP/DS/Th)
Bachelor of Occupational Therapy (BOT)	Basic computer and Information sciences	CIS201
Bachelor of Occupational Therapy (BOT)	Introduction to operation theatre (OT)	BOT 301
Bachelor of Occupational Therapy (BOT)	Introduction to basic surgical instruments	BOT302
Bachelor of Occupational Therapy (BOT)	Introduction to Anaesthesia Technology	BOT303

Program Name	Course Name	Course Code
Bachelor of Occupational Therapy (BOT)	Introduction to basic surgical equipment (OT)	BOT401
Bachelor of Occupational Therapy (BOT)	Basic concepts of Allied Surgeries	BOT402
Bachelor of Occupational Therapy (BOT)	Medical diseases influencing choice of Anaesthesia	BOT403
Bachelor of Occupational Therapy (BOT)	CSSD procedures and Sterilization techniques	BOT502
Bachelor of Occupational Therapy (BOT)	Specialized surgery (Plastic, Pediatric, Cardiothoracic and vascular surgeries)	BOT602
Bachelor of Optometry (B.Optom)	Human Anatomy-I	BOPT101
Bachelor of Optometry (B.Optom)	Human Physiology-I	BOPT102
Bachelor of Optometry (B.Optom)	Biochemistry	BOPT103
Bachelor of Optometry (B.Optom)	Human Anatomy- II	BOPT201
Bachelor of Optometry (B.Optom)	Human Physiology-II	BOPT202
Bachelor of Optometry (B.Optom)	Basic Orthoptics	BOPT203
Bachelor of Optometry (B.Optom)	English, Communication & Soft Skills	ECS201
Bachelor of Optometry (B.Optom)	Introduction to Yoga- Basic theory, science & techniques	YST201

Program Name	Course Name	Course Code
Bachelor of Optometry (B.Optom)	Basic Computer & Information Sciences	CIS201
Bachelor of Optometry (B.Optom)	Clinical refraction and contact lens	BOPT301
Bachelor of Optometry (B.Optom)	Pathology	BOPT302
Bachelor of Optometry (B.Optom)	Environmental Science – I*	EVS301
Bachelor of Optometry (B.Optom)	Optometric investigations	BOPT401
Bachelor of Optometry (B.Optom)	Clinical orthoptics	BOPT402
Bachelor of Optometry (B.Optom)	Low visual aids	BOPT403
Bachelor of Optometry (B.Optom)	Environmental Science - II	EVS301
Bachelor of Optometry (B.Optom)	Advanced contact lens	BOPT502
Bachelor of Optometry (B.Optom)	Advanced Low visual aids	BOPTO503
Bachelor of Optometry (B.Optom)	Research Methodology and Biostatistics	BOPTO504
Bachelor of Optometry (B.Optom)	Community optometry	BOPT601
Bachelor of Optometry (B.Optom)	Advanced orthoptics	BOPT602
Bachelor of Optometry (B.Optom)	Eye banking and OT management	BOPT603
Bachelor of Audiology and	Introduction to Speech-Language Pathology	B1.1M

Program Name	Course Name	Course Code
Speech-Language Pathology (BASLP)		
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Introduction to Audiology	B1.2M
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Anatomy and Physiology of Speech & Swallowing	B1.3MC
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Practicals Audiology	B1.6M
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Fluency and its Disorders	B 2.1M
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Diagnostic Audiology- Basic	B2.2M
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Linguistics and Phonetics	B2.3MC
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Optional Minor - 1	B2.5MO

Program Name	Course Name	Course Code
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Clinicals in Speech-Language Pathology	B2.6M
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Clinicals in Audiology	B2.7M
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Introduction to Yoga- Basic theory, science and techniques	YST201
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Voice and its Disorders	B 3.1
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Speech Sound Disorders	B 3.2
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Clinicals in Speech-Language Pathology	B3.5
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Motor Speech Disorders in children	B 4.1
Bachelor of Audiology and	Child Language Disorders	B4.2

Program Name	Course Name	Course Code
Speech-Language Pathology (BASLP)		
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Diagnostic Audiology–Physiological Tests	B4.3
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Implantable Hearing Devices	B4.4
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Clinicals in Speech Language	B4.5
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Environmental Sciences	EVS
Bachelor of Audiology and Speech-Language Pathology (BASLP)	StructuralAnomali es&SpeechDisorde rs	B5.1
Bachelor of Audiology and Speech-Language Pathology (BASLP)	PediatricAudiology	B5.3
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Aural Rehabilitation in Children	B5.4

Program Name	Course Name	Course Code
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Clinicals in Speech-Language Pathology	B5.5
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Language Disorders in Adults	B6.2
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Aural Rehabilitation in Adults	B6.3
Bachelor of Audiology and Speech-Language Pathology (BASLP)	AudiologyinPractice	B6.4
Bachelor of Audiology and Speech-Language Pathology (BASLP)	Clinicals in Speech-Language Pathology	B6.5
Master of Physiotherapy (MPT)	Research Methodology and Biostatistics	MPT102
Master of Physiotherapy (MPT)	Electrophysiology & Electro-diagnosis	MPT103
Master of Physiotherapy (MPT)	Research Dissertation-I	MRD101
Master of Physiotherapy (MPT)	Research Dissertation II	MRD201
Master of Physiotherapy (MPT)	Musculoskeletal Disorders: Clinical Sciences I	MPT1 301

Program Name	Course Name	Course Code
Master of Physiotherapy (MPT)	Musculoskeletal Disorders: Physiotherapeutics I	MPT1 302
Master of Physiotherapy (MPT)	Musculoskeletal Disorders: Recent Advances I	MPT1 303
Master of Physiotherapy (MPT)	Research Dissertation-III	MRD 301
Master of Physiotherapy (MPT)	Neurological Disorders: Clinical Sciences I	MPT2 301
Master of Physiotherapy (MPT)	Neurological Disorders: Physiotherapeutics I	MPT2 302
Master of Physiotherapy (MPT)	Neurological Disorders: Recent Advances I	MPT2 303
Master of Physiotherapy (MPT)	Musculoskeletal Disorders: Clinical Sciences II	MPT1 401
Master of Physiotherapy (MPT)	Research Dissertation – Sem. I-	*MRD405(1- 4)
Master of Physiotherapy (MPT)	Neurological Disorders: Clinical Sciences II	MPT2 401
Master of Physiotherapy (MPT)	Research Dissertation- Sem. I-IV	*MRD 405 Sem. (I-IV)
Master of Hospital Administration	Hospital Planning and Operations	MHA122
Master of Hospital Administration	Basic Medical Statistics and Research Methodology	MHA123
Master of Hospital Administration	Essentials of Computer Application	MHA125
Master of Hospital Administration	Management Information System in Hospitals	MHA127
Master of Hospital Administration	Inventory and equipment management in Hospitals	MHA129

Program Name	Course Name	Course Code
Master of Hospital Administration	Project Management	MHA216
Master of Hospital Administration	Epidemiology, Health Communication and Health Economics	MHA218
Master of Hospital Administration	Recent Trends and Advances in Hospital Management	MHA219
Master of Hospital Administration	Dissertation	MHA223
B.Sc. Nursing	Health /Nursing Informatics & Technology	HNIT 145
B.Sc. Nursing	Community Health Nursing II - Theory	N- COMH (II) 401
B.Sc. Nursing	Community Health Nursing II – Practical	N- COMH (II) 401
B.Sc. Nursing	Nursing Research & Statistics	NRST (I) 405
Post Basic BSc Nursing	Community Health Nursing	PBN201
Post Basic BSc Nursing	Community Health Nursing – Practical	PBN201
Post Basic BSc Nursing	Introduction to Nursing Research & Statistics #	PBN204
M.Sc. Nursing	Advanced Nursing Practice	MSN101
M.Sc. Nursing	Community Health Nursing - I	MSN102 B
M.Sc. Nursing	Community Health Nursing - I Practical	MSN102 B
M.Sc. Nursing	Nursing Education- Practical	MSN103
M.Sc. Nursing	Nursing Research and Statistics	MSN104
M.Sc. Nursing	Community Health Nursing – II	MSN-201 B
M.Sc. Nursing	Cardiovascular & Thoracic Nursing– II	MSN201 C1
M.Sc. Nursing	Critical Care Nursing – II	MSN201 C2
M.Sc. Nursing	Gastroenterology - II	MSN201 C3
M.Sc. Nursing	Nephro - urology Nursing – II	MSN201 C4
M.Sc. Nursing	Neurosciences Nursing – II	MSN201 C5

Program Name	Course Name	Course Code
M.Sc. Nursing	Oncology Nursing – II P	MSN201 C6
M.Sc. Nursing	Orthopaedic Nursing – II	MSN201 C7
M.Sc. Nursing	Cardiovascular & Thoracic Nursing– II Practical	MSN201 C1
M.Sc. Nursing	Critical Care Nursing – II Practical	MSN201 C1
M.Sc. Nursing	Gastroenterology – II Practical	MSN201 C2
M.Sc. Nursing	Nephro-Urology Nursing – II Practical	MSN201 C3
M.Sc. Nursing	Neurosciences Nursing – II Practical	MSN201 C4
M.Sc. Nursing	Oncology Nursing – II Practical	MSN201 C5
M.Sc. Nursing	Orthopaedic Nursing – II Practical	MSN201 C7
M.Sc. Nursing	Nursing Research Dissertation & Viva	MSN203
Nursing Practice in Critical Care (NPCC)	Research Application and Evidence-Based Practice in Critical Care – Theory	NPC104
Nursing Practice in Critical Care (NPCC)	Research Dissertation & Viva	NPC204
B.Sc. Biotechnology	Biochemistry and Metabolism	BBTC 111
B.Sc. Biotechnology	Cell Biology	BBTC 112
B.Sc. Biotechnology	General Microbiology	BMBC 111
B.Sc. Biotechnology	Basic Bioinformatics-1	BBTOE 111
B.Sc. Biotechnology	Principle of Management	BBTOE 112
B.Sc. Biotechnology	Lab course based on course BBTC 111	BBTPC 111
B.Sc. Biotechnology	Lab course based on course BBTC 112	BBTPC 112
B.Sc. Biotechnology	Lab course based on course BMBC 111	BBTPC 113
B.Sc. Biotechnology	Human Physiology	BBTC 121
B.Sc. Biotechnology	Plant Physiology	BBTC 122
B.Sc. Biotechnology	Basic Bioinformatics-II	BBTOE 121
B.Sc. Biotechnology	Entrepreneurship Development	BBTOE 122
B.Sc. Biotechnology	Basics of Forensic Sciences	BBTOE 123
B.Sc. Biotechnology	Lab course based on course BBTC 121	BBTPC 121
B.Sc. Biotechnology	Lab course based on course BMBC 121	BBTPC 123
B.Sc. Biotechnology	Molecular Biology	BBTC 231
B.Sc. Biotechnology	Developmental Biology	BBTC 232

Program Name	Course Name	Course Code
B.Sc. Biotechnology	Chemistry-I	BBTC 233
B.Sc. Biotechnology	Principles of Marketing	BBTOE 232
B.Sc. Biotechnology	Microbial Quality Control in Food and Pharmaceutical Industries	BBTSE 231
B.Sc. Biotechnology	Lab course based on course BBTC 231	BBTPC 231
B.Sc. Biotechnology	Lab course based on course BBTC 232	BBPTC 232
B.Sc. Biotechnology	Lab course based on course BBTC 233	BBPTC 233
B.Sc. Biotechnology	Genetics	BBTC 111
B.Sc. Biotechnology	Immunology	BBTC 242
B.Sc. Biotechnology	Chemistry- 2	BBTC 243
B.Sc. Biotechnology	Beverage biotechnology	BBTOE 241
B.Sc. Biotechnology	Biotechnology and Human Welfare	BBTOE 242
B.Sc. Biotechnology	Organizational Behaviour	AECC 241
B.Sc. Biotechnology	Lab course based on course BBTC 241	BBTPC 241
B.Sc. Biotechnology	Lab course based on course BBTC 242	BBTPC 242
B.Sc. Biotechnology	Lab course based on course BBTC 243	BBTPC 243
B.Sc. Biotechnology	Animal Biotechnology & Developmental Biology	BBTC 501
B.Sc. Biotechnology	Environmental Biotechnology	BBTC 503
B.Sc. Biotechnology	Genomics and Proteomics	BBTE 501 A
B.Sc. Biotechnology	Bioprocess Engineering	BBTE 501 B
B.Sc. Biotechnology	Food Biotechnology	BBTE 501 C
B.Sc. Biotechnology	Practical- IX (Paper XXIX & XXX)	BBTP 501
B.Sc. Biotechnology	Practical- X (Paper XXXI & XXXII)	BBTP 502
B.Sc. Microbiology	Biochemistry and Metabolism	BBTC 111
B.Sc. Microbiology	Cell Biology	BBTC 112
B.Sc. Microbiology	General Microbiology	BMBC 111
B.Sc. Microbiology	Basic Bioinformatics-1	BBTOE 111
B.Sc. Microbiology	Principle of Management	BBTOE 112
B.Sc. Microbiology	Lab course based on course BBTC 111	BBTPC 111
B.Sc. Microbiology	Lab course based on course BBTC 112	BBTPC 112
B.Sc. Microbiology	Lab course based on course BMBC 111	BBTPC 113

Program Name	Course Name	Course Code
B.Sc. Microbiology	Industrial Microbiology	BMBC 122
B.Sc. Microbiology	Plant Physiology	BBTC 122
B.Sc. Microbiology	Human Physiology	BBTC 121
B.Sc. Microbiology	Basic Bioinformatics-II	BBTOE 121
B.Sc. Microbiology	Entrepreneurship Development	BBTOE 122
B.Sc. Microbiology	Lab course based on course BBTC 121	BBTPC 121
B.Sc. Microbiology	Molecular Biology	BBTC 231
B.Sc. Microbiology	Food &Diary Microbiology	BMBC 231
B.Sc. Microbiology	Principles of Marketing	BBTOE 232
B.Sc. Microbiology	Microbial Quality Control in Food and Pharmaceutical Industries	BBTSE 231
B.Sc. Microbiology	Lab course based on course BBTC 231	BMPC 231
B.Sc. Microbiology	Lab course based on course BMBC 231	BMPC 232
B.Sc. Microbiology	Lab course based on course BBTC 233	BMPC 233
B.Sc. Microbiology	Virology and Infection	BMBC 241
B.Sc. Microbiology	Immunology	BBTC 242
B.Sc. Microbiology	Chemistry- 2	BBTC 243
B.Sc. Microbiology	Biotechnology and Human Welfare	BBTOE 242
B.Sc. Microbiology	Lab course based on course BBTC 242	BMPC 242
B.Sc. Microbiology	Lab course based on course BBTC 243	BMPC 243
M.Sc Biotechnology, Sem-I	Microbiology	MMBT 101
M.Sc Biotechnology, Sem-I	Cell & Molecular Biology	MBTT 101
M.Sc Biotechnology, Sem-I	Bioenergetics & Metabolism	MBCT 101
M.Sc Biotechnology, Sem-I	Biochemical & Analytical Techniques	MBCT 102
M.Sc Biotechnology, Sem-I	Cell & Molecular Biology Practical	MBTP 101

Program Name	Course Name	Course Code
M.Sc Biotechnology, Sem-I	Bioenergetics & Metabolism Practical	MBCP 101
M.Sc Biotechnology, Sem-I	Biochemical & Analytical Techniques Practical	MBCP 102
M.Sc Biotechnology, Sem-II	Immunology	MBTT 201
M.Sc Biotechnology, Sem-II	Enzymology and Protein Engineering	MBCT 202
M.Sc Biotechnology, Sem-II	Medical Biotechnology	MBTT 203
M.Sc Biotechnology, Sem-II	Immunology Practical	MBTP 201
M.Sc Biotechnology, Sem-II	Enzymology and Protein Engineering Practical	MBCP 202
M.Sc Biotechnology, Sem-II	Medical Biotechnology Practical	MBTP 203
M.Sc Biotechnology, Sem-II	Recombinant DNA Technology Practical	MBTP 202
M.Sc Biotechnology, Sem-III	Pharmaceutical Biotechnology	MBTT 301
M.Sc Biotechnology, Sem-III	Plant & Animal Biotechnology	MBTT 302
M.Sc Biotechnology, Sem-III	Food and Industrial Biotechnology	MBTT 303
M.Sc Biotechnology, Sem-III	Transcriptomics, Proteomics & Metabolomics	MBTE 301
M.Sc Biotechnology, Sem-III	Vaccine Development and Production	MBTE 303
M.Sc Biotechnology, Sem-III	Transgenic Animal Technology	MBTE 304

Program Name	Course Name	Course Code
M.Sc Biotechnology, Sem-III	Agrobiotechnology	MBTE 305
M.Sc Biotechnology, Sem-III	Metabolic Engineering	MBTE 306
M.Sc Biotechnology, Sem-III	Microbial Technology	MBTE 307
M.Sc Biotechnology, Sem-III	Nanobiotechnology	MBTE 308
M.Sc Biotechnology, Sem-III	Bioinformatics & System Biology	MBTE 309
M.Sc Biotechnology, Sem-III	Synthetic Biology	MBTE 311
M.Sc Biotechnology, Sem-III	Pharmaceutical Biotechnology Practical	MBTT 301
M.Sc Biotechnology, Sem-III	Plant & Animal Biotechnology Practical	MBTP 302
M.Sc Biotechnology, Sem-III	Food and Industrial Biotechnology Practical	MBTP 303
M.Sc Biotechnology, Sem-IV	Biostatistics, Bioinformatics, Research Methodology & IPR	MBTT 401
M.Sc. Biotechnology, Sem-IV	Seminars	MBTS 401
M.Sc. Biotechnology, Sem-IV	Research Project/Dissertation	MBTR 401
M.Sc. Microbiology	Microbiology	MMBT 101
M.Sc. Microbiology	Cell & Molecular Biology	MBTT 101
M.Sc. Microbiology	Bioenergetics & Metabolism	MBCT 101
M.Sc. Microbiology	Biochemical & Analytical Techniques	MBCT 102
M.Sc. Microbiology	Cell & Molecular Biology Practical	MBTP 101
M.Sc. Microbiology	Bioenergetics & Metabolism Practical	MBCP 101
M.Sc. Microbiology	Biochemical & Analytical Techniques Practical	MBCP 102

Program Name	Course Name	Course Code
M.Sc. Microbiology	Immunology	MBTT 201
M.Sc. Microbiology	Microbial Physiology & Metabolism	MMBT 202
M.Sc. Microbiology	Recombinant DNA Technology	MBTT 202
M.Sc. Microbiology	Immunology Practical	MBTP 201
M.Sc. Microbiology	Virology and Bacteriology Practical	MMBP 201
M.Sc. Microbiology	Microbial Physiology & Metabolism Practical	MMBP 202
M.Sc. Microbiology	Recombinant DNA Technology Practical	MBTP 202
M.Sc. Microbiology	Pharmaceutical Microbiology	MMBT 301
M.Sc. Microbiology	Industrial Microbiology	MMBT 302
M.Sc. Microbiology	Food & Dairy Microbiology	MMBT 303
M.Sc. Microbiology	Microbial Technology	MMBE 301
M.Sc. Microbiology	Industrial Waste Management	MMBE 302
M.Sc. Microbiology	Genomics, Proteomics & Metabolomics	MMBE 303
M.Sc. Microbiology	Infection and Immunity	MMBE 305
M.Sc. Microbiology	Epidemiology	MMBE 306
M.Sc. Microbiology	Bioinformatics & System Biology	MMBE 307
M.Sc. Microbiology	Nano Biotechnology	MMBE 309
M.Sc. Microbiology	Bioprocess Technology	MMBE 310
M.Sc. Microbiology	Pharmaceutical Microbiology Practical	MMBP 301
M.Sc. Microbiology	Industrial Microbiology Practical	MMBP 302
M.Sc. Microbiology	Food & Dairy Microbiology Practical	MMBP 303
M.Sc. Microbiology	Biostatistics, Bioinformatics, Research Methodology & IPR	MBTT 401
M.Sc. Microbiology	Seminars	MMBS 401
M.Sc. Microbiology	Research Project/Dissertation	MMBR 401
BSc. Yoga Science and Holistic Health	Foundations of Yoga – I	BYSC101
BSc. Yoga Science and Holistic Health	Principles of Hatha Yoga -I	BYSC102
BSc. Yoga Science and holistic health	Human Anatomy and Physiology-I	BYSC103

Program Name	Course Name	Course Code
BSc. Yoga Science and holistic health	Basics of Sanskrit	BYSC104
BSc. Yoga Science and holistic health	Yoga Practical - I	BYSC106
BSc. Yoga Science and holistic health	Yoga Practical - II	BYSC107
BSc. Yoga Science and holistic health	Human Anatomy and Physiology Practical - I	BYSC108
BSc. Yoga Science and Holistic Health	Foundations of Yoga – II	BYSC201
BSc. Yoga Science and Holistic Health	Principles of Hatha Yoga -II	BYSC202
BSc. Yoga Science and Holistic Health	Human Anatomy and Physiology-II	BYSC203
BSc. Yoga Science and Holistic Health	Multidisciplinary Elective-I	MDC101/ MDC103
BSc. Yoga Science and holistic health	Soft Skill Training	BYSC205
BSc. Yoga Science and Holistic Health	Yoga Practical - III	BYSC206
BSc. Yoga Science and holistic health	Yoga Practical - IV	BYSC207
BSc. Yoga Science and Holistic Health	Human Anatomy and Physiology Practical – II	BYSC208
BSc. Yoga Science and holistic health	Patanjal Yoga Darshana – I	BYS301
BSc. Yoga Science and Holistic Health	Yoga Education & Teaching Methodology	BYS302
BSc. Yoga Science and holistic health	Yoga Practical – V	BYS305

Program Name	Course Name	Course Code
BSc. Yoga Science and holistic health	Yoga Practical – VI	BYS306
BSc. Yoga Science and holistic health	Holistic Health Practical	BYS307
BSc. Yoga Science and holistic health	Patanjal Yoga Darshana – II	BYS401
BSc. Yoga Science and holistic health	Yoga Psychology	BYS402
BSc. Yoga Science and holistic health	Yoga Diet & Nutrition	BYS403
BSc. Yoga Science and holistic health	Fundamentals of Ayurveda	BYS404
BSc. Yoga Science and holistic health	Yoga Practical – VII	BYS405
BSc. Yoga Science and holistic health	Yoga Practical – VIII	BYS406
BSc. Yoga Science and holistic health	Ayurveda Practical	BYS407
BSc. Yoga Science and holistic health	Bhagavadgita	BYS501
BSc. Yoga Science and holistic health	Yoga Principles & Practices of Healthy Living	BYS502
BSc. Yoga Science and Holistic Health	Generic Elective –I Applied Astrology, Vastu Shastra & Holistic Healing Methods	BYS504(ST)
BSc. Yoga Science and holistic health	Generic Elective –II Fundamentals of Naturopathy	BYS504(ST)
BSc. Yoga Science and Holistic Health	Yoga Practical – IX	BYS505
BSc. Yoga Science and Holistic Health	Applied Astrology, Vastu Shastra & Holistic Healing Methods	BYS506(SP)

Program Name	Course Name	Course Code
BSc. Yoga Science and Holistic Health	Naturopathy Practical	BYS506(SP)
BSc. Yoga Science and holistic health	Yoga Management of Lifestyle-related disorders	BYS602
BSc. Yoga Science and Holistic Health	Elective-I Fundamentals of Homeopathy	BYS604
BSc. Yoga Science and Holistic Health	Elective-II Applied Alternative Therapies	BYS605
BSc. Yoga Science and holistic health	Yoga Practical – X	BYS606
BSc. Yoga Science and holistic health	Yoga Field Work	BYS607
BSc. Yoga Science and Holistic Health	Internship-II	BYS608
MSc. Yoga Science and holistic health	Foundations of Yoga	MYS101
MSc. Yoga Science and holistic health	Human Consciousness	MYS102
MSc. Yoga Science and holistic health	Principles of Hatha Yoga	MYS104
MSc. Yoga Science and holistic health	Yoga Practical - I	MYS105
MSc. Yoga Science and holistic health	Yoga Practical - II	MYS106
MSc. Yoga Science and holistic health	Patanjala Yoga Darshana	MYS201
MSc. Yoga Science and holistic health	Fundamentals of Ayurveda and Naturopathy	MYS202
MSc. Yoga Science and Holistic Health	Essence of Upanishad	MYS204

Program Name	Course Name	Course Code
MSc. Yoga Science and holistic health	Yoga Practical III	MYS205
MSc. Yoga Science and holistic health	Yoga Practical IV	MYS206
MSc. Yoga Science and holistic health	Indian Philo s op hy	MY302
MSc. Yoga Science and holistic health	Yoga Practical - V	MYS306
MSc. Yoga Science and holistic health	Research Methodology & Statistics	MYS401
MSc. Yoga Science and holistic health	Yogic Management of Diseases	MY402
MSc. Yoga Science and Holistic Health	Elective I - Holistic Health	MYS403
MSc. Yoga Science and holistic health	Elective II - Basics of Computer	MYS404
MSc. Yoga Science and holistic health	Dissertation	MYS406
B.Tech CSE	Fundamental of Computer & IT	CST111
B.Tech CSE	Programming for Problem Solving	CST112
B.Tech CSE	Software Engineering	CST121
B.Tech CSE	Object Oriented Programming Using C++	CST122
194. B.Tech_CSE_Sem_III	Computer System Architecture	CST231
194. B.Tech_CSE_Sem_III	Operating System	CST232
194. B.Tech_CSE_Sem_III	Python Programming	CST234
B.Tech CSE	Probability and Statistics	BST241
B.Tech CSE	Database Management Systems	CST241
B.Tech CSE	Introduction to Machine Learning	CST242

Program Name	Course Name	Course Code
B.Tech CSE	Theory of Computation	CST243
B.Tech CSE	Java Programming	CST244
B.Tech CSE	Computer Graphics	CCS351
B.Tech CSE	Microprocessors & Peripheral Devices	CCS352
B.Tech CSE	Design and Analysis of Algorithms	CCS353
B.Tech CSE	Artificial Intelligence	CCS361
B.Tech CSE	Compiler Design	CCS362
B.Tech CSE	Operating Systems	CCS363
B.Tech CSE	Computer Networks	CCS364
B.Tech CSE	Cryptography & Network Security	CCS471
B.Tech CSE	Industrial Training/ Certification	PPD103#
B.Tech (Hons.) CSE with AI & ML	Fundamental of Computer & IT	CST111
B.Tech (Hons.) CSE with AI & ML	Programming for Problem Solving	CST112
B.Tech (Hons.) CSE with AI & ML	Software Engineering	CST121
B.Tech (Hons.) CSE with AI & ML	Object Oriented Programming Using C++	CST122
B.Tech (Hons.) CSE with AI & ML	Introduction to IT Verticals	CST123
B.Tech (Hons.) CSE with AI & ML	Discrete Mathematics	BST231
B.Tech (Hons.) CSE with AI & ML	Computer System Architecture	CST231
B.Tech (Hons.) CSE with AI & ML	Operating System	CST232
B.Tech (Hons.) CSE with AI & ML	Data Structures	CST233
B.Tech (Hons.) CSE with AI & ML	Python Programming	CST234

Program Name	Course Name	Course Code
B.Tech (Hons.) CSE with AI & ML	Soft Skills –I	CST234
B.Tech (Hons.) CSE with AI & ML	Introduction to Artificial Intelligence	PCT311
B.Tech (Hons.) CSE with AI & ML	Probability and Statistics	BST241
B.Tech (Hons.) CSE with AI & ML	Database Management Systems	CST241
B.Tech (Hons.) CSE with AI & ML	Theory of Computation	CST242
B.Tech (Hons.) CSE with AI & ML	Java Programming	CST243
B.Tech (Hons.) CSE with AI & ML	Soft Skills –II	CST243
B.Tech (Hons.) CSE with AI & ML	Introduction to Machine Learning	PCT412
B.Tech (Hons.) CSE with AI & ML	Natural Language Processing	PCT413
B.Tech (Hons.) CSE with AI & ML	Compiler Design	CS501T
B.Tech (Hons.) CSE with AI & ML	Computer Graphics	CS502T
B.Tech (Hons.) CSE with AI & ML	Web Technology	CS503T
B.Tech (Hons.) CSE with AI & ML	Neural Networks & Deep Learning	PC514T
B.Tech (Hons.) CSE with AI & ML	Problem Solving and Robotics	PC515T
B.Tech (Hons.) CSE with AI & ML	Seminar	PC515T

Program Name	Course Name	Course Code
B.Tech (Hons.) CSE with AI & ML	Soft Skills-II	PC515T
B.Tech (Hons.) CSE with AI & ML	NoSQL Database	CS601T
B.Tech (Hons.) CSE with AI & ML	Cryptography and Network Security	CS602T
B.Tech (Hons.) CSE with AI & ML	Internet of Things (IoT)	CS603T
B.Tech (Hons.) CSE with AI & ML	Image Processing	PC616T
B.Tech (Hons.) CSE with AI & ML	Minor Project	HS601T
B.Tech (Hons.) CSE with DS & ML	Fundamental of Computer & IT	CST111
B.Tech (Hons.) CSE with DS & ML	Programming for Problem Solving	CST112
B.Tech (Hons.) CSE with DS & ML	Software Engineering	CST121
B.Tech (Hons.) CSE with DS & ML	Object Oriented Programming Using C++	CST122
B.Tech (Hons.) CSE with DS & ML	Introduction to IT Verticals	CST123
B.Tech (Hons.) CSE with DS & ML	Computer System Architecture	CST231
B.Tech (Hons.) CSE with DS & ML	Operating System	CST232
B.Tech (Hons.) CSE with DS & ML	Data Structures	CST233
B.Tech (Hons.) CSE with DS & ML	Python Programming	CST234

Program Name	Course Name	Course Code
B.Tech (Hons.) CSE with DS & ML	Introduction to Data Science	PCT321
B.Tech (Hons.) CSE with DS & ML	Probability and Statistics	BST241
B.Tech (Hons.) CSE with DS & ML	Database Management Systems	CST241
B.Tech (Hons.) CSE with DS & ML	Theory of Computation	CST242
B.Tech (Hons.) CSE with DS & ML	Java Programming	CST243
B.Tech (Hons.) CSE with DS & ML	Introduction to Machine Learning	PCT422
B.Tech (Hons.) CSE with DS & ML	Natural Language Processing	PCT423
B.Tech (Hons.) CSE with DS & ML	Compiler Design	CS501T
B.Tech (Hons.) CSE with DS & ML	Computer Graphics	CS502T
B.Tech (Hons.) CSE with DS & ML	Web Technology	CS503T
B.Tech (Hons.) CSE with DS & ML	Neural Networks & Deep Learning	PC524T
B.Tech (Hons.) CSE with DS & ML	Data Visualization Techniques	PC525T
B.Tech (Hons.) CSE with DS & ML	NoSQL Database	CS601T
B.Tech (Hons.) CSE with DS & ML	Cryptography and Network Security	CS602T
B.Tech (Hons.) CSE with DS & ML	Internet of Things (IoT)	CS603T

Program Name	Course Name	Course Code
B.Tech (Hons.) CSE with DS & ML	Image Processing	PC626T
B.Tech (Hons.) CSE with DS & ML	Big Data Analytics	PC627T
B.Tech (Hons.) CSE with DS & ML	Minor Project	HS601T
B.Tech CSE – Cyber Security	Mathematics I	BST111
B.Tech CSE – Cyber Security	Fundamental of Computer & IT	CST111
B.Tech CSE – Cyber Security	Programming for Problem Solving	CST112
B.Tech CSE – Cyber Security	Basic Electronic Engineering	BST112
B.Tech CSE – Cyber Security	Engligh-I	HST111
B.Tech CSE – Cyber Security	Environmental Studies	HST112
B.Tech CSE – Cyber Security	Science of Joyful Living/Yoga & Health/Sports & Activities	HST112
B.Tech CSE – Cyber Security	Mathematics II	BST121
B.Tech CSE – Cyber Security	Software Engineering	CST121
B.Tech CSE – Cyber Security	Object Oriented Programming Using C++	CST122
B.Tech CSE – Cyber Security	Introduction to IT Verticals	CST123
B.Tech CSE – Cyber Security	Digital Electronics	CST124

Program Name	Course Name	Course Code
B.Tech CSE – Cyber Security	Human Values & Professional Ethics	HST121
Bachelor of Computer Applications (BCA)	Fundamentals of Information Technology	BCT111
Bachelor of Computer Applications (BCA)	Programming Concepts using C Language	BCT112
Bachelor of Computer Applications (BCA)	Introduction to AI	BCT113
Bachelor of Computer Applications (BCA)	Foundation Course in Mathematics-I	BCT114
Bachelor of Computer Applications (BCA)	English Communication	BCT115
Bachelor of Computer Applications (BCA)	Multidisciplinary Elective I	BMD111/BMD112
Bachelor of Computer Applications (BCA)	Programming Concepts using C Language Lab	BCP112
Bachelor of Computer Applications (BCA)	English Communication Lab	BCP115
Bachelor of Computer Applications (BCA)	Introduction to Data Science	BCT121
Bachelor of Computer Applications (BCA)	Data Structures using C	BCT122
Bachelor of Computer Applications (BCA)	Computer Organization	BCT123
Bachelor of Computer Applications (BCA)	Foundation Course in Mathematics -II	BCT124
Bachelor of Computer Applications (BCA)	Environmental Studies	BCT125
Bachelor of Computer Applications (BCA)	Human Values & Professional Ethics	BCT126

Program Name	Course Name	Course Code
Bachelor of Computer Applications (BCA)	Introduction to Data Science Lab	BCP121
Bachelor of Computer Applications (BCA)	Data Structures using C Lab	BCP122
Bachelor of Computer Applications (BCA)	Science of Joyful Living/ Yoga and Health/Sports & Activities	BCP127
Bachelor of Computer Applications (BCA)	Programming in JAVA	BC231T
Bachelor of Computer Applications (BCA)	Database Management System	BC232T
Bachelor of Computer Applications (BCA)	Design Thinking	BC233T
Bachelor of Computer Applications (BCA)	Design and Analysis of	BC234T
Bachelor of Computer Applications (BCA)	Algorithms Discrete Mathematics	BC236T
Bachelor of Computer Applications (BCA)	Soft Skills-I*	BC236T
Bachelor of Computer Applications (BCA)	Seminar-I	BC236T
Bachelor of Computer Applications (BCA)	Software Engineering	BC235T
Bachelor of Computer Applications (BCA)	Web Technology	BC242T
Bachelor of Computer Applications (BCA)	Python Programming	BC243T
Bachelor of Computer Applications (BCA)	Operating Systems	BC244T
Bachelor of Computer Applications (BCA)	Optimization Techniques	BC245T

Program Name	Course Name	Course Code
Bachelor of Computer Applications (BCA)	Soft Skills-II*	BC245T
Bachelor of Computer Applications (BCA)	Seminar-II	BC245T
Bachelor of Computer Applications (BCA)	Programming in VB, Net	BCA302
Bachelor of Computer Applications (BCA)	Management Information Systems	BCA303
Bachelor of Computer Applications (BCA)	Disaster Management	BCA309
Bachelor of Computer Applications (BCA)	Project Work Phase-I	BCA309
Bachelor of Computer Applications (BCA)	Personality Development Programme-III	PDP103
Bachelor of Computer Applications (BCA)	Web Development using PHP	BCA306
Bachelor of Computer Applications (BCA)	Computer Graphics	BCA307
Bachelor of Computer Applications (BCA)	Network Security	BCA308
Bachelor of Computer Applications (BCA)	ELECTIVE	BCE31#
Bachelor of Computer Applications (BCA)	Project Work Phase- II	BCE31#
Bachelor of Computer Applications (BCA)	Personality Development Programme-IV	PDP104
B.Sc. Data Science	Foundation of Information Technology	BD112T
B.Sc. Data Science	Introduction to C Programming	BD113T
B.Sc. Data Science	Introduction to C Programming Lab	BD113P
B.Sc. Data Science	Statistics for Data Science	BD121T
B.Sc. Data Science	Data Structures using C	BD123T

Program Name	Course Name	Course Code
B.Sc. Data Science	Introduction to Data Warehousing and Mining	BD124T
B.Sc. Data Science	Data Structures using C Lab	BD123P
B.Sc. Data Science	Software Engineering	BDS232
B.Sc. Data Science	Database Management Systems	BDS233
B.Sc. Data Science	Introduction to Data Science using Python	BDS234
B.Sc. Data Science	Object-Oriented Programming using Java	BDS235
B.Sc. Data Science	Skill Enhancement Certification/Badge-I	BDS235
B.Sc. Data Science	Estimation and Inferential Statistics	BDS241
B.Sc. Data Science	Introduction to Artificial Intelligence	BDS242
B.Sc. Data Science	Applied Data Science using Python	BDS243
B.Sc. Data Science	Operating System	BDS244
B.Sc. Data Science	Design and Analysis of Algorithms	BDS245
B.Sc. Data Science	Skill Enhancement Certification/Badge-II	BDS245
B.Sc. Data Science	Machine Learning for Data Science	BDS351
B.Sc. Data Science	Operations Research	BDS352
B.Sc. Data Science	NoSQL Databases	BDS353
B.Sc. Data Science	Discipline Specific Elective-I	DDS35*
B.Sc. Data Science	Discipline Specific Elective-II	DDS35*
B.Sc. Data Science	Skill Enhancement Citification/Badge-III	GDS35
B.Sc. Data Science	Project Work / Industry-Based Learning Program Phase-I	GDS35
B.Sc. Data Science	Introduction to Deep Learning	BDS361
B.Sc. Data Science	Business Intelligence Tools and Application	BDS362
B.Sc. Data Science	Discipline Specific Elective Course- III	DDS363
B.Sc. Data Science	Discipline Specific Elective-IV	DDS36*
B.Sc. Data Science	Project Work / Industry-Based Learning Program - Phase -II	GDS36*
Master of Computer Applications (MCA)	Computer Fundamentals & Programming for Problem Solving	MCA111
Master of Computer Applications (MCA)	Discrete Mathematics	MCA112
Master of Computer Applications (MCA)	Computer Organization and Architecture	MCA113

Program Name	Course Name	Course Code
Master of Computer Applications (MCA)	Computer Networks	MCA114
Master of Computer Applications (MCA)	Scripting Languages	MCA115
Master of Computer Applications (MCA)	Software Engineering & Project Management	MCA116
Master of Computer Applications (MCA)	Personality Development Programme-I	PPD101
Master of Computer Applications (MCA)	Database Management Systems	MCA121
Master of Computer Applications (MCA)	Data Structures Using 'C'	MCA122
Master of Computer Applications (MCA)	OOP using Java	MCA123
Master of Computer Applications (MCA)	Operating Systems	MCA124
Master of Computer Applications (MCA)	Theory of Automata	MCA125
Master of Computer Applications (MCA)	ELECTIVE-I	MCE12#
Master of Computer Applications (MCA)	Personality Development Programme-II	PPD102
Master of Computer Applications (MCA)	Design and Analysis of Algorithms	MCA231
Master of Computer Applications (MCA)	Compiler Design	MCA232
Master of Computer Applications (MCA)	(Dot) .NET Framework & C#	MCA233
Master of Computer Applications (MCA)	Computer Graphics	MCA234

Program Name	Course Name	Course Code
Master of Computer Applications (MCA)	ELECTIVE-II	MCE23#
Master of Computer Applications (MCA)	ELECTIVE-III	MCE23#
Master of Computer Applications (MCA)	Personality Development Programme-III	PPD103
Master of Computer Applications (MCA)	Project Work Phase-I / Induction Program for Industry-Based Learning Program	PPD103
Master of Computer Applications (MCA)	Project Work Phase-II /Induction Program for Industry- Based Learning Program	Theory
BBA	Business Mathematics	BBA 102
BBA	Financial Accounting	BBA 103
BBA	Management Concepts	BBA 104
BBA	Micro Economics	BBA 105
BBA	Business Environment Analysis	BBA 201
BBA	Business Statistics	BBA 202
BBA	Business Communication	BBA 203
BBA	Macro Economics	BBA 205
BBA	English	BBA 206
BBA	E-Commerce	BBA 303
BBA	Management Information System	BBA 403
BBA	Financial Institutions and Markets	BBA 502
BBA	Sales Management	BBA 504
BBA	Exports ,Procedures & Documentation	BBA 602
BBA	Project Management and Entrepreneurship	BBA 603
BBA	Undergraduate Research Project	BBA 604
B.Com	Business Statistics	BCM 102
B.Com	Financial Accounting	BCM 103
B.Com	Micro Economics	BCM 105
B.Com	English	BCM 106
B.Com	Macro Economics	BCM 205

Program Name	Course Name	Course Code
B.Com	Soft Skills – I	BCM 206
B.Com	Advanced Accounting – Ii	BCM 301
B.Com	Computer Applications	BCM 306
B.Com	Accounting Standards	BCM 401
B.Com	Indirect Taxes	BCM 403
B.Com	Human Resource Management	BCM 405
B.Com	Company Law	BCM 501
B.Com	Summer Internship Project*	BCM 505
B.Com	Auditing & Assurance Practices	BCM 601
B.Com	Undergraduate Research Project*	BCM 604
MBA	Management Theory & Organizational Behaviour	MBA 101
MBA	Statistics For Managers	MBA 102
MBA	Computer Application For Managers	MBA 105
MBA	Communication For Managers	MBA 107
MBA	Business Research	MBA 201
MBA	Management Information Systems	MBA 202
MBA	Introduction to Business Analytics	MBA 209
MBA	Project Management & Entrepreneurship	MBA303
MBA	Career Advancement Course For Managers	MBA304
MBA	Business Research Project	MBA 401
B.Pharm	Human Anatomy and Physiology I	BP101T
B.Pharm	Pharmaceutical Analysis I	BP102T
B.Pharm	Pharmaceutics I	BP103T
B.Pharm	Pharmaceutical Inorganic Chemistry	BP104T
B.Pharm	Human Anatomy and Physiology I – Practical	BP107P
B.Pharm	Pharmaceutical Analysis I – Practical	BP108P
B.Pharm	Pharmaceutics I – Practical	BP109P
B.Pharm	Pharmaceutical Inorganic Chemistry – Practical	BP110P
B.Pharm	Pharmaceutical Organic Chemistry II	BP301T

Program Name	Course Name	Course Code
B.Pharm	Physical Pharmaceutics I	BP302T
B.Pharm	Pharmaceutical Microbiology	BP303T
B.Pharm	Pharmaceutical Engineering	BP304T
B.Pharm	Pharmaceutical Organic Chemistry II – Practical	BP305P
B.Pharm	Physical Pharmaceutics I – Practical	BP306P
B.Pharm	Pharmaceutical Microbiology – Practical	BP307P
B.Pharm	Pharmaceutical Engineering – Practical	BP308P
B.Pharm	Pharmaceutical Organic Chemistry III	BP401T
B.Pharm	Medicinal Chemistry I	BP402T
B.Pharm	Physical Pharmaceutics II	BP403T
B.Pharm	Pharmacology I	BP404T
B.Pharm	Pharmacognosy and Phytochemistry I	BP405T
B.Pharm	Medicinal Chemistry I – Practical	BP406P
B.Pharm	Physical Pharmaceutics II – Practical	BP407P
B.Pharm	Pharmacology I – Practical	BP407P
B.Pharm	Pharmacognosy and Phytochemistry I – Practical	BP409P

9.2 Patents citing university research

9.2.1 Number of patents citing research

From 2021 to 2025, two SRHU publications were cited in patent applications. A study on the valorisation of tender coconut mesocarp, published in the Journal of Agriculture and Food Research, is cited in a pending United States application for a coconut-based essence composition. A review on nanotechnology in sustainable agriculture, published in Plant Nano Biology, is cited in an international application for seed nanopriming filed by King Abdullah University of Science and Technology.

Evidence:

List of Patents citing SRHU research

SRHU publication cited	DOI	Citing patent	Patent no.	URL
Valorization of tender coconut mesocarp for the formulation of ready-to-eat dairy-based dessert (Kheer): Utilization of industrial by-product (Naik, B.; Kumar, V.; Gupta, A.K., 2023, Journal of Agriculture and Food Research)	10.1016/j.jafr.2023.100572	Coconut-Based Essence Composition and Method for Preparation Thereof (Applicant/Inventor: Rincon Jose; filed 26 Jan 2024; published 23 May 2024)	US 2024/0164419 A1	patents.google.com/patent/US20240164419A1
Harnessing nanotechnology for sustainable agriculture: From seed priming to encapsulation (Mahra, S.; Tripathi, S.; Tiwari, K.; Kumar, V.; Sharma, S.V., 2025, Plant Nano Biology)	10.1016/j.plana.2024.100124	Compositions and Methods for Seed Nanopriming (Applicant: King Abdullah University of Science & Technology; inventors: Khashab, N.M.; Perez, K.M.A.; Nikolaeva, V.; Maiti, B.; filed 19 Sep 2025; published 26 Mar 2026; earliest priority 19 Sep 2024)	WO 2026/062580 A1	patents.google.com/patent/WO2026062580A1

9.3 University spin-offs

9.3.1 Number of university spin-offs

The innovation ecosystem at SRHU includes seven registered companies and pre-startups, with one holding a university-transferred design right.

List of Registered companies

Company	CIN (date of incorporation)	IP originated at SRHU	Established 2022 or earlier	Still active
Canfinis Therapeutics Private Limited	U85100WB2021PTC246850 (30 July 2021)	Three UK designs, owned by the company and assigned to it. Founder-led; SRHU linkage recorded.	Yes	Yes, active
ULO Labs Private Limited	U21001UT2024PTC017631 (26 June 2024)	Yes. UK Design 6501510; transfer from SRHU in progress.	No	Yes, active
Ayuda Holistique Private Limited	U21003UT2024PTC017752 (23 July 2024)	No IP recorded	No	Yes, active
Mirage Energy R&D Private Limited	U72100UT2024PTC017930 (2 September 2024)	No. External founder; incubated at SRHU only.	No	Yes, active
SR Carehive Private Limited	U86900UT2025PTC018405 (1 August 2025)	No IP recorded	No	Yes, active
Jasarena Pvt Ltd	U92419TG2019PTC135130	No IP recorded	Yes	Graduated
Eco Bambrin India Private Limited	Incubated	No IP recorded	No	Yes, incubated 2024-25

9.4 Research income from industry and commerce

9.4.1 Research income from industry and commerce per academic staff

SRHU demonstrates a multidisciplinary academic and research profile, with Medicine representing the largest academic domain, comprising 287 academic staff and generating ₹1.38 crore in research income from industry and commerce. STEM, with 34 academic staff, generated ₹5.5 lakh in industry-linked research income, while Arts & Humanities/Social Sciences has 19 academic staff and reported no research income from industry and commerce. These figures highlight SRHU's strong research capacity, particularly in Medicine, while reflecting academic contributions across diverse disciplines.

Research income from industry and commerce and academic staff during 2024-2025

Data field	Research income from industry and commerce (INR)	Academic staff
STEM	5,50,000	34
Medicine	1,37,78,400	287
Arts & Humanities / Social Sciences	0	19

Academic staff by academic unit during 2024-2025

Academic unit	Faculty	Subject area
HIMS (Himalayan Institute of Medical Sciences)	242	Medicine
HCN (Himalayan College of Nursing)	33	Medicine
SYS (School of Yoga Sciences)	7	Medicine
SPS (School of Pharmaceutical Sciences)	5	Medicine
SBS (School of Biosciences)	17	STEM
SST (School of Science and Technology)	17	STEM
SMS (School of Management Studies)	19	Arts & Humanities / Social Sciences
Centre for Library and Information Management (CLIM)	2	Arts & Humanities / Social Sciences
Total	342	

SDG 9 Champion

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