

SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under section 3 of the UGC Act 1956)

Re-Accredited by NAAC with 'A' grade (3.58/4) I Awarded Category - I by UGC

Founder : Prof. Dr. S. B. Mujumdar M.Sc. Ph.D. (Awarded Padma Bhushan and Padma Shri by President of India)

Feedback Collection, Analysis and Action Taken Report for A.Y. 2021-22

All the constituent institutes review the program structures every year. They collect the feedback for design and review of curriculum from various stakeholders viz. Students, faculty members, Alumni and Industry experts. Additionally, feedback is also collected from parents for the undergraduate programs.

Constituent institutes collect feedback from students in every semester while it is collected annually from the faculty members. Normally feedback is collected through institute LMS.

Feedback is collected from alumni, industry experts and parents formally or informally when they visit the institutes as guest speakers, committee members or during the events and gatherings. At times, feedback form is also sent to them through online mode.

Feedback thus collected is analysed and discussed in faculty meeting. The action points based on the feedback are deliberated and approved in institute PRC / IQAC meetings. Proposal for new courses or modification in the existing program structure is proposed to the Board of Studies of the respective Faculty which is then sent to the University Academic Council for approval.

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Each constituent institute collects feedback under the common SIU parameters as given below:

Students Feedback:

Sr No	Parameter	Sample Questions
1	Clarity	I was informed about our expected competencies, course outcomes (CO) and programme outcomes (PO)
2	Relevance	The curriculum is relevant to and provides for flexibility to meet my learning needs.
3	Learning	Adequate co-curricular learning opportunities are provided to me to support the curricular learning.
4	Applicability / relevance to real life situations	The course is relevant to the industry requirements.
5	Depth	Depth of the course contents
6	Coverage	The number of hours allocated to the course are adequate.
7	Content	The topics were overlapping with the courses taught earlier / during the semester. If Yes, name such topics with course details
8	Placement	Placement of the course is in appropriate semester. If No, Please specify the correct semester

Teachers Feedback:

Sr No	Parameter	Sample Questions
1	Flexibility	I am given enough Flexibility to contribute my ideas on curriculum design and development.
2	Support	The faculty members/teachers are supported with adequate learning resources.
3	Motivation	The faculty members/teachers are encouraged to establish linkages with Industry.
4	Relevance	The syllabus is relevant and adequate in terms of scope, depth, and choice to help develop the required competencies amongst students.
5	Knowledge / Research	Would you recommend any new course/topic to be added in the program structure?

Employer/ Industry Experts Feedback:

Sr No	Parameter	Sample Questions
1	Holistic	The curriculum has a good blend of theory and practical aspects
2	Knowledge, skills and values	The students of the programme are adequately trained in terms of knowledge, skills and values
3	Adaptability	The students of the programme demonstrate the ability to learn new things quickly, to adapt, to the dynamic environment
4	Employability	The courses offered in the Institute have relevance to societal needs and employment potential.
5	Knowledge / Research	Would you recommend any new course/topic to be added in the program structure?

Alumni Feedback:

Sr No	Parameter	Sample Questions
1	Applicability / relevance to real life situations	The institute curriculum has prepared me adequately for the job roles, I have handled and been handling.
2	Depth	The curriculum of the program is well designed and promotes learning experience of the students.
3	Employability / Growth	The courses offered in the Institute have relevance to societal needs and employment potential.
4	Involvement	The institute encourages contribution from Alumni in curriculum and student development.
5	Knowledge / Research	Would you recommend any new course/topic to be added in the program structure?

Parents Feedback:

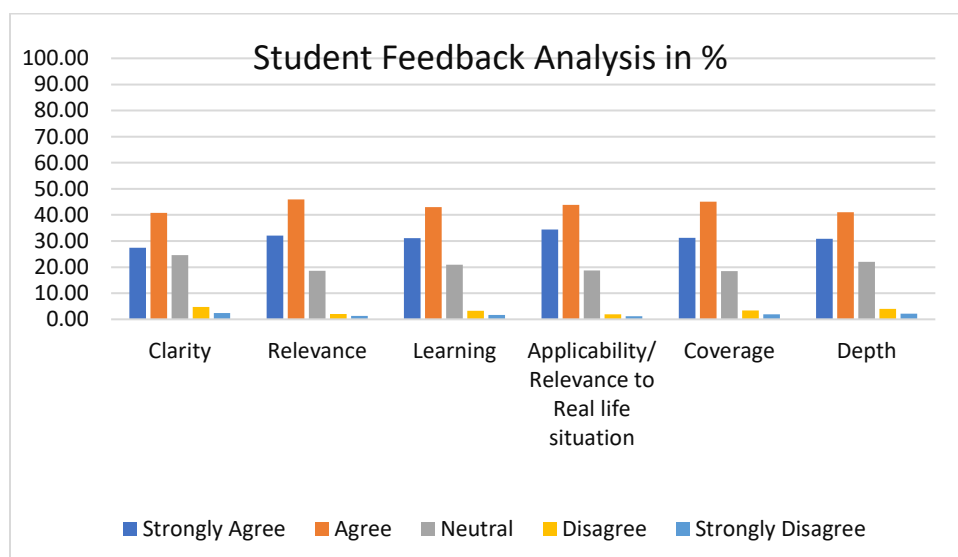
Sr No	Parameter	Sample Questions
1	Transformation	There is a positive change in the behaviour of my ward after joining the Institute.
2	Employability	The curriculum would make my ward employable and industry ready.
3	Coverage	The curriculum provides a choice of courses/specialization to select.
4	Knowledge / Research	Would you recommend any new course/topic to be added in the program structure?

The above exercise was followed for A.Y. 2021-22 and below is the summary of the outcome. Detailed Feedback analysis and review is as given below:

Sr No	Stakeholder	No. of Respondents
1	Students	8182
2	Teachers	947
3	Employers	154
4	Alumni	430
5	Parents	924

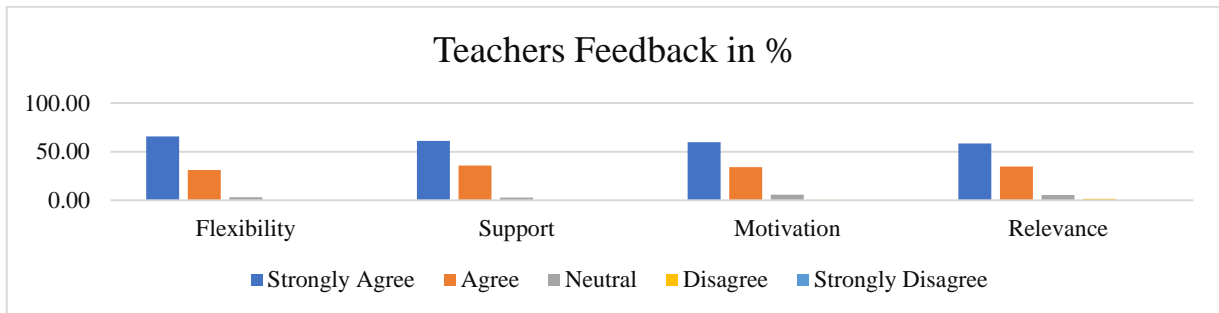
Students Feedback %

Parameter	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Clarity	27.44	40.78	24.54	4.78	2.46	100.00
Relevance	32.12	45.95	18.61	2.07	1.25	100.00
Learning	31.13	42.96	20.91	3.32	1.67	100.00
Applicability/ Relevance to Real life situation	34.35	43.88	18.66	1.88	1.23	100.00
Coverage	31.17	45.10	18.52	3.34	1.86	100.00
Depth	30.84	41.01	22.05	3.97	2.13	100.00



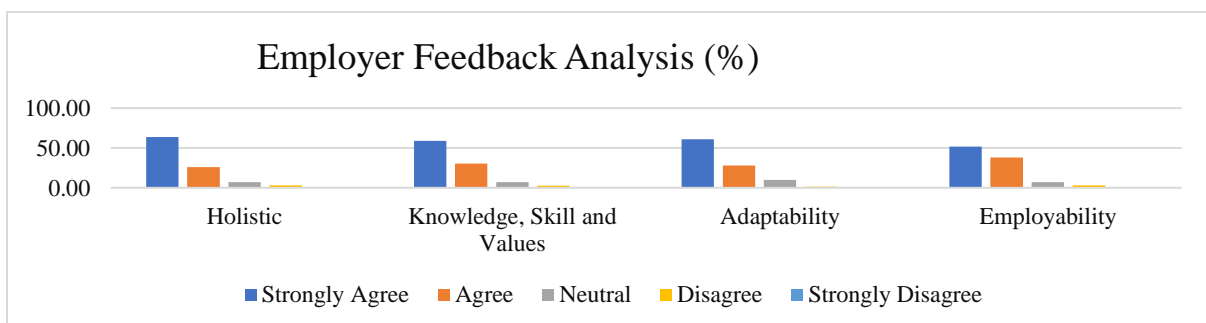
Teachers Feedback %

Parameter	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Flexibility	65.61	31.12	3.26	0.00	0.00	100.00
Support	61.13	35.72	2.82	0.33	0.00	100.00
Motivation	59.89	33.95	5.73	0.43	0.00	100.00
Relevance	58.49	34.59	5.51	1.41	0.00	100.00



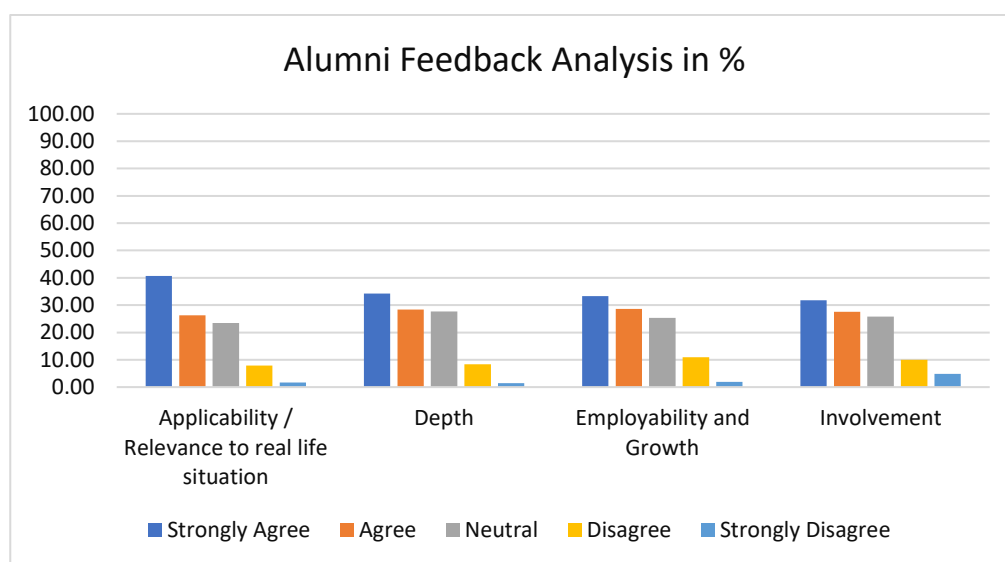
Employers Feedback %

Parameter	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Holistic	63.64	25.97	7.14	3.25	0.00	100
Knowledge, Skill and Values	58.94	30.46	7.28	2.65	0.66	100
Adaptability	61.04	27.92	9.74	1.30	0.00	100
Employability	51.63	37.91	7.19	3.27	0.00	100



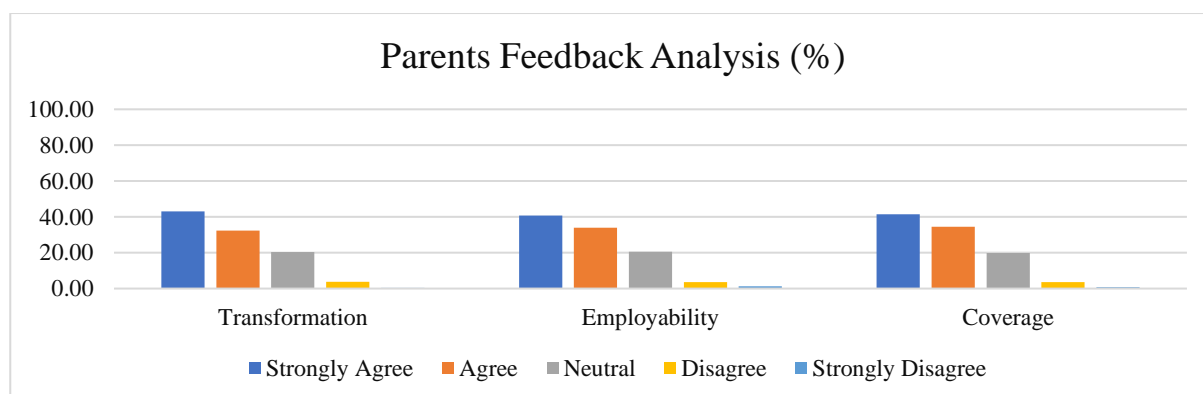
Alumni Feedback %

Parameter	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	total
Applicability / Relevance to real life situation	40.70	26.28	23.49	7.91	1.63	100.00
Depth	34.19	28.37	27.67	8.37	1.40	100.00
Employability and Growth	33.26	28.60	25.35	10.93	1.86	100.00
Involvement	31.82	27.58	25.76	10.00	4.85	100.00



Parents Feedback %

Parameter	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Transformation	43.09	32.35	20.39	3.84	0.33	100.00
Employability	40.64	33.92	20.59	3.63	1.21	100.00
Coverage	41.47	34.46	19.80	3.61	0.66	100.00



Summary of the suggestions / recommendations received from stakeholders:

1. Few topics to be added in the syllabi
2. Few new courses to be added in the curriculum
3. Few courses to be removed from syllabi
4. More industry / field visits were recommended
5. Some pedagogical changes were suggested
6. Some workshop / webinar topics of emerging areas were recommended

Institutes analysed the above suggestions. It was found that some of the inputs were actionable and the respective institutes followed the process to incorporate them in the curriculum. The actions included the following for A.Y. 2021-22:

1. 521 new courses were introduced
2. 72 program structures were modified
3. Institutes have planned more industry interaction / field visits / workshops / webinars

List of New Courses Introduced:

<i>Title of the Course</i>
Climate Justice: Law, Governance, Management and Policy (EU and Asia)
Energy Law
Law, Good Governance and Development: Conceptual and Theoretical Issues
Trademarks & Geographical Indications
Science, Technology & Human Rights
Patent law - Practice & Procedure
Intellectual Property Asset Management
Comparative Science, Technology, Innovation and IPR
Comparative Information Technology and Intellectual Property
Comparative Copyright and Industrial Designs- Law and Practice
Human Rights & International Order
Comparative Corporate Law
Business and Human Rights
Taxation Laws
Bio-Technology & Legal Regulation
International Trade Law
Fintech Framework and Governance
Application of Machine Learning & Artificial Intelligence in Finance
Digital Payment Systems
Financing Decisions for MSMEs
Supply Chain Finance
Advanced Financial Analytics
Global Banking
Digital Transformation in Financial Services

Fundamentals of Stock Market
Insurance Management for Households
Risk Management and Regulatory compliances for MSMEs
Financial Discipline
Project Management for MSMEs
Personal Financial Management
Marketing metrics for MSMEs
Financial Analysis and Working Capital Appraisal for MSMEs
Savings and Investments for Households
Financial Modeling for Economic and Financial Analysis
Stock Market Analysis and Other Investments
Excel, Investment Analysis and Decisions
Contemporary Developments in Digital Finance
Banking Operations Management
Trade Finance and Forex Risk Management
Public Private Partnership (PPP) in Railways
Energy Efficiency in Energy and Utility Systems and Buildings
Energy Transitions
Litigation and Arbitration in Infrastructure and Real Estate Projects
Electric Vehicle (EV) Mobility and Business
Real Estate Rules and Regulations
Introduction, Design and Financing of Real Estate Projects
Green Buildings and Rating Systems
Energy Audits and Energy Management
Advanced Energy Management
Renewable Energy Sources and Technologies
Non Renewable Energy Sources
Electricity Regulatory Issues and Mechanisms
Processing and Value Chain in Agriculture
Operations Research and Optimization Techniques
Advanced Big Data Analytics
Mathematics Foundation
Business Process Integration in SAP
Proteins and Enzymes
Practicals in Microbiology and Molecular Biology
Practicals in Biochemical Techniques
Practicals in Enzymology
Metabolism
Biophysical Techniques
Genetic and Metabolic Engineering
Clinical Biochemistry
Practicals in Clinical Biochemistry
Drug Discovery and Pharmacology
Structural Biology
Laboratory Techniques – I
Food System
Genomics, Proteomics and Bioinformatics

Food Quality and Safety
Lifestyle Disease Management
Global Health Diplomacy
Sports Analytics
Application of Sports Analytics
Technology in Sportswear and Performance Apparel
Sports Economics
Analytics in Basketball and Volleyball
Sports Development and Governance
Sports Marketing
Sports Equipment and Facility Management
Talent Management and Scouting in Cricket
Talent Management and Scouting in Football
Talent Management and Scouting in Basketball and Volleyball
Talent Management and Scouting in Racquet Sports
Analytics in Cricket
Analytics in Football
Analytics in Racquet Sports
Application of Technology in Sports
Brand Management and Sponsorship in Sports
Introduction to Sports Science
Introduction to Sports Management
Introduction to Sports Technology
Management of E-sports and Gaming
Sports Photography and Mobile Editing
Management of Racquet Sport
Management of Basketball & Volleyball
Management of Cricket
Management of Operations
Introduction to The Olympics
Management of Football
Financial Accounting for Sports Industry
Sports Journalism
Foundation of Ethics
Creative Thinking
Digital Signal Processors
Data Visualization Lab
Structural Non Linear and 3D Analysis Lab
Automotive Electronics and Instrumentation
Automotive Vehicle Dynamics and NVH Lab
Heat Exchanger Simulation Lab 1
Modern Sensors and Actuators
Hybrid Technology
Computer Aided Manufacturing Lab
Heat Exchanger Simulation Lab-2
AI and ML for Smart Manufacturing
Sensors and Actuators Lab

Comparative Climate Justice
Critical Thinking Skill and Collaborative Problem-Solving Skills
Forced Migration and International Law
Legal Database, ICT and 21st Century Skills
Energy Law
Law of Crimes II- Criminal Procedure Code
Legal Research Writing
Banking and Insurance
Microfinance
Basics of Strategic Management
Workforce Analytics
Financial Analytics
Awareness in Technology
Advance Data Structure and Algorithm
Advanced Programming in Python
Computer Forensics - Detection and Prevention of IT Frauds
Introduction to Web Services
PHP Framework
Web Development using Python
NoSQL Databases
Big Data
Advance Web Scripting
Advanced Programming in Python
Introduction to Python
American Cuisine Block (Practical)
American Cuisine Block (Theory)
Contemporary Cuisine Block (Practical)
Contemporary Cuisine Block (Theory)
Culinary Foundation Blocks (Practical)
Culinary Foundation Blocks (Theory)
European Culinary Foundation (Practical)
European Culinary Foundation(Theory)
Indian Culinary Basic and Bulk Cooking (Practical)
Indian Culinary Foundation (Theory)
Catering Operations and Management
Contemporary Hospitality and Service Industry Operations
Food and Beverage Service Management
Hospitality and Catering Law
Hospitality Today : An Introduction
Rooms Division Management
Rooms Division Operations - I (Theory)
Rooms Division Operations - II (Theory)
Rooms Division Operations - II (Practical)
Applied Management in Embryology Clinic
Basic Biochemistry, Cell Biology, Molecular Biology
Basic Physiology of Urodynamics
Case Discussions and Updates on Urodynamic Practice and Standards

Counselling in infertility
Cytogenetics
Developmental Biology
Ethics, Legal Aspects in Assisted Reproduction (ART) and Embryology
Instrumentation in Assisted Reproduction (ART) and Embryology
Introduction and training in usage of Urodynamic Equipment - practical issues
Overview and Basic Principles of Urodynamics
Quality Assurance, Standardization& Accreditation (Assisted Reproduction and Embryology)
Recent advances in Assisted Reproduction (ART) and Embryology
Reproductive Anatomy and Physiology
Reproductive disorders
Semen Washing Techniques
Semenology Techniques-I
Semenology Techniques- II
Troubleshooting and Quality Control in Urodynamic unit
Urodynamic Techniques, Spare Procedures and Documentation
Assessment of Mental Health
Biological Determinants of Mental Health
Child and Adolescent Mental Health
Cognitive Psychology
Collaborative Case Management in Mental Health
Community Mental Health Care
Core Concepts of Mental Health
Core Counselling Skills
Emergencies in Mental Health
Ethics and Legalities in Mental Health
Geriatric Mental Health
History Taking in Mental Health
Mental Health Advocacy
Overview of Pharmacological Management in Mental Health
Positive Psychology
Psychological and Socio-Cultural Determinants of Mental Health
Psychopathology I
Psychopathology II
Recovery and Rehabilitation in Mental Health
Substance and Behavioural Addictions
Treatment and Therapy Planning
Developmental Psychology
Adult Health (Medical Surgical) Nursing - I with Integrated Pathophysiology Including BCLS Module (Theory)
Adult Health (Medical Surgical) Nursing - I With Integrated Pathophysiology Including BCLS Module (Practical)
Adult Health Nursing - II With Integrated Pathophysiology including Geriatric Nursing (Theory)
Adult Health Nursing - II with Integrated Pathophysiology Including Geriatric Nursing (Practical)
Applied Anatomy
Applied Biochemistry
Applied Microbiology and Infection Control Including Safety

Applied Nutrition and Dietetics
Applied Physiology
Applied Psychology
Applied Sociology
Child Health Nursing -I including Essential New - Born Care (ENBC), FBNC, IMNCI and PLS, Modules (Theory)
Child Health Nursing - I including Essential New-born Care (ENBC), FBNC, IMNCI and PLS, modules (Practical)
Child Health Nursing - II (Theory)
Child Health Nursing - II (Practical)
Communicative English
Community Health Nursing- II (Theory)
Community Health Nursing- II (Practical)
Community Health Nursing-I Including Environmental Sciences and Epidemiology (Theory)
Community Health Nursing-I including Environmental Sciences & Epidemiology (Practical)
Educational Technology/Nursing Education
Health / Nursing Informatics and Technology
Introduction to Forensic Nursing and Indian Laws
Mental Health Nursing - I (Theory)
Mental Health Nursing - I (Practical)
Mental Health Nursing - II (Theory)
Mental Health Nursing - II (Practical)
Midwifery / Obstetrics and Gynaecology (OBG) Nursing II including Safe delivery app module (Practical)
Midwifery/Obstetrics and Gynaecology (OBG) Nursing II Including Safe Delivery App Module (Theory)
Midwifery/Obstetrics and Gynecology (OBG) Nursing - I Including SBA Module (Theory)
Midwifery/Obstetrics and Gynecology (OBG) Nursing - I Including SBA Module (Practical)
Nursing Foundation - I Including First Aid Module (Theory)
Nursing Foundation - I Including First Aid Module (Practical)
Nursing Foundation - II (Theory)
Nursing Foundation - II (Practical)
Nursing Management and Leadership (Theory)
Nursing Management and Leadership (Practical)
Nursing Research and Statistics
Pathology - I
Pathology - II and Genetics
Pharmacology I
Pharmacology - II
Professionalism, Professional Values and Ethics Including Bioethics
Sound Engineering Theory and Practice
Video Editing
35mm Cinematography
Advanced Motion Picture Camera Technique
Cinematic Lighting I
Cinematic Lighting II
Cinematography Greats
Directing for Cinematographers

Image processing: Digital
Image processing: Film
Mise-en-scene project
Motion Picture Camera Technique
Stage Lighting Workshop
Studio Photography: Basics
Studio Photography: Advanced
Behavioral and Experimental Economics
Gender Economics
Introduction to Behavioral Economics and Finance
Labour Economics
Law and Economics
Mathematical Economics
Fiction and Narrative Cinema
World Cinema Today
Connected Worlds
Histories and Historiographies
History and Geography of the Americas
History of Africa
History of East Asia and Oceania
History of West Asia
Medieval India: 11th to 18th Century
Roots of India: Prehistory to 10th Century CE
Texts in Practice
World History and Geography
Digital Tools for Qualitative Analysis
Digital Tools for Quantitative Analysis
Contemporary India
Internal Security in India
Introduction to Public Administration and Public Policy
Public Policy and Administration in India
Global Mental Health
Environment, Ecology and Society
Sociology of Science and Technology
State, Civil Society and Market
Advanced Calculus
Bayesian Inference
Concepts in Pure Mathematics
Essentials of Applied Statistics
Operations Research
Statistical Methods I
Statistical Methods II
Gender Labour and Work
Applied Mathematics for Robotics
Discrete Mathematics and Graph Theory
Executive Corporate Communication For Impact
Financial Mathematics

Mathematical Transform Techniques
Mathematical Transform Techniques Lab
Mathematics-I
Mathematics-II
Maths for Data Science
Physics for Civil Engineers
Physics for Computer Engineers
Physics for Electronics Engineers
Physics for Mechanical Engineers
Physics Lab
Statistics and Numerical Methods in Robotics
Statistics and Probability
Statistics for Data Science
Statistics, Probability and Numerical Methods
Statistics, Probability and Numerical Methods Lab
Calculus
Chemistry
Chemistry Lab
Discrete Mathematics
Linear Algebra
Nanotechnology
Probability and Random Processes
Smart Materials
Advanced BIM Lab
Applied Mechanics
Applied Mechanics Lab
Artificial Intelligence and Machine Learning
Automation in Construction
Basics of Sensors and Microcontrollers
Basics of Sensors and Microcontrollers Lab
Big Data Analytics
Cloud Computing and Blockchain Technology
Computer Aided Building Design & Drawing Lab
Computer Aided Structural Analysis-I
Computer Aided Structural Analysis-II
Construction Project Management Lab
Design of RCC Structures
Design of RCC Structures Lab
Design of Steel Structures
Design of Steel Structures Lab
Digital Image Processing
Digital Image Processing Lab
Digital Land Surveying and Mapping
Digital Land Surveying and Mapping Lab
Emerging Technologies in Construction
Geotechnical Engineering
Geotechnical Engineering Lab

Harbour and Airport Engineering
Highway Engineering Lab
Internet of Things
Introduction to Fluid Mechanics Lab
Introduction to Python Programming Lab
Materials Testing Lab
Open Channel Flow Simulation Lab
Programming and Logic Building Lab
Project Estimation, Costing and Valuation Lab
Railway and Tunnel Engineering
Smart Solid Waste Management Systems
Smart Solid Waste Management Systems Lab
Smart Transport Management
Smart Transport Management Lab
Software Tools for Civil Engineers
Strength of Materials
Waste Water Treatment and Recycling
Water and Waste Water Analysis Lab
Water Treatment and Supply System
Big Data and Applications
Sensors and Microcontrollers
Sensors and Microcontrollers Lab
Software Tools
Software Tools for Artificial Intelligence and Machine Learning
Software Tools for Computer Science
Web Application Development
Compiler Construction
Database Concepts for Data Science Lab
Deep Learning
Deep Learning Lab
Exploratory Data Analysis Lab
Open Source Technologies
Optimization Techniques for Machine Learning
Predictive Analytics
Python for Data Science
Unsupervised Learning
Unsupervised Learning Lab
5G Technology
5G Technology Lab
Building Automation Lab
CMOS VLSI Design
CMOS VLSI Design Lab
Computational Techniques
Consumer Electronics
Consumer Electronics Lab
Control Systems
Cyber Physical System Lab

Data Analytics with Excel
Digital Circuits and Logic Design
Digital Circuits and Logic Design Lab
Digital Design Verification
Digital Design Verification Lab
Digital Signal Processing
Electric Vehicle
Electric Vehicle Lab
Electromagnetic Field Theory
Embedded Artificial Intelligence
Embedded Artificial Intelligence Lab
FPGA Design
FPGA Design Lab
Fundamentals of Electrical and Electronics Engineering
Fundamentals of Electrical and Electronics Engineering Lab
Introduction to Electronics and Telecommunication Engineering
IPR for Engineers
Low Power VLSI Design
Low Power VLSI Design Lab
Microcontrollers and Applications
Microwaves, Radar and Electronic Navigation
Microwaves, Radar and Electronic Navigation Lab
Mixed Signal Design
Mixed Signal Design Lab
Operating Systems Fundamentals
Operating Systems Fundamentals Lab
Project Based Learning
Real Time Systems
Real Time Systems Lab
Wireless Sensor Network Lab
Block Chain Technology
AI ML for Renewable Energy Harvesting
Design Optimization Techniques
Harvesting Solar Energy Using IoT and AI
IC Engine and E-Mobility
I.C. Engines and E-Mobility Lab
Industrial Automation and Robotics
Industrial IoT with Applications (Industry 4.0)
Industrial Revolution and Introduction of Industry 5.0
Renewable Energy Storage Technology
Simulation Based Turbomachine Design
Smart Renewable Energy Harvesting and Storage
Software Tools For Mechanical Engineering
Solar Energy Simulation Lab
Additive Manufacturing
Additive Manufacturing Lab
Advanced Manufacturing

Advanced Manufacturing Lab
Advanced Python Lab
Advanced Robotic Process Automation Lab
Agile Development for Robotics Application
AI for Automation
Application of AI in Robotics and Automation
Application of AI in Robotics and Automation Lab
Applications of Robotic Process Automation
Augmented Reality and Virtual Reality Technology
Basics of Operating Systems
Basics of Operating Systems Lab
Big Data Analytics
Block Chain Technology For Robotics
Building Automation
Cloud Computing in Manufacturing
Cloud Computing Lab
Computational Fluid Dynamics with Artificial Intelligence
Computer Vision for Robotics
Computer Vision for Robotics Lab
Deep Learning for Manufacturing
Deep Learning for Manufacturing Lab
Digital Manufacturing
Digital Signals
Embedded System and Wireless Sensor Network
Embedded System and Wireless Sensor Network Lab
Fundamentals of IOT and Cloud Computing
Fundamentals of Robotics and Automation
Hydraulics and Pneumatics for Robots
Hydraulics and Pneumatics for Robots Lab
Industrial Internet of Things
Industrial Internet of Things Lab
Introduction to Aerial Robotics and Drones
Introduction to Artificial Intelligence
Kinematics and Dynamics of Robotics
Kinematics and Dynamics of Robotics Lab
Lean Manufacturing
Materials and Measurement
Materials and Measurement Lab
Mechanics of Materials
Mechanics of Materials Lab
Microcontroller and Embedded Systems
Microcontroller and Embedded Systems Lab
Mobile and Micro Robotics
Mobile Application Development
Mobile Application Development Lab
Motion Planning and Control
Motion Planning and Control lab

Navigation and Communication Lab
Optimization for Robotics
Path Planning and Reinforcement Learning
Path Planning and Reinforcement Learning Lab
PLC and SCADA
PLC and SCADA Lab
PLC Process Automation Lab
Predictive Maintenance
Probabilistic Robotics
Reliability Engineering
Responsible AI for Robotics
Robot System Design and Simulation
Robot System Design and Simulation Lab
Robotic Control Systems
Robotic Control Systems Lab
Robotic Process Automation
Robotic Process Automation Lab
Robotics Estimation and Learning
Robotics Mobility and Perception
Robotics Operating System
Robotics Operating System Lab
Sensor and Electronics Drives
Sensor and Electronics Drives Lab
Simulator for Robotics Lab
Software Tools for Robotics
Sustainable Development
Theory of Universal Robots and Cobots
Leather Accessory Design
Psychology in UX
Sustainable Living
UX Writing
Biomolecules

